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LECTURES
ON
THE PATHOLOGY AND TREATMENT OF DIABETES MELLITUS.

BY

T. LAUDER BRUNTON, M.D., D.Sc.Edin., M.R.C.P.Lond.,
Lecturer on Materia Medica and Therapeutics, and Casualty Physician to St. Bartholomew's Hospital; etc.

Lecture I.

THERE are two diseases to which the generic term diabetes has been applied. They are distinguished by the specific names diabetes insipidus and diabetes mellitus. They resemble one another in the copious secretion of urine, which is the characteristic symptom of diabetes insipidus, and is generally present, though not always, in diabetes mellitus. In the former disease, the urine contains no abnormal ingredient; while the latter is characterised by the presence of grape-sugar in it. The term hydruria is employed by some writers to designate the copious secretion of urine, and glycosuria the presence of sugar. A large increase in the quantity of urine often occurs, and sugar may be occasionally found in it, in health.[*] It is, therefore, well to restrict the use of the terms diabetes insipidus or diabetes mellitus to the permanent continuance of these symptoms. As the former disease is comparatively rare, the simple name diabetes is always applied in ordinary language to the latter; indeed, it is now sometimes used instead of glycosuria to signify the mere presence of sugar in the urine, although it may be but temporary.

SYMPTOMS.—When patients suffering from diabetes come to a hospital, they usually complain that their mouth is dry, and they suffer from thirst. They pass a great quantity of urine, frequently having to rise during the night to micturate; and they have been losing flesh, although their appetite is undiminished or even greatly increased. Although these symptoms are generally present when patients apply for hospital relief, they are not, so far as my experience goes, the first indications of the disease. This fact was much impressed upon me by a circumstance which occurred while I was a medical student. I chanced one day to see a working man who was under treatment for diabetes by a medical friend of mine. Being anxious to display my newly acquired knowledge, I said to the patient, "I suppose that the first thing you noticed was, that you made water very often, and were very thirsty." His reply took me somewhat aback. "Oh no!" said he; "the first thing I noticed was, that I could not do my day's work as I used to do." My attention was thus directed for the first time to muscular weakness as one of the earliest symptoms of diabetes; and I find that it has been the very first to appear in a large number of the cases recorded by Seegen in his elaborate work on this subject.[†] I have noticed it in several cases where no complaint was made of thirst, increased appetite, or frequent micturition. Another frequent symptom of diabetes is dryness of the skin, or the presence of an obstinate cutaneous eruption. I have not observed any characteristic form of eruption, nor any particular situation, as either the face or the body may be affected; but itching of the vulva in women is common, probably on account of the irritation caused by the saccharine urine. For my own guidance in practice, I have laid down the two following rules. Always examine the urine for sugar—(1) whenever a patient, especially a male, complains of weakness without any obvious cause; (2) whenever an obstinate cutaneous eruption is met with. In his *Handbook of Medicine*, Dr. F. T. Roberts gives the much more general and comprehensive rule to examine the urine in all cases of obstinate ill health; and this is, no doubt, better than the rules which I have just mentioned; yet, by following these, I have several times detected diabetes when most of the ordinary symptoms were absent.

PATHOLOGY.—The presence of sugar in the urine as an abnormal constituent has been long known; but the pathtological processes which it indicates are only now, thanks to the labours of Bernard, Cyon, Eckhard, Flint, Lusk, Pavy, and others, beginning to be clearly understood. Even yet we generally find diabetes ranged in text-books with albuminuria and other diseases of the kidneys, although we now know that these organs are not at all in fault, but merely separate from the blood the excess of sugar present in it. The blood always contains more or less sugar;[*] but, unless it amount to more than about one-third per cent.,[†] it is not separated by the kidneys. Its appearance in the urine, therefore, indicates that an excessive quantity of it is present in the blood; and, if we can find out how this excess came to be there, we shall have discovered the pathology of diabetes. An analysis of blood from the crural or jugular veins, and from the femoral and carotid arteries, shows that less sugar is contained in the venous than in the arterial blood; and therefore destruction of sugar must go on somewhere in the organism.[‡] Excess of sugar in the blood may thus be due to two causes—1, to increased introduction of sugar; or, 2, to diminished destruction of it; or to both of these together.

We will first consider the ways in which an excess of sugar may be introduced into the blood; and this involves the question, How does sugar come to be present in it at all? The ultimate source of the sugar and of every other constituent of the body is, of course, the food we eat; and this, as we may easily see in a typical meal of beef-steak, bread, and pudding, consists of fat, albumen, starch, and cane-sugar. The fat takes no part in the production of sugar within the organism, but the other three do. After they have entered the intestinal canal, the starch is converted into grape-sugar by the saliva and pancreatic juice, and the cane-sugar into a mixture of glucose and another sugar called lævulose[§] by the intestinal juice. The albumen is converted into peptone by the gastric and pancreatic juices. The sugar and peptones thus formed in the intestinal canal are absorbed by the intestinal veins, but they are not all at once poured into the general circulation and carried to the brain and muscles. If this were the case, these structures would get all their nutriment at once, and they would have to stow it away themselves for use during the intervals of fasting. Possibly the reserve-stores they would thus require to accumulate might clog their action; and, unless they could assimilate all the sugar at once, some of it would pass out in the urine, and thus be lost. It seems, at any rate, that such intermittent nutrition is not good for them, since a means of equalising it has been provided in the liver. This organ acts as a storehouse, in which the superfluous nutriment absorbed during digestion is laid up, and gradually given out again into the blood during fasting. The sugar which has been absorbed from the intestines is conveyed by the portal vein to the liver; and there it is converted into glycogen, and stored up in the hepatic cells. How the transformation is effected, we do not at present know; nor can we say whether the sugar is simply transformed into glycogen, or whether it splits up in some peculiar way so as to yield glycogen and fat. That glycogen is formed from sugar, and that sugar is stopped by the liver on its way from the intestine to the general circulation, is shown by several facts. In a starved animal, glycogen disappears entirely from the liver; but it quickly reappears if some sugar be injected into the stomach.[*] It is greatly diminished by fasting, and greatly increased by a full meal. When sugar is injected into the crural vein, it appears in large quantities in the urine; but when it is injected slowly into the portal vein, it is taken up by the liver, and not a trace of it is to be found in the urine. If the injection have been made too quickly, so that the liver cannot transform the sugar as rapidly as it is supplied, a portion of it passes into the general circulation and appears in the urine.[†] If the portal vein be ligatured, so that the blood finds its way from the intestines to the heart and body by means of the collateral circulation without passing through the liver, glycosuria occurs.[‡] It would seem that it is only while sugar is being absorbed from the intestines that much of it is present in the portal blood, for generally there is less of it in the portal vein than of almost any other vessel in the body.[§] From the power of the liver to use up sugar in this way, Tscherinow has proposed to call its function glycophthiric, or sugar-destroying. Peptones also form glycogen, for the liver of a dog always yields a much greater quantity of this substance after the animal has had a meal of flesh than when it is fasting. Fick has advanced the hypothesis that the peptones which result from the digestion of albuminous food in the stomach are not again built up into albuminous substances in the organism, as is usually supposed. Instead of this, they undergo further decomposition, and split up into non-nitrogenous and nitrogenous bodies. The non-nitrogenous products are stored up in the body, and serve it as fuel; while the nitrogenous ones are excreted in the form of urea.[‖] The urea is probably not formed directly from peptones; for, when they are injected into the blood, the urea is not increased till four or five hours after the injection; and, when meat is digested in the stomach, the increase of urea begins five or six hours after the meal.[¶] It is probable, from Schultzen's researches,[**] that glycocine, leucine, and tyrosine, are first formed, and that these afterwards become converted into urea. Fick does not say where he supposes the decomposition of peptones to take place; but I think we are not far wrong in saying that it probably does so in the liver and muscles.

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[*] Brücke, *Sitzungs-Bericht der Wiener Akad.*, vol. xxix, 1859, p. 346.

[†] Seegen, *Der Diabetes Mellitus*, p. 109.

[*] *Revue Scientifique*, 2nd ser., tome iv, p. 1023.

[†] Bernard, *Physiologie Expérimentale*, tome i, p. 302. (Several of these lectures of Claude Bernard have lately been reproduced in the *London Medical Record*, and are well worthy of perusal, both for their matter and as admirable examples of method in experiment and clearness in diction.)

[‡] *Revue Scientifique*, 2nd ser., tome iv, p. 1022.

[§] Sugars may be divided into two classes. Those of the first class are fermentable, yielding alcohol when acted on by yeast; and, when boiled with potash and sulphate of copper, give a deposit of oxide of copper. They have all the same formula, $C_6H_{12}O_6$, but are distinguished from each other by their action on polarised light. The chief members of the group are glucose, or ordinary grape-sugar, and lævulose or lævoglucose. Glucose turns the plane of polarisation to the right, and thus is sometimes called dextrose or dextroglucose, while lævoglucose turns it to the left, and hence its name. Glucose obtained from starch cannot be distinguished by chemical tests from that got from the liver; but it is quite possible that they are not the same, and that the one may be much more easily oxidised in the organism than the other. Indeed, Bernard states (*Physiologie Expérimentale*, tome i, p. 213) that sugar obtained from the liver is most easily destroyed in the body; next comes sugar from diabetic urine, then grape-sugar from starch, and, lastly, milk-sugar. The position of diabetic sugar between glucose from the liver and glucose from starch may be due to its being in many cases a mixture of the two—part of it consisting of sugar formed from starch in the intestine, and not altered by the liver, and part of it derived from the transformation of glycogen.

The second class of sugars has for its chief members cane-sugar or saccharose, and milk-sugar or lactose. They do not undergo alcoholic fermentation with yeast, nor do they reduce copper like those of the first group; but they can be transformed into the sugars of the first kind by boiling with acids, or by the action of certain ferments, and then they are capable of fermentation and reduce copper. They both have the same formula, $C_{12}H_{22}O_{11}$. They both turn the plane of polarisation to the right, though cane-sugar does so more than milk-sugar. They are distinguished by their different solubility and sweetness.

We may thus broadly say that albuminous food forms peptones in the stomach and intestines; and these are split up in the liver and muscles, so as to yield glycogen, a non-nitrogenous product, which is stored up in these organs, and urea which is excreted. This at once enables us to understand how it is that, in diabetic patients fed on animal food, the urea and sugar in the urine increase *pari passu*[††]; the sugar in them being in great part excreted with the urea, instead of being stored up as in the healthy body. The first great function of the liver, then, is to form glycogen from the sugar and peptones supplied to it from the intestines, and to store them up till wanted. This is termed by Bernard its glycogenetic function.[‡‡] As the materials on which the liver acts are supplied to it by the *portal vein*, we may connect the *formation* of glycogen with this vessel; while, as I shall afterwards show, the *hepatic artery* is more closely related to its *destruction*; although, from the free anastomosis between them, neither vessel possesses any function exclusively. The portal vein in man has the power of contracting very considerably;[*] but the source of its vaso-motor nervous supply is not so well ascertained as that of the hepatic artery. We shall, however, return to this subject in another part of this paper.

We can at once see that, if the glycogenetic function be imperfectly performed, too much sugar will pass into the general circulation, and be excreted by the kidneys. It will only do this, however, during the time that the sugar produced by the digestion of starchy or saccharine food is being absorbed from the intestines; and the glycosuria arising from this cause will be intermittent, coming on after meals, and disappearing during fasting.[†] It is evident that, if the meals be taken so frequently that the whole of the sugar obtained from one, cannot be excreted before absorption of the next one begins, the glycosnria will be remittent instead of intermittent. The sugar will be most abundant when digestion is at its height, and scantier when it is nearly finished; but it will never be entirely absent. This kind of glycosuria will be completely arrested by abstinence from farinaceous or saccharine articles of diet. According to Pavy, it is not uncommon among elderly people; and, so long as the urine is kept nearly free from sugar by attention to diet, it does not appear to injure their health.[‡] Even in health, the power of the liver to use up sugar is limited; and, if it be absorbed too quickly from the intestine, it will pass through the liver and appear in the urine. This occurs when sugar is taken in large quantities by men or by animals, unless it be prevented by some circumstance or other from being too rapidly absorbed.[§] Thus Bernard found that, when he injected a quantity of syrup into the stomach of a dog, sugar appearad in the urine. On repeating the experiment with a rabbit, no glycosuria was induced. The reason of this difference is, that the dog's stomach is generally empty, except immediately after a meal; and the syrup quickly passed into the intestine was altered by the intestinal juice, and was absorbed so rapidly that the liver could not convert it all into glycogen. The rabbit's stomach, on the contrary, always contains a large quantity of vegetable matter, even when the animal has been starved. This mass absorbs the syrup like a sponge, and only allows it to descend slowly into the intestine, so that digestion and absorption go on gradually, and the liver is able to convert all the sugar into glycogen.[‖] Bernard shows in a very ingenious manner that the sugar which appears in the urine of the dog is really the same sugar which has been absorbed from the intestine and passed unchanged through the liver, and is not sugar derived from glycogen. The latter consists entirely of glucose; but that obtained from the urine of the dog contains both glucose and lævulose, which are the ordinary products of the digestion of cane-sugar by the intestinal juice.

The starch and cane-sugar contained in food are not usually converted into grape-sugar by the saliva, pancreatic and intestinal juices, so quickly as to supply sugar to the liver more rapidly than it can convert it into glycogen. An increase in the amount of any of these secretions, such as might be expected to occur in hypertrophy of the pancreas, for example, by leading to more rapid conversion of the food into sugar, might cause diabetes, presenting similar characters to that produced by incomplete glycogenesis in the liver. Almost the only distinction between them would be that, digestion being completed more rapidly in the latter sort, the secretion of saccharine urine would begin sooner after meals and last for a shorter time than in the former. To ascertain this, an examination of the urine would require to be made very frequently; and I am not aware that any observations of this sort are on record. Several cases of glycosuria apparently depending on such alterations in the liver or digestion as have just been described, and arrested by abstinence from starch and sugar, have been recorded by Camplin,[¶] Parkes, Traube,[**] Rayer, Bence Jones, and others. In some of these cases, the failure of the liver to perform its glycogenetic function seems to have been the sole cause of diabetes; in them, it could be warded off for many years by abstinence from farinaceous food. In others, the failure of this function seems to have been quickly followed by other changes; and then abstinence from starch failed to prevent the appearance of sugar in the urine, although it had done so at the commencement of the disease. It is possible that another imperfect kind of glycogenesis sometimes occurs when the liver forms glycogen rapidly enough, but of such a kind as to be too readily broken up again. The glycogen obtained from the livers of animals is by no meaus always of the same quality; for, according to Kühne, some specimens are converted by ferments into sugar with great rapidity, while others are only changed by them after the lapse of hours, although these very specimens may be at once changed into sugar by boiling them with acids.*

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[*] Tscherinow, *Wiener Acad. Sitzber. Math-Naturwiss*, vol. li, Abth. 2.

[†] Schöpffer, *Archiv für Exper. Pathologie und Pharmacologie*, vol. i, p. 71.

[‡] Bernard, *Revue Scientifique*, 2nd serie, tome iv, p. 1066. Compare also the analysis (*Revue Scientif.*, tome iv, p. 1108), and *Observations* (p. 1023); also Schiff, *Untersuchungen über Zuckerbildung*, 1859, p. 3.

[§] Kühne, *Lehrbuch der Physiologischen Chemic*, p. 65. It is difficult to understand the conflicting statements of different observers on this point, except by supposing that their experiments were made on animals in different stages of digestion or fasting.

[‖] Fick, Pflüger's *Archiv*, vol. iv, p. 40; also Rabuteau, *L'Union Médicale*, 1873, No. 107.

[¶] Fick, *Verhandlungen der Physikal-Medicin. Gesellschaft zu Würzburg*, new series, vol. ii, p. 53.

[**] Schultzen and Nencki, *Zeitschrift für Biologie*, vol. viii, p. 124.

[††] Ringer, *Medico-Chirurgical Transactions*, vol. xliii, p. 323.

[‡‡] *Revue Scientifique*, 2nd ser., tome iv, p. 1155.

[*] *Verhandlungen der Physikal-Medicin. Gesellschaft zu Würzburg*, 1854, p. 1.

[†] See Traube, Ueber die Gesetze der Zuckerausscheidung im Diabetes Mellitus, Virchow's *Archiv*, vol. iv, p. 118.

[‡] Pavy on *Diabetes*, second edition, p. 144.

[§] Pavy, *op. cit.*, p. 141; and Vogel, in Virchow's *Handbuch speciellen Pathologie und Therapie*, vol. vi, Abth. 2, p. 49.

[‖] *Revue Scientifique*, second series, tome iv, p. 1066.

[¶] Camplin on *Diabetes*; and *Medico-Chirurgical Trans.*, vol. xxxviii, p. 69; also other cases quoted bv Parkes in his work on *Urine*, p. 317.

[**] Traube, Virchow's *Archiv*, vol. iv.

It is to be observed that the liver is not the only organ in the body which contains glycogen, although it is the chief one. The muscles also contain this substance;† and it is found in considerable quantities wherever cell-growth is actively going on, as, for example, in fœtal structures, or in the inflamed parts of the lungs in pneumonia. It is possible that it is first formed in the liver, and is merely carried to these other parts; but as it is readily changed into sugar in the blood, it seems much more likely that muscles and young cells possess also, to some extent, glycogenesic powers, and that the glycogen they contain is actually formed by them from sugar, or peptones supplied to them by the blood. The sugar they receive may either be derived from glycogen in the liver, or directly from intestinal digestion, for it is almost certain that, although a great part of the sugar and peptones is stopped by the liver, the whole of them is not.

Diabetes, from imperfect glycogenesis, then, is to be ascribed chiefly to the liver; but the possible participation of the muscles is to be borne in mind.

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* Kühne, *Lehrbuch der Physiologischen Chemie*, p. 63.

† Bernard, Kühne, and M'Donnell; Kühne's *Lehrbuch der Physiologischen Chemie*, p. 307; Nasse, Pflüger's *Archiv*, vol. ii, p. 97.

A LECTURE
ON
THE PROPER METHOD OF TREATING TAPEWORM.

Delivered at the Middlesex Hospital, Wednesday, December 10th, 1873.

By T. SPENCER COBBOLD, M.D., F.R.S., F.L.S.,
Lecturer on Parasitic Diseases at the Hospital.

Gentlemen,—The treatment of that common form of helminthiasis technically called "tapeworm" unfortunately constitutes one of those departments of the healing art, about which people generally suppose that little or nothing need be said. Excellent practitioners will tell you that the administration of turpentine and castor oil, or the giving of half a drachm of the etherial extract of male fern, suffices to dislodge the parasite; and, should the worm unhappily return—which is usually the case under such a rough-and-ready mode of treatment—all that you have to do is to repeat the remedy until the entozoon is finally destroyed. This kind of advice has the merit of being delightfully simple; but I have no hesitation in saying that, in the majority of cases, the practical results following its adoption are eminently unsatisfactory. I am not stating that the particular drugs in question are inefficient; on the contrary, viewed as tæniacides, I believe them to be superior to kousso, areca-nut, and other more or less well-known vermifuges. What I contend for is that, although in a small proportion of cases thus treated you may have the good fortune to be successful, yet, in by far the greater number of instances, the parasite will return, because neither the head nor even the neck of the worm will have been dislodged.

If I read the moral of professional conduct correctly, it should be our endeavour to effect cures as speedily as possible, thereby preventing the recurrence of the disease. The ordinary mode of prescribing is, to say the least, slovenly, and it fully accounts for the very incomplete results that are obtained. If it be urged that I ought to produce evidence of the truth of what has just been stated, I can only point to my own experiences in this connection, and assure you that nine out of every ten cases in which my opinion has been solicited have been cast-off or rejected ones, so to speak. I mean that they have been cases where the patients have long previously undergone treatment, experiencing only partial relief.

As observed in one of my former lectures delivered at this hospital, some persons think it fair and honest to record all cases as successful where the body of the parasite is eliminated from the bearer. Thus, one practitioner, desirous of extolling the merits of turpentine, had the politeness to inform me that this drug, with its appropriate aperient combination, "never failed to bring away the worm where it had been known to have been present." This statement was based on experiences obtained by the treatment of thirty or forty dispensary cases. The inadequacy, however, of conclusions drawn from such a source must, I think, be obvious, for in no single instance does it appear that the head of the parasite was obtained, or even that it was so much as sought for by the medical attendant. On grounds, therefore, of this order, I maintain that it is unfair to speak of such cases as cures, and it is, further, an entire mistake to characterise the results thus obtained as successful.

Undoubtedly, now and then, cures have been effected without finding, or without any endeavour on the part of the practitioner to find, the head of the parasite; but I hold that no medical man is entitled to pronounce his patient as absolutely cured, unless he has dislodged and produced the head from the matters discharged, after and in consequence of the advice and remedies offered and administered. It may be, indeed, that the head, though expelled, escapes observation, however diligently sought for; and it is quite certain that much practical experience is often necessary to enable the searcher to find the small isolated and detached head in the midst of dark-coloured fæcal matters. Repeatedly, I have obtained it after hours of search.

Again, in proof of the statement which I have advanced, respecting the comparative unfrequency of cure by the ordinary methods, I may mention that not a few of the numerous cast-off cases to which I have adverted have been those of patients who had undergone more or less severe drugging at intervals extending over a period of several years; moreover, as bearing on the question of diagnosis, it is also my duty to observe that patients have come to me for advice about their tapeworm disorders under far graver circumstances. I mean, that they have been subjected to the trying discipline of taking nauseous and drastic vermifuges for the expulsion of tapeworm and other parasites which, to my certain knowledge, never had any existence, excepting either in their own imaginations or in those of their medical advisers. This is a painful statement to have to make, but it is nevertheless strictly true. One of the most remarkable cases of this description is already recorded in my published *Lectures on Practical Helminthology*, case xxiv, p. 44. Others of a similar kind are given in the volume referred to, where it will be seen that the majority of such purely imaginary cases of tapeworm occur either in overworked men or in hysterical women. Certainly, they are amongst the most painful cases that we have to deal with; but, taken in connection with the phenomena of true parasitism, they have served to convince me that special knowledge on this subject is not without its practical value.

To return to the particular point previously urged, I have further to remark that, with more care in the exhibition of the ordinary remedies backed by a more thorough appreciation of the general economy and modes of development of the human tapeworms, a much larger professional success will be obtained. Lengthened experience justifies me in making this statement. I can say, indeed, that, during the year now closing, it has been my good fortune to obtain unusual success in the treatment of tapeworm. Some of these helminthiases were regarded by the patients not merely as obstinate, but as incurable cases. However, to cut the matter short, let me say that, in all instances, without exception, where I have this year had an opportunity of actually examining the fæces and other matters passed by stool, as a consequence of remedies prescribed by myself, I have succeeded in procuring the head of the worm. In every instance, therefore, I have been enabled to assure my private patients that they were permanently and absolutely cured. This success, unique, perhaps, of its kind, of course only holds good in the case of those persons who have properly placed themselves under my personal care. In the more numerous instances where my opinion has merely been sought, I cannot tell what results may have followed the advice given.

Here, it is only just that I should likewise remark that, in all the cases above referred to, I have had to deal with the very prevalent beef-tapeworm. Had it been otherwise, a similar degree of success could not possibly have followed. It seems to me that the pork-tapeworm (*Tænia solium*) becomes rarer and rarer, whilst that derived from beef (*T. mediocanellata*) is extremely common. I am, indeed, informed by a practitioner of great experience that, of late years, the tapeworm disorder has very sensibly increased in Somersetshire, and it would not surprise me to learn that such was the case in other counties. Be that as it may, I can now only find time further to observe that, in the diagnosis and treatment of tapeworm, there are many other practical points which I should have been glad to have brought under your notice. For these, however, it must suffice me to refer you to the work already quoted.

By way of bringing the subject to an appropriate conclusion, I will mention one interesting case which came under my care last July. It was that of a gentleman who had carried the cestode entozoon about with him for a period of sixteen years. Previously to my seeing him, he had been repeatedly dosed with male fern, as much as one drachm and a half of the extract being taken by him at a single dose. The body of the tapeworm had several times come away; nevertheless, the patient was not cured. Like some other patients I have seen this year, he not unnaturally despaired of my ever finding the head. It appeared to him absurd that I should obtain better results than others; and the more so, since I proposed to employ the same drug that others had used. However, an admirable preparation of the extract, prepared by Corbyn and Co., had the desired effect. Recommending my patient to observe certain preliminary rules, I succeeded with much smaller doses of the drug than he had been accustomed to take.[*] To be brief, the head of the worm was at once obtained; and thus, host and guest, after sixteen years of intimacy, were for ever separated, to the astonishment of the former and to the final discomforture of the latter. During the residence of this truly obstinate parasite, I reckon that my patient must have been the means of distributing something like five hundred millions of tapeworm germs; and yet, possibly, scarce a score of these germs have since arrived at sexual maturity. Be that as it may, I judge that in the course of a few more years the parasite itself would have died a natural death. It was an ill-nourished specimen, and evidently feeble. How long a tapeworm, if left to itself, may be capable of living I do not know; but I lately saw a patient who assured me that he had played the part of tapeworm-bearer for a period of no less than twenty years.

ON THE TREATMENT OF *POST PARTUM* HÆMORRHAGE.

By T. SNOW BECK, M.D.Lond., F.R.S.

I HAVE no doubt Dr. Robert Barnes exercises a wise discretion "not to enter upon any discussion which might bear the semblance of controversy," knowing, as he must, that his clinical experience, when he ventures upon the record of cases, has ill borne the test of practical examination. In the course of last year, when going over the subject of retro-uterine hæmatocele, I had occasion to examine twenty-seven cases, published by Dr. Barnes, where "effusion of blood into the peritoneum" was said to have occurred through the Fallopian tubes during menstruation; yet in not one of these twenty-seven cases was there sufficient evidence to show that any effusion of blood had ever taken place. (*Obstet. Trans.*, vol. xiv, p. 260.) And, unless I am much mistaken, his clinical experience on the subject of the injection of the perchloride of iron to arrest *post partum* hæmorrhage will prove as little to be relied upon. During the recent discussion upon the subject at the Obstetrical Society, I adduced evidence to show that the employment of this substance was fraught with the greatest danger—that fatal results had followed the employment of it in several cases—that the deaths had been caused by the transmission of the perchloride through the pervious canals of the uterine veins into the general system, producing blood-poisoning. And I would not have now returned to the subject had not Dr. Barnes, in some recent remarks, referred pointedly to this discussion "to point my (Dr. Barnes) assertion that the 'evidence adduced' cannot be trusted."

If I rightly apprehend the subject under discussion, it is not whether *post partum* hæmorrhage has been successfully arrested by the injection of a solution of perchloride of iron into the cavity of the uterus, or whether fatal cases have occurred after this substance had been so injected, for there cannot be a doubt that both these results have followed this plan of treatment. But the moot point appears to be, whether the injection of strong styptics into the uterus directly after parturition is, or is not, the correct principle of treatment. For it must be remembered that styptic injections have been used, not only to arrest *post partum* hæmorrhage, but also to anticipate the occurrence of it when no hæmorrhage was present. To advocate this "new plan of treatment," Dr. Barnes asserts that the "old way" of arresting hæmorrhage by procuring contraction of the gravid uterus is not to be trusted; that the means we have been accustomed to depend upon are insufficient, and frequently useless; and that it becomes necessary to adopt "a new principle," a "new power," to chemically seal up the mouths of the vessels and corrugate the inner surface of the uterus, by the direct application of styptics to the bleeding surface. I, on the contrary, venture to maintain that the whole of these assertions made by Dr. Barnes are erroneous; that the only principle by which we can arrest *post partum* hæmorrhage is by procuring the contraction of the uterus; that the "good old ways" are sufficient for this purpose, when properly and efficiently applied; that the injection of styptics into the gravid uterus neither seals up the mouths of the blood-vessels, nor corrugates the inner surface of the uterus; and that this practice involves the serious risk of causing the inevitable death of the individual upon whom it is employed.

It is evident that these questions involve the consideration of the whole subject of the treatment of *post partum* hæmorrhage, which would be much too lengthy for the pages of this JOURNAL; but it may not be improper to advert to one or two points which appear to be causing considerable interest. Everyone will admit the remark of Dr. Barnes, that these practical questions cannot be determined by "the subtle argumentations of Zoilistic critics"—though many may doubt the good taste of anyone who thus compares himself with the immortal Homer—and that these questions "must eventually be settled by the results of clinical experience." But the value attached to clinical experience presupposes accurate observation at the bedside, and correct deductions drawn from the cases observed; whilst imperfect observation and unfounded assertions cannot be accepted in the place of the former. For it is equally true in medicine as in other things, that "there is no untruth so misleading and so mischievous as a half-truth."

Referring to Dr. Boyd Mushet's remarks, which Dr. Barnes considers "to express some current errors as to fact and theory," I may say that I entirely endorse them. Dr. Mushet may commit a slight mistake in supposing that others have not used the injection of cold water; but he is not alone in attributing much value to the injection of cold water freely into the uterus, and in having no compunction as to any ill-effects which may follow the use of it. When conversing with some of the most successful practitioners in midwifery, I have been surprised how many had been led to adopt a similar plan in their own practice—to administer one or two doses of ergot of rye when the head was low down in the pelvis, and no obstacle hindered its exit; and to douche the cavity of the uterus with cold water thrown up by a long elastic tube attached to an India-rubber bottle, capable of holding about one pint. Dr. Sells of New York lately informed us it was the practice in the Vienna Hospital that, provided ergot and the injection of cold water did not arrest any bleeding, a weak solution of the sesquichloride of iron was gently injected, and repeated until the hæmorrhage ceased. And, in a communication which I have received from Dr. Hermann Biegel, within the last few days, he confirms this account, adding, "This solution of the sesquichloride is too weak to have any effect; it is the cold water which acts."

But Dr. Barnes has undertaken to correct the errors in "fact and theory" into which we have fallen, for I endorse Dr. Mushet's remarks. He terms the local application of cold water and ice to the interior of the uterus, by which it was "struck with a sudden chill," as "a graphic clinical description of reflex action." Reflex action, when the uterus itself was struck with a sudden chill by the local application of ice. In the desire to correct the errors of others, Dr. Barnes appears to forget there is such a thing as local impression produced by the direct application of cold. Reflex action, he elsewhere informs us, may be excited by "flapping the abdomen with the corner of a wet towel," which "is the most certain to evoke contraction," and which, I would add, would be equally effective if another and more posterior part of the body were subjected to a similar treatment. But, in this "graphic clinical description" of reflex action, he appears to have forgotten that "enormous supply of nerve-force," which he informs us, in his Lumleian lectures, is necessary to complete the work of parturition, and which is of such essential importance as to require the pregnant female to become afflicted with "physiological hypertrophy of the spinal cord" during each pregnancy; and, as this "physiological hypertrophy" is said to be "analogous to that which takes place in the heart," it necessarily follows that a woman who has been six or eight times pregnant, must have "physiological hypertrophy of the spinal cord" six or eight times increased. It does seem "the unkindest cut of all" that Dr. Barnes should forget this idol of his own creation, and be led away by "a graphic clinical description" to attribute the local effects of ice applied to the interior of the gravid uterus—to reflex action.

It is a curious fact which has been brought out by these discussions, that there is only one cause of *post partum* hæmorrhage—the want of contraction, or relaxation, of the uterus; and one means by which this hæmorrhage can be arrested—by procuring the contraction of the organ by which the arteries are compressed, and the flow of blood prevented. This want of contraction usually arises in two ways—either the contents of the uterus are removed in the absence of contraction, or relaxation occurs after the completion of the labour, the hæmorrhage coming on fifteen or twenty minutes afterwards. I am not unmindful that so able and practical a physician as Dr. R. Gooch has described "a peculiar form of hæmorrhage" which he believed to take place when the uterus was contracted, and to be caused by the violent action of the heart and arteries. But a reference to the cases published by Dr. Gooch shows that, in each case, he passed the hand into the uterus, which he could not have done unless the organ had become relaxed after the completion of the labour. The examination of the uterus in cases which have proved fatal, after the injection of the perchloride of iron, has also established that the hæmorrhage is not, as has been generally supposed, "a venous hæmorrhage by retrogression," but that the blood escapes from the open extremities of the torn utero-placental arteries; and, as every practical accoucheur knows, the blood which pours away is of a bright red arterial character. In every case, then, of *post partum* hæmorrhage, these conditions are present—a relaxed state of the contractile tissue of the uterus; an open condition of the utero-placental arteries, through which the blood is propelled by the action of the heart; an open state of the uterine veins or sinuses, which admits of any fluid matters being taken up from the inner surface, conveyed into the general system, and producing pyæmia, septicæmia, or any other condition of blood-poisoning. And the problem which has to be solved is, what are the best means by which efficient contraction can be induced and maintained, by which not only the arteries may be compressed, so as to prevent the further escape of blood from them, but that the veins or sinuses may also be closed, and all absorption of noxious fluids obstructed? For experience has sufficiently shown that it requires a smaller amount of contraction to close the long, slender, tortuous utero-placental arteries, and prevent the escape of blood, than that which is requisite to obiterate the venous canals, and prevent those puerperal complications known as septicæmia, pyæmia, puerperal fever, etc. As I have already stated, I maintain that the means in ordinary use, when efficiently and properly employed, are sufficient for this purpose. Dr. Barnes contends that is necessary to have recourse to "a new plan of treatment, by means of styptics applied directly to the bleeding surface, which act chemically, and seal up the mouths of the blood-vessels, and corrugate the inner surface of the uterus".

The means in ordinary use are well known, and undoubtedly the most efficient of them are those which act directly upon the uterus itself as local stimulants to contraction. For example: the ergot of rye o maintain the contraction, as well as to excite it; the local stimulus of the hand introduced into the uterus; compression of the organ by well-directed pressure from the abdomen, through the aid of an assistant at the opposite side of the bed, the hand of the accoucheur placed on the abdomen, and directing the pressure in the proper direction and on to the part where the pressure ought to be applied; compression of he walls of the uterus between the two hands, one being introduced nto the cavity and the other applied to the outside of the abdomen, aided by the force of an assistant; the local application of cold, either as cold water injected into the cavity of the uterus, after the manner adopted in the hospitals at Vienna, or by the introduction of pieces of ce, and renewed as often as those previously passed dissolve away; and ome have added the use of galvanism. And lately, an additional means of applying local stimulation to the uterus has been introduced, nd in many cases attended with success; the injection of styptics into he uterine cavity, whether by the solution of the perchloride of iron, r by other stimulating astringents. For I feel assured that the anecote related by the late Dr. Rigby, and again mentioned by Dr. Wynn Williams, will prove to be the correct explanation of the action of these typtic injections. Dr. Wynn Williams informs us that Dr. Rigby reated, in his lectures, how a certain accoucheur, on an emergency, when n charge of a patient, seized a lemon off the table, passed it through he hand already in the uterus, and squeezed out the contents, and by his means saved the life of the patient. Here we have "a graphic linical description" of the effect of the additional local stimulus of the emon-juice, when aided by the presence of the hand, before the theory was thought of by styptic injections. This action of the perchloride of on is abundantly proved by the record of those cases wherein it has een employed and the women have recovered. It is also distinctly ated, in the pages of this JOURNAL in 1869, by Dr. Hugh Norris, ho was the first in this country who clearly described the action of it. He states:—"The contractile effect on the uterus was such as to fill e with surprise; the injection was followed by instant and permanent contraction, cessation of flow, and recovery; the manner in which the emedy *instantaneously contracts, and holds permanently contracted*, the reviously flaccid uterus is sometimes little short of marvellous." And milar contractile effects were also observed on the muscles of the agina from the injection flowing over this canal (vol. i, 1869, pp. 327 nd 504).

It apparently matters little by what means contraction is obtained—whether by the "good old ways," or by the "new plan of treatment"—long as complete contraction is induced and maintained, the woman safe, and will make a good recovery. But, suppose that only that mount of contraction is attained which, while it closes the arteries and rests the flow of blood, still leaves the venous canals patent and rvious to the transmission of any fluid substances, what then follows? he absorption of any substance which may be found at the inner rface of the uterus; and, when this substance is the perchloride of n which thus gains entrance into the general system, the almost inevitable result appears to be the death of the individual. For, so far as we at present know, there are no means by which the deadly effects of this substance can be counteracted, when once it is introduced into the general system. And, so far as the present discussion has enlightened us, it is this absorption of any styptic thrown into the uterus after parturition which is to be so much dreaded. Hence arises the question, Are we justified in the employment of these substances, which may prove so fatal, when other means may be safely employed for attaining the same end—complete and permanent contraction of the uterus after parturition?

I am aware that Dr. Barnes will not agree with this explanation, and will probably reply, as on a former occasion, "The simple answer was, that it did both, and did it effectually—act chemically, seal up the mouths of the vessels, and corrugate the inner surface of the uterus. He had often had his hand in the flaccid bleeding uterus to clear out the placenta and clots, and felt the inner surface of the uterus contracting, corrugating, crinkling under the contract of the iron as it flowed, stopping the bleeding, and expelling the hand." How much more probable does the account given by Dr. Hugh Norris appear: "The injection was followed by instant and permanent contraction, cessation of flow, and recovery." But we may fairly ask, What are the grounds upon which Dr. Barnes makes these statements? The only reason I can find for stating that the mouths of the vessels are sealed up is: "I affirm this because I have observed that the hæmorrhage has stopped, although the uterus remained large and uncontracted." But this same fact is now and then observed where no injection of any kind has been employed; and surely this cannot be accepted as sufficient grounds for affirming that the styptic acted chemically and sealed up the mouths of the vessels. No effect has ever been shown, by *post mortem* examination or otherwise, to have been produced; and, in the examinations I have had the opportunity of making where death has followed the injection of styptics, the orifices and canals of the vessels have been open, and did not present any appearance of any local action either upon the tissues of the vessels or upon the blood they might have contained. Nor has Dr. Barnes ever shown, so far as I know, any facts in support of the assertion that the inner surface of the uterus becomes corrugated and crinkled, which, to say the least, appears highly improbable. The tissue at the inner surface is non-contractile, and cannot contract under the influence of any injection; and the solution of perchloride of iron employed is not of that strength, even supposing it was applied of the same strength as injected, to corrugate or crinkle the tissue. I have at different times placed a thin section of the uterus in a similar solution of the perchloride of iron; and, although it becomes firmer and harder from prolonged immersion, yet no corrugation or crinkling has taken place. And what does not take place out of the body from prolonged immersion, can scarcely be considered probable to take place in the body when a solution of the same strength is applied to the inner surface of the uterus. Moreover, the strength of the solution will probably be reduced by contact with the blood in the uterine cavity before it reaches the inner surface; and, if I may be permitted to again refer to my own observations, the inner surface of the uterus has not in any case presented any appearance of corrugation or crinkling, nor of any chemical action beyond the staining of some of the tissues of an inkblack colour.

The question whether the action of the styptics produces contraction of the contractile tissue, or whether it acts chemically upon the tissues at the inner surface, is one of much importance in the employment of those substances in the treatment of *post partum* hæmorrhage. And I feel we have a right to require of Dr. Barnes some further proof than the mere assertion of what is *primâ facie* so highly improbable. Yet there can be little doubt that Dr. Barnes has felt something; and what was this something? I can only conclude that he felt the constringing effect of the styptic on his own hand when in the uterine cavity, as the fluid flowed back after injection; and that he mistook the chemical effect produced upon the cuticle of his own hand for a chemical action on the tissue at the inner surface of the uterus. This may appear a severe criticism; yet it is quite in accordance with the "clinical experience" of any one who observes through any preconceived notions, rather than notes the effects which actually take place.

Dr. Barnes further remarks: "Great questions in practice must eventually be settled by clinical results;" and "earnestly appeals to every man who has had a fatal case to publish as full an account of it as possible." In the spirit of this appeal, I will relate a fatal case which occurred in Dr. Barnes's own practice, but which, by some singular process of oblivion, he has omitted to notice. The case was referred to by Dr. G. Granville Bantock during the late discussion at the Obstetrical Society.

The wife of a naval surgeon, of strong wiry constitution, who had passed through several pregnancies without accident, when within a fortnight of the natural term, was seized with severe accidental hæmorrhage whilst going upstairs, and without any previous pain. Examining her immediately on my arrival, and within a quarter of an hour after the commencement of the hæmorrhage, I found the orifice of the uterus as large as a half-crown piece, and as yet too rigid for interference with a view to the delivery of the child. Very slight hæmorrhage was going on, and she was in no pain. No trace of the placenta could be felt within the circle of the orifice as far as the finger could reach. I at once passed an elastic bag, and distended it with air so as to completely fill the vagina. The face at this time was pale, the pulse of fair strength, the voice good, and there were no indications of collapse. After about three hours, during which there was no bleeding, I again examined the patient, and found the orifice slightly larger. Her husband being at this time accidentally absent, I sent for Dr. Barnes, who arrived in due time, and, after a short delay, applied the forceps and delivered her of a dead child. There was no pain either before or directly after the delivery. Dr. Barnes at once introduced the hand into the uterus in the absence of pain, and immediately extracted the placenta with a considerable amount of coagulum. The uterus contracted firmly. No pain was induced by the extraction of the placenta, nor was there any hæmorrhage; but, taking into account the exhausted state of the patient and the probability that a further small amount of hæmorrhage might prove fatal, it was decided that the uterine cavity should be injected with a solution of the perchloride of iron. Some solid perchloride was mixed with water; and no sooner was the iron injected than the patient began to complain of severe pain in the hypogastrium. It was agreed to administer opium as required. This was done in three doses of nepenthe of twenty minims each, or one fluid-drachm in all, but without in the slightest degree alleviating the pain; in fact, it rather increased in severity, and she died exhausted in about seven hours. I saw her about ten minutes before her death, when the pulse was very weak; but the patient was quite conscious, and able to speak about her husband and other matters. No *post mortem* examination was made.

I know not what feelings this case may produce with practical accoucheurs generally, but with me it causes a feeling of painful astonishment. To introduce the forceps in a case of accidental hæmorrhage, where the bleeding had ceased and no pain was present to indicate any tendency to contraction, and to extract the child, appears unaccountable. To immediately introduce the hand in the absence of pain, and remove the placenta, without taking any previous means to ensure contraction, is only marvellous it was not followed by serious hæmorrhage. And, if this be the practice which Dr. Barnes generally adopts, it is no longer to be wondered that, according to his own statement, he "had seen many women bleed to death". The uterus is said to have firmly contracted; but it must have again relaxed to admit the hand being afterwards passed into the uterine cavity. And again to introduce the hand, in the absence of any hæmorrhage, and in the absence of any pain, and to throw into the uterine cavity a solution of perchloride of iron, probably of considerable strength, was so extraordinary a proceeding, that I hesitate to characterise it by any words. Suffice it to say, that no sooner was the solution of iron injected than the patient began to complain of severe pain at the hypogastrium; that this pain continued, rather increased in severity; and the patient died exhausted in about seven hours afterwards. No more blood was lost after the first quarter of an hour. What, then, produced this deadly effect?

In commenting upon this case at the Obstetrical Society, Dr. Barnes remarked: "Certainly the pain must be attributed to the injection; but it did not follow it was the cause of death. The prostration was already extreme,, and the fatal termination was, as had been pointed out by a previous speaker, probably due to "shock." In extreme exhaustion from bleeding, a very slight cause was often enough to extinguish the patient's life" (*Obstetrical Journal*, April, p. 48.)

The statement "the prostration was already extreme," does not accord with the condition described, "the face was pale, the pulse of good strength, the voice good, and no indication of collapse." But inaccuracies of this kind are of too frequent occurrence to need more than a passing notice. And I fear it will require the "subtle argumentations of Zoilistic critics" to convince any practical medical man that a lady of strong wiry constitution, who had been in severe pain for about seven hours, who never lost her consciousness, who ten minutes before her death was sufficiently collected and aware of her approaching end as to speak about her husband and other matters—had died from "shock." I am well aware that every possible excuse is resorted to to palliate these fatal cases. Now it is "shock"; at another time "puerperal fever." Now it is "septicæmia"; then again "puerperal peritonitis, and other puerperal complications." Now "pyæmia"; and then any other excuse the case may admit. But these excuses do not justify the injection of the perchloride of iron, nor prevent the lives of other women being lost when a similar treatment is employed. What, then, caused the death? In the absence of a *post mortem* examination, the cause can only be one of conjecture; yet, judging by what has been known to take place in other cases, the conjecture assumes the position of strong probability. Severe pain at the hypogastrium has been observed in other cases, and in them it arose from a strong solution being employed, and this running down upon the sensitive structures of the vagina. Women have writhed in bed for hours from a similar cause, yet it has passed away without further ill effects than the suffering inflicted. If I am correct in the belief that the danger in the use of these styptic injections arises from the substances injected being taken up by the pervious veins, in the absence of complete contraction, and being conveyed into the general system, this case will admit of easy explanation. Throughout the whole case, nothing was more apparent than the absence of any pain indicating any tendency to contraction. And in an organ thus relaxed, when no hæmorrhage was going on and no urgent symptoms present, and without any other means being adopted to induce contraction of the walls—a strong solution of perchloride of iron was injected, and followed by the death of the woman in about seven hours afterwards. What is more probable than that the perchloride was directly taken up by the open veins or sinuses, carried into the general circulation, and produced the deadly effects, only more quickly, which have been known to follow in other cases? Hence, again, arises this question: Is any one justified in having recourse to means which may have such serious results, when other remedies, which have never been noticed to be followed by such consequences, may be employed to induce what was required—contraction of the gravid uterus?

It may be some excuse for the treatment adopted, to remember that Dr. Barnes entertains the notion that these styptics chemically seal up the mouths of the vessels, and corrugate the inner surface of the uterus; and that, entertaining this notion, he may have supposed there was little or no danger incurred by injecting the cavity of the uterus with a strong solution of the perchloride. But, if anything will tend to disabuse the mind of any one from this patent fallacy, it would be, I should imagine, the experience of such sad cases as these. And, again, the question will force itself upon the mind—Why does Dr. Barnes never allude, until he is forced, to these fatal cases which have occurred in his own practice? Dr. Routh mentioned another fatal case to which Dr. Barnes had been called in consultation: why is this also forgotten in the general oblivion of the grave? Would it not be better for our self-indicated medical Homer rather to sing of these disastrous occurrences, which might serve as a beacon to prevent others from falling into similar mistakes, than to indulge in "long-tailed similes" of unalloyed successes, or in the various flights of fancy we have been obliged to touch upon?

CURRENT VIEWS ON TREATING STRICTURE.

By BERKELEY HILL, M.B., F.R.C.S.,

Surgeon to University College Hospital.

In the British Medical Journal for December 20th, 1873, views are held up to obloquy by Mr. Savory which he terms "current," but which I venture, nevertheless, to believe to be "old-fashioned," if not obsolete. Mr. Savory attacks the employment of instruments for treating urethral obstructions of all kinds, which he alleges to be still customary.

Mr. Savory's conduct calls to mind that of Don Quixote when charging the sacks of flour in the mill, with this difference—the gallant knight-errant found his imaginary foes already erect before him, while Mr. Savory has had to raise up from the dead the objects of his wrath. For it is to be hoped that the treatment of all urethral obstructions, spasmodic, congestive, and organic alike, by instruments as routine practice has been discarded by properly trained surgeons. To impress his readers with the terrible evil of bougie treatment, Mr. Savory informs us that a distinguished surgeon once said, "Had bougies never been invented, it would, on the whole, have been a great gain to humanity." Why not go further, and quote the anecdote of the two eminent physicians, both now dead, who were crossing the canal-bridge at Camden Town, on their way to a consultation at Hampstead, when one asked the other whether it would not be, on the whole, a benefit to humanity if all doctors were then and there thrown into the canal? His companion was, indeed, for the moment, of opinion that the sacrifice of the Faculty by drowning would really be advantageous to mankind. But arguments valid against an abuse of a remedy lose much of their force when that abuse has been subdued by more exact knowledge to a legitimate use.

At the end of his paper, Mr. Savory alleges that the sum of his argument is, after all, not to suggest that instruments are never to be employed, but to affirm that they have been and still are grossly abused, and that, in a word, instruments of any kind should never be employed in any way except as a last resource. With much of this everyone must agree; but the statement, that instruments should never be employed except as a last resource, needs some qualification. In many cases, it is impossible to ascertain what is the matter without using instruments, and any treatment under such circumstances might be "routine," but certainly would be useless. Were the comparatively modest position at the end of the paper the only one taken up by the writer, it would not call for special remark; but there is more. There is confusion, under the term "stricture," of conditions that are now currently held to be not strictures at all, and are expressly distinguished from organic obstructions by all leading authorities in this department of surgery.

Mr. Savory says, "Any advanced student or young surgeon, if asked what he understands by the term stricture, would reply, a constriction of a portion of the canal due to thickening and deposit in its walls." And the student would be right; it is Mr. Savory who makes the error of calling spasm and inflammatory swelling strictures. These misleading names, given at a time when the distinctions in nature and requirements of treatment were ill understood, are yet employed by some, it is true, but without thereby intending to imply that these temporary obstructions are similar in nature to organic obstruction; and the surgeon who still looks upon spasmodic contraction, inflammatory swelling, and organic stricture as simple physical conditions to be treated only by physical means, had better take the advanced student, whose acquaintance with the subject is, nevertheless, second hand, for his teacher without delay. Certainly, more exact knowledge of the differences between these obstructions is current in standard treatises on urinary diseases, and the mischief that may be caused by using instruments in spasm and inflammatory swelling is carefully pointed out. So far from instrumentation being directed as routine treatment, to the neglect of other means, even in organic stricture, such writers as Civiale and Thompson, to mention no more, warn their readers against hastily using bougies, which those masters strongly insist are evils even when most needed. And, whatever old-fashioned or obsolete books may direct, in no standard treatise of the present day is the use of instruments given as the sole or most important means of treating anything but organic obstructions.

Next, the reproach is made against instruments, that they do not afford a cure; that, though the passage may be widened to the normal extent for a time, it ultimately shrinks back to its dangerous constriction, and no permanent cure is effected. This is true, doubtless. There is no cure for stricture, if, by cure, we mean putting the urethra into such a condition that no further attention is necessary. A system of treatment that procures such a result has yet to be found. But, if by cure be meant restoration of the canal, so that it can be easily maintained at its full calibre throughout, the use of instruments does cure stricture, and it has yet to be proved that any other plan will do the same for organic obstructions. Apparently, one of Mr. Savory's objects in writing was to lead the profession to suppose that organic obstructions can be dissipated by his plan of treatment—that rest in bed for an indefinite time, with warmth and other adjuvants, can cause the absorption, either wholly or in part, of organic obstructions. Undoubtedly—and this is also current knowledge—the remedies on which Mr. Savory relies are efficient to remove the spasm and inflammatory swelling that often aggravate the inconvenience or suffering of an organic obstruction sufficiently to induce the possessor to seek surgical aid; but, when this is done, is any further progress made towards widening the canal? To ascertain this, the canal must be gauged by the hated bougie after spasm has subsided, and again when a week or a fortnight, or any time thought requisite, has been passed by the patient in his bed, and the measurements compared. If Mr. Savory have done this, and find the organic thickening gone, he has made a discovery of the highest value; but this is not told us in his paper. Otherwise, which patient will take leave of his surgeon with the most satisfied mind—he who has learnt to pass with ease along his urethra a bougie as large as the natural size of his canal, and has simply to do this, from time to time, to maintain the full patency thereof, or he who, having spent a fortnight in bed, finds he can pass his urine comfortably now his passage is somewhat widened by the subsidence of spasm or inflammatory swelling, but has still a tough and narrow part that will be tightly closed the next time spasm sets in, or a cold is caught? The one man knows that, if temporary irritation attack his urethra, there is still room for the passage of his urine while the attack lasts; the other knows he must be constantly on his guard against accident, and live by rule, that his narrowed urethra may suffice for his daily needs.

It is useful to lift up the voice against the rash employment of instruments in urinary diseases; there are always too many inducements to employ the bougie or sound; but this may be done without depreciating the current teaching and knowledge of these diseases, and casting mischievous prejudice on a valuable remedy.

THE DEPRESSANTS OF THE CIRCULATION AND THEIR USE.*

By J. MILNER FOTHERGILL, M.D., M.R.C.P.

The aim of medicine, indeed its practical utility as an art, is to do good to the suffering and the sick. It has often been alleged that the scientific study of medicine has done little or nothing to further this end, at least comparatively little; and we not seldom hear that modern therapeutics directed by science are, as regards results, inferior to the empirical practice of our predecessors. That there is any truth at all in such statement, is and must be a matter for regret. It is certain, however, that all attempts to apply science to the elucidation of our every-day practice meet with ready and indeed warm appreciation. If we can make modern physiology or chemistry explain to us the manner or the mode of action of remedies with whose use we are familiar, it will go far to convert the special knowledge acquired by one shrewd observer and successful practitioner into a heir-loom for his successors, instead of being, as of old, an individual property which too commonly died with its possessor.

By observation and patient comparison of cases, our predecessors have arranged remedies into classes, and have described the peculiarities of each agent in a manner which must elicit our admiration: and the practical skill with which certain of them wielded their remedial agents still evokes our warmest praise. For instance, Graves laid down, with consummate skill, rules for the combined administration of opium and antimony in varying proportions, according to the circumstances of the case. Ringer's abridgement of it runs thus: "Each drug appears to assist the action of the other; and the relative doses must be determined by the circumstances of the case. In furious delirium, the tartar emetic must be given in full, and the opium in small quantities; while, if wakefulness is the chief symptom, the delirium being not very boisterous, the dose of tartar emetic must be reduced and the opium increased."

The exquisite correctness of these directions will become more apparent as we proceed. But this acquired skill could not be communicated, even to those who were familiar with the practice of these empirical masters of the past; an occasional pupil might be able to comprehend his master and imitate him, more or less perfectly; but usually only disconnected bits of his art were retained, and these soon lost all traces of the pattern which characterised the whole, of which they were fragments.

Recent scientific work, and especially physiology, is now stepping in to remedy, to some extent at least, this condition of matters; and, by explaining how the different agents achieve their results, is throwing a ray of light along the difficult and broken pathway of empirical therapeutics. To attempt to take even a bird's-eye view of the position of therapeutics at this moment, would be alike futile and impossible here; and the section to which I propose to draw the attention of the Society to-night is that connected with the circulation by means of its innervation. We all know that the nervous supply of the circulation is now attracting the attention which its importance merits, and that much has been done in this subject recently, both at home and abroad. From being an obscure fact in anatomy, the vaso-motor nerves and their allies are rapidly taking a prominent position in physiology, and they will ere long occupy an equally important position in therapeutics. These nerves are found running along the blood-vessels, the arteries especially, and control or regulate their calibre. By them the muscular coat is kept in a state of semi-contraction normally, and through them the calibre of the smaller arteries is lessened as in the cold stage of ague, or enlarged as in the full but soft pulse of dilated vessels in ordinary pyrexia. By their means the arterial system is kept at its normal tension, and the blood, pumped in by the heart, is restrained from at once escaping again into the veins. Thus the elastic arteries are kept gently on the stretch, and the intermittent current from the heart is converted into an even steady stream in the peripheral capillaries. But this pressure in the arteries, or the arterial tension as it is termed, is not always alike, and varies with certain conditions; for instance, in ordinary pyrexia the dilated peripheral vessels permit the rapid escape of the blood through them, and thus the blood-pressure is low, though the heart is contracting with abnormal rapidity; while in cirrhosis of the kidney there are commonly contraction of the arterioles and a high blood-pressure, with a ventricle contracting but slowly. By the beautiful arrangement of its nerve-supply, the circulation is controlled and regulated, and a norm maintained most fitted to our necessities; and in disturbance of this equilibrium we find the commencement of many of our commonest maladies. Not only so, but in their action over the vaso-motor nerves we find the explanation of the beneficial effects of many of our remedies. Thus, in ordinary catarrhal fever, we have the cutaneous vessels contracted, and consequently hyperæmia of the internal parts; the result of which is that there are increased heat-production in the interior, and imperfect radiation of the heat by the vessels of the dry burning skin.[*] No more efficient remedial agent for such a condition do we possess than antimony. This agent acts upon the circulation by lowering the heart's action, and dilating the peripheral vessels, especially of the skin. When given, then, in the above condition, it lowers the action of the heart, and with it the circulation of the blood, and so, probably, the chemical interchanges are diminished upon which the temperature depends; while at the same time the cutaneous vessels are dilated, and a freer stream of blood flows through the skin, with the effect of radiating off the heat, and by this defervescence a normal temperature is regained. This is the history in its rise and fall of an ordinary feverish cold treated by antimony; when left alone, the defervescence is slower and more gradual.

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* Read before the Medical Society of London.

In precisely the same way is the temperature ordinarily kept at its norm. When the surrounding temperature is low, the skin is dry and cold, *i. e.*, the cutaneous vessels are contracted and the blood-flow through them is small, and so the heat is but slowly radiated off and the body-temperature is maintained.[†] If the cutaneous vessels were not so contracted, we should perish in low temperatures, as men do after taking larger doses of alcohol, which dilate and even paralyse the cutaneous vessels, the body-heat being rapidly radiated off, and so the alcohol-drinker perishes of cold—frozen to death, while the abstainer, though uncomfortably cold, survives. In hot weather the cutaneous vessels normally dilate; the warm blood is brought freely into contact with the surrounding medium, and so is cooled; when this is insufficient, still further dilatation goes on, and free perspiration ensues, and the cooling effect of the evaporation of the watery constituents of the sweat is called into action.

Recently, Traube has taken up a view of fever almost essentially the same as that held by Cullen, viz., that fever is due to a "diminished giving off" of heat rather than an increased production; and in this he is followed by Senator. Leyden opposes this view, stating that the loss of heat is greater in fever than in health, and that therefore there must be increased production of heat. The loss of heat is greatest in the crisis, where it amounts to twice or even three times the normal loss, and so a return to the normal temperature is obtained. The defervescence always occurs with well-marked perspiration and exhalation of water; while in increasing fever no evaporation of water can be demonstrated, even under an impenetrable covering. Leyden's view has much to recommend it, and is probably most in accordance with facts.[‡]

This physiological introduction, though obviously and necessarily imperfect, will serve to introduce the more especial subject-matter of this paper. In dividing the subject into halves, and only regarding here th agents which depress the circulation, I have been guided by the consideration that the effects of the opposite class of agents had been discussed in my essay on *Digitalis*, and so need not be repeated here.

Ere proceeding to describe the agents we already possess which act upon the circulation, either by inhibiting the vaso-motor centre, or by acting on the vagus or the cardiac ganglia, and so either increasing the vascular area or lowering the heart's action—agents which in fact "bleed the patient into his own vessels," it may not be out of place to review the practice of the past, and so to see how far our ancestors had learnt to recognise empirically the rules which apparently must ever guide our practice. The best illustration probably is to go back to their treatment of inflammation. This usually consisted of bleeding, the application of leeches, and the administration of calomel and antimony (both cardiac depressants), both being locked in the system by accompanying doses of opium.[*] A spare diet was enjoined; and under this treatment a fair proportion of patients recovered. Now, before we sit too severely upon this treatment, let us consider the pathology of the disease and the action of the measures adopted, and see how far these men had a reason for the faith that was in them. When an organ is inflamed, we can exercise no direct effect upon the inflamed part by any agent with which we are acquainted; and our only indirect means of acting upon it is by controlling the blood-supply to it. The effect of this is most perfectly illustrated in the plan of arresting inflammation in a joint, by tying the artery above the articular branches. In the case of inflammation of a viscus, such treatment is impracticable, and the blood-supply can only be partially controlled through the circulation generally.

Our forefathers recognised this fact plainly enough; and if their measures were not of the happiest, we must not blame them too severely for resorting to the only means with which they were acquainted. Whether there be a change of type in disease or not; or whether there be only a change in our ideas as to remedial measures, it is no part of my plan to enter into here: what does interest us, is the question how our predecessors grappled with the difficulty presented to them. They recognised the fact that there was an organ in a state of inflammation; they knew well enough that they could exercise no direct control over it; but they knew that indirect control could be exercised by bleeding, etc. So marked an effect could be thus produced, that many believed that an inflammation could be cut short, or even cut down—strangled, by active measures. Nor is such faith extinct. Bouchut, in an article in the *Bulletin Générale de Thérapeutic*, of April 15th, 1873, takes up this position.

What was the effect of this treatment? By the direct abstraction of blood, either by general bleeding or by leeches, the effect was to reduce the amount of blood going to the part—to starve it in fact.

The nutritive changes going on were influenced by such measures, and the inflammatory action was arrested or modified. The reduction of the bulk of blood affected the chemical interchanges, and the calomel and antimony aided in producing such effect; while by their action upon the skin they increased the radiation away from the body-heat, and so lowered the temperature. So far, so good: but the results went to show that the remedial measures were often as lethal as the disease, if not more so.

The disastrous consequences of this heroic treatment led to the abandonment of a line of practice not altogether irrational in itself. Nor can we permit our condemnation of such practice to be unqualified, if we desire to be just. These men acted up to their light—such as it was: and the failure of their treatment was the first step towards something else—sometimes better, sometimes doubtless worse than that which it had supplanted. This new line of practice was the waiting and watching plan, called "the expectant treatment."

The objections to the old plan were obvious enough. The consequences of the loss of blood were often very serious; and if the blow aimed at the disease failed at once to cut it short, the loss of blood frequently led to such debility as to cause the patient at once to quickly succumb, or ultimately to wreck him in the convalescence. The secondary effects of the calomel and antimony were also often very undesirable. But the discarded measures were efficient means for producing the desired effects: and Bouchut speaks warmly of their apyretic action, especially with relation to the quickness with which they produce a fall of two or three degrees in the temperature.[†]

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[*] In febrile diseases, while the temperature of the body is raised by the activity of the destructive processes going on in the economy, the cutaneous exhalation is diminished—according to the old expression, by "a spasm of the capillary vessels of the skin"; and the sensation of heat in this texture, as well as in the internal organs, becomes a source of much suffering. The subsidence of the excitement and tension is usually accompanied with more or less perspiration. (Stille's *Therapeutics*, vol. ii, page 517.)

[†] Rosenthal, *Zur Kenntniss der Wärmeregulirung bei den Warmblütigen Thieren.* 1872.

[‡] Wunderlich sums up the causes that increase the general temperature after the following arrangement, an abstract only being given here (chap. viii, sec. 10), 1. An accumulation of heat caused by deficient abstraction of warmth. 2. An increase of temperature from an overplus of heat in different centres or foci, as in local inflammations. 3. A general elevation of temperature may arise from increased activity of the normal processes for the production of heat. 4. A rise of temperature may also occur from an over-production of heat, resulting from chemical processes unknown in the healthy body. 5. Alterations in the degree of activity of the vaso-motor nerves must almost necessarily have an influence upon temperature, and that in more ways than one, and quite as much by altering the conditions of production as by affecting the giving off or loss of heat. 6. Elevation of temperature may occur in consequence of a morbidly increased action of the spinal centres. 7. The rise of temperature is doubtless brought about by several of these conditions combined, or in varied succession. The reader may also refer to chay. v, sec. 4, 15, 17, 20, 21; chap. vi, sec. 3, 10, 13, 20; chap. viii generally, especially sec. 8, 9, 12; and chap. xiii, sec. 4, *Medical Thermometry.* On a full consideration of Wunderlich the view of fever given above is founded.

[*] Tartar emetic and bleeding, with opium, were considered by Hufeland the basis of all therapeutics (1820-30).

[†] The effect of loss of blood is to lower the temperature, according to Marshall Hall and Bärensprung; but Frese found it to rise again in a few hours. Bauer found the amount of urea and carbonic acid increased by bleeding, in which respects his experiments agree with those of Voit and Rauber. According to this it would appear that bleeding should be accompanied or followed by the administration of depressants. Wunderlich thinks that the time of bleeding is the most important matter.

Blood-letting will never perhaps be generally revived; but nevertheless it may be our readiest or even only means at hand, especially with the general practitioner in rural districts. It sometimes materially aids the action of other remedies (see Watson, *Practice of Physic*, art. Enteritis). I well remember one case, where a stalwart dalesman had bronchitis, to which he was subject. The first or congestive stage was always troublesome; and when he came into my hands, after trying antimony, ipecacuanha, and iodide of potassium in vain, he had to be bled, as before, by my late father. On two different occasions had this to be done by me—each time with perfect success. At another time recently, I had an opportunity of watching the effect of general bleeding over pericarditis in its earliest stage; its effect was most satisfactory. My experience of bleeding is, however, almost confined to watching it in the practice of my late father, who often resorted to it with excellent effects.

In 1800, Rasori brought forward the use of tartar emetic alone in large doses in the treatment of inflammatory conditions, especially pneumonia. In many cases the good effects of this treatment were marked; the fever, the bounding pulse, the thirst, and the inflammatory processes, all were relieved, and the patient was easier and cooler, in free perspiration and with a softer pulse. The heart's action was depressed and the peripheral vessels dilated, especially those of the skin, permitting of a large flow of warm blood through them, and so exposing it to the cooling influence of the surrounding medium. But tartar emetic in full doses is a very active agent, and only suited to the cases called sthenic; its depressing effects rendering it unsuitable to asthenic cases and to children, except in very moderate doses. But to Rasori must be awarded the credit of originating the valuable idea of bleeding a patient into his own vessels—and not into the blood-basin.

Another depressant agent or direct sedative was introduced for the treatment of inflammatory conditions, and especially pneumonia, by two Italians, Borda and Breda, namely, hydrocyanic acid, which affects the circulation much in the manner of antimony. But prussic acid in anything like free doses is an agent one uses but charily, and so it has been given up.*

Then free purgation had its day, especially under Hamilton, and combined with salines found favour with many. But this method was unpleasant and inconvenient, necessitating much disturbance, interfering with rest and sleep, and therefore objectionable. It still remains in a modified form, and is the first arrow fired at acute disease from the country practitioner's quiver. In a large number of less serious cases it makes a capital commencement; probably, however, rather by its unloading the intestinal canal than by any direct action upon the circulation.†

The saline treatment is still in common use, and over many patients potash exercises a powerful sedative influence. The effects of acetate of ammonia over the cutaneous vessels in inducing perspiration with its apyretic consequences, render it a favourite remedy with many; and it is admirably adapted to domestic use, there being no room for doubt but that a dose or two of acetate of ammonia have arrested in its early stages many a threatening pyrexia. For we must remember, gentlemen, that the arrest of acute disease in its first manifestation is a much easier matter than the institution of recovery and repair after much injury has been done, when the affection has got strong hold of the patient.

While these general measures were being tried in their turn, and partially adopted partly discarded, other measures for affecting the circulation were being instituted. These were measures applied externally. Blisters, counter-irritants, dry cupping, etc., had long been in vogue, and were known to exercise in a smaller degree the same action as wet-cupping and leeches; viz., attracting the blood to the cutaneous vessels and so relieving the inflamed part beneath, according to the law of Schroeder van der Kolk. But for this to be successful it is necessary that the blood supply of the inflamed part, and of the skin operated upon, should actually be derived from the same arterial trunk. In costal pleurisy, where the pleura and the skin alike derive their blood-supply from the intercostal arteries the effect of this local treatment is much more marked than in pneumonia with visceral pleurisy. To the French school belongs the credit of first affecting the general circulation by efficient external measures. Junod invented a boot by which he could lock up a quantity of blood in a leg, actually bleeding the patient to the extent of the blood so imprisoned; and then when desirable, permitting the blood to once more rejoin the general current. But Junod's boots ere long went the way of many ingenious but impracticable measures, namely, to oblivion, where, I am afraid, they are likely to remain. But if this is the destiny of Junod's boots, a far different future is before another French method of affecting the general circulation by external appliances, viz., the jacket-poultice. The excellent effects of this application in thoracic affections are well known to us all, especially in pneumonia, and in the acute pulmonary congestion, commonly seen in the course of organic diseases of the heart. The application of moist heat to so large an area of skin, with its myriads of minute vessels, exercises a marked effect over the circulation. The vessels of an extensive area are dilated, and therefore hold more blood; the consequence of which is, that practically the vascular system is relieved of the bulk of blood retained in these dilated vessels, as effectually as if the patient had been bled to an equal amount. A considerable quantity of blood can thus be withdrawn from the circulation in a manner that admits of its being returned again when desirable—a matter of immense practical importance. The temporary removal of a mass of blood from the circulation without its withdrawal from the body, in a form at once practicable and effective, is one of the greatest steps forward in modern therapeutics. After this exposition of the action of a jacket-poultice, it becomes unnecessary and superfluous to insist upon the constant renewal of the hot poultice, and the absurdity of allowing it to remain on when cold is at once manifest. When the principle of the use of the jacket-poultice becomes more generally known, its adoption will be much more extensively resorted to.

[*To be continued.*]

THE CASE OF THE LATE DR. H. W. FULLER.

By WILLIAM FULLER, Esq.;

WITH AN ACCOUNT OF THE *POST MORTEM* EXAMINATION.

By W. H. DICKINSON, M.D., F.R.C.P.,

Assistant Physician to St. George's Hospital.

I WAS called to see my brother, Dr. Fuller, on the evening of Monday, December 8th, and found him suffering from an incessant short hacking cough, with expectoration of glairy mucus, and complaining of great pain in the epigastrium extending over the whole region of the liver, with severe intercostal pain of the right side. He was unable to remain for a minute turned on his left side. His pulse was very intermitting and irregular; his tongue coated but moist. The temperature 102. His urine was scanty, high-coloured, and very loaded. On examination, I found no physical signs of either pleurisy or pneumonia. The percussion-sound was equal on both sides; but there was inability to expand the chest and to inflate the lungs, apparently owing to the pain. He told me that, with the exception of some little trouble with his bowels and loss of appetite, he had been quite well till the previous day, when he had been forced to return home, feeling very poorly and short breathed, and was unable to eat his dinner. However, the next day he managed to see his morning patients, and went out to pay his visits, but was again forced to return home from the pain and irritating cough. His bowels had not been well-relieved, though he had taken a dose of pills in the night. Knowing his tendency to rheumatic affections, I diagnosed rheumatism of the diaphragm and intercostals, and insisted on some days' rest in bed. On Tuesday, the 9th, he was somewhat relieved. His pulse was less intermitting and irregular. Temperature 101. The urine was still scanty. The bowels had been relieved with dark bilious evacuations. Contrary to my wish, he got up and received his patients as usual at home, but did not leave the house. At 5 P.M., he went to bed again, thoroughly knocked up; and at 6 P.M. I found him much exhausted, but otherwise better. Temperature barely 100 deg. The urine was more free, the pain and cough less. There was more power of inflating the lungs. On December 10th, he remained quietly in bed, and was much relieved in the evening. The urine was free, less high coloured, and without deposit. The pulse was regular, soft, 88; his cough still irritable when lying on his back, but much better when on his right side. Whenever he took food, he complained of pain in the act of swallowing, and for some time afterwards in the epigastrium. On the 11th, he was much better, saw several patients in his bedroom, and held two consultations. After this he had a severe rigor, followed by profuse perspiration; but at night the temperature was 99; the tongue was cleaning at the edge. Pulse 84, regular, soft. His general feelings were improved. On the 12th, he was much better; he was taking quinine and acid mixture. Temperature natural. Pulse about 80. The urine was free, clear, and fairly abundant. He worked at correcting proofs of the new edition of his work on *Rheumatism* till 11 P.M., did not sleep; and on the 13th and 14th became gradually worse, with more discomfort and pain in swallowing, more cough, and increased feeling of *malaise*. The tongue was more dry, and the urine loaded, but the pulse did not exceed 86, and the temperature did not exceed 100. On the afternoon of the 14th he had another rigor; and in the evening the temperature rose to 102 deg., with a feeling of general aching all over. I could detect nothing fresh by a most careful examination of the chest. It was on this afternoon that Mr. Manley Sims elicited from him that on the afternoon of the 7th, when he was taken ill and returned home, he had a rigor, so severe that he wrapped himself up in a railway rug and laid himself down before the fire, where he remained some hours. Up to this time there were no head-symptoms of any kind. On this day he sat up chatting about his case and other subjects with Mr. Sims, and wrote a prescription for himself as clearly and well as he had ever done. On my arrival at his house at 8.30 A.M. on the 15th, I was told that he had passed a quiet night, but was obstinate in refusing food, medicine, etc. I found him in a semicomatose condition, and was unable to elicit answers to my questions. He was unable to protrude the tongue. The conjunctivæ were congested; the pupils rather contracted; temperature 103 deg.; pulse 96. The scalp was hot. Difficulty in swallowing was more marked. The abdomen was soft. His urine was passed under him. Sir William Jenner, who saw him with me, noticed slight ptosis of the left eyelid. We agreed that the symptoms were those of blood-poisoning, probably uræmia. In the evening, a small quantity of urine was collected, and was found by Sir William Jenner and myself to contain albumen in distinct quantity. The temperature rose to 104.4. Pulse 100. On the 16th, the symptoms all increased in intensity; the coma became more profound. The pupils acted less. The temperature was 104 deg. He had great difficulty in swallowing, food was often retained in the mouth a minute or two before it was swallowed. The urine was examined; no albumen could be found. Ptosis of the left eyelid was more marked; there was slight drawing of the mouth. Dr. Barclay and Dr. Sieveking joined in the management of the case. From this time till death, at 4 P.M. on the 18th, the symptoms gradually increased in intensity, with loss of power in the right side, and rigidity of the flexors of the right arm, increased ptosis of the left eyelid, insensibility of the pupils, alteration in the axis of the eyeballs, muscular twitchings, and complete loss of the power of swallowing. After consulting together and carefully going over the symptoms, the case was diagnosed as one of abscess of the liver, with pyæmic deposits in the brain.

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* It seems strange that bleeding in its worse aspects should cling so tenaciously to the country where the earliest attempts to do away with it commenced.

† It is possible, however, that unloading the bowels may permit of distension of the abdominal veins, and so act like bleeding.

The *post mortem* examination of Dr. H. W. Fuller was made on December 20th, 1873. Externally, the body presented no signs of disease. There was a recent excoriation made by a blister on the back of the neck, and there were marks of leeches on the temples.

Head.—The dura mater was somewhat injected, and was firmly adherent to the anterior part of the vault, from which it had to be torn, leaving an irregular layer of fibrous tissue adherent to the bone. The bone itself was roughened. The pia mater was intensely injected. The convolutions were somewhat flattened. A large number of abscesses, perhaps more than a score, were found in various parts of the brain. These were abundant in the white matter of the centrum ovale; some were found in the grey matter of the convolutions, and some were in contact with the processes of the pia mater. In these situations, the abscesses mostly varied in size from that of a pea to that of a small bean, though some were no larger than mustard-seeds. A large collection of matter undermined the floor of both lateral ventricles, and had burst by a small opening into the left through the optic thalamus. This layer of pus was of irregular thickness; it was separated from the floor of the ventricles by a layer of brain-substance about an eighth of an inch in thickness; it extended horizontally more or less parallel to the floor of the ventricles, involving the optic thalami and corpora striata on both sides. Beneath the matter was a stratum of intense injection. The collection of matter was of irregular thickness, having a mean thickness of about a quarter of an inch. The lateral ventricles each contained a small quantity of sero-purulent fluid; the fluid being the more purulent in the left, into which the abscess had burst as described. The abscesses were generally surrounded by congestion, but nowhere so intensely as between the base of the brain and the floor of the ventricles. The abscesses all appeared to be quite recent, and about equally so. The pus had the colour and consistence of thick cream. The membranes at the base of the brain, especially about the pons and in the space between the pons and the optic commissure, were greatly thickened, evidently by old meningitis. The thickness surrounded the roots of the third nerves, and covered all the adjacent parts.

Chest.—At the apex of the right lung was an ancient vomica, about as large as a walnut, which was occupied by a mass of soft cretaceous matter, easily detached from its walls. The lower part of this lung was intensely injected, approaching, but not amounting to, hepatisation. It was in a state such as precedes the formation of pyæmic abscesses. A few pleural adhesions existed over the position of the vomica. No recent or characteristic tubercles existed in this lung or elsewhere. The left lung was attached to the chest by a few adhesions at the back. The lung was congested posteriorly, to a less extent than the right lung; it was in other respects natural. In cutting through the root of this lung the cavity of an abscess was exposed, which was partially empty, but might, if distended, have held an orange. This lay in the posterior mediastinum, and in contact with the root of the left lung, the outside of the left bronchus being somewhat eroded. It lay posterior to the pleural cavity, close to the left side of the œsophagus. It was surmised, from its position, and the impossibility of finding any other source for the pus, that it had originated in one of the bronchial glands. The heart was uncontracted; the valves were healthy, The blood was fluid, with the exception of a large elastic decolorised clot in the right ventricle.

Abdomen.—The peritoneum was free from adhesions, and there were no obvious signs of disease in this cavity. The liver was perfectly natural, excepting the presence of a gall-stone, almost exactly of the size and shape of an olive, in the gall-bladder. The kidneys were of full size, smooth and natural, excepting that they were somewhat congested. The bladder was not examined.

Death in this case was clearly due to pyæmia, the suppurative results of which were limited to the brain. The origin of the pyæmia must be attributed to the mediastinal or postpleural abscess, since no external or other source could be discovered.

The only pathological difficulty is in the origin of this abscess; it could not be traced to the œsophagus or spine, and it clearly had not crept up from the abdominal cavity. In the absence of any obvious source, it was presumed to have taken its rise in one of the bronchial glands, possibly as the result of tubercle, such as had given rise to the vomica at the right apex. But the extreme rarity of such a result of tubercular disease must leave some doubt upon the origin of the abscess to which the pyæmia was due.

CLINICAL MEMORANDA.

CONGENITAL STRANGULATED HERNIA IN AN INFANT.

A HEALTHY thriving boy, 10 days old, had a fit of crying, which lasted three hours during the middle of the night. He vomited repeatedly in the course of the early morning; though he sucked the breast, all that he swallowed seemed to come up. It was then observed that he had a considerable tumour in the scrotum, on the right side. This the nurse fomented with hot water. When I saw the child in the afternoon, the vomiting was still continuing, and the bowels, contrary to custom, had not acted since the previous evening. The child was evidently suffering, but there was no fever, nor any unnatural fulness in the abdomen. On examining the scrotum, it was evident enough that the swelling was an inguinal hernia. The testicle of the right side was felt in contact with the protruding end of the hernia, but the cord could not be made out, being lost in the tumour. On the left side, both testicle and cord were found in a natural condition. The handling of the hernia caused a good deal of pain to the child, so that taxis was not much persisted in, and was quite unavailing. At the same time, the symptoms did not seem very urgent; and, as the relatives stated that the tumour was not so large as when first observed, I decided to wait, directing that enemata should be administered, and that carminatives should be used to prevent the child's crying. In the evening, the tumour was somewhat less than in the afternoon, and the child was easier, though the hernia could not yet be reduced, and there was no action of the bowels. Next morning, the hernia was gone. The bowels had acted during the night, and the vomiting had ceased. With the exception of slight feverishness, which passed off during the course of the day, the child was quite well. Ten days have now elapsed; the hernia has not returned, and the infant is in perfect health.

No doubt, the hernia was congenital and strangulated. Its rare occurrence at such an early age and its spontaneous cure seem to make it worthy of record. ROBERT SOMERVILLE, M.D., Galashiels.

COMPOUND DISLOCATION OF ANKLE: RECOVERY.

J. J., a collier, aged 40, married, robust and healthy, whilst at work on September 10th, 1872, in the pit using a pike in a sitting position, was suddenly knocked over by some falling coal into a hole which was just behind him. His foot became entangled in the *débris*; he was thus partially suspended by it, and the following accident was the result. The foot was turned inwards at a right angle to the leg. A wound three inches long, running from before backwards, was made exactly over the outer ankle. Through the wound were thrust fully two inches of the tibia, with the articulating surface for the astralagus intact, together with the jagged end of the fractured fibula. The shaft of the fibula was broken near the external malleolus, leaving the lower fragment (about 1¼ inches) in its natural position. Chloroform having been administered, an effort was made to reduce the dislocation. This being found impossible, I then sawed off rather more than three-fourths of an inch of the lower end of the tibia, together with a quarter of an inch of the lower end of the upper fragment of the fibula, and, with bone-forceps, removed the jagged portions of bone on the lower fragment of the fibula. I then returned the bones into position, taking care to place the two ends of the fibula in apposition. The edges of the wound were brought together with sutures, and a back splint extending above the knee-joint, with foot-piece, was applied. The wound was dressed with carbolic lotion. In the third week after the operation, an abscess formed over the shaft of the tibia about three inches above the ankle-joint. This was freely opened, and a considerable quantity of fœtid pus escaped. Liberal diet was allowed, a solution of Condy's fluid was injected daily into the incision, and ten minims of tincture of perchloride of iron were given three times a day. From this time the leg progressed favourably, and, in the thirteenth week after the occurrence of the accident, the splint was removed and the leg bandaged from the foot upwards. In the fourteenth week, the patient went out with the help of crutches. In the seventeenth week, he was able to stand without help or support. There was fair motion in the ankle-joint, the patient being able to flex and extend his foot. On January 28th, 1873, the man was able to stand on the injured leg, supporting the whole weight of his body, without any help. On October 1st, he was now able to walk some miles without feeling fatigue, with the simple aid of a stick. There is now but slight deformity of the ankle, and very little shortening of the leg.

HUGH R. KER, Cradley Heath.

ON ALLEGED INSUSCEPTIBILITY OF VACCINATION.

THE doctrine of the insusceptibility of certain subjects of vaccination seems universally maintained by writers on that important branch of medicine. It is also recognised by the law of the land; for, both the English and Scotch Vaccination Acts provide for the granting of certificates of insusceptibility, and a certain number of such certificates are annually granted. During the few years I have been in practice, vaccination has engaged much of my attention. I have performed the operation in about six thousand cases; but in not one of these have I found a single case of insusceptibility. Instances of failure after the first operation have been rare, varying from one in a hundred to one in three hundred. On the operation being repeated, almost all were successful, and, to the best of my recollection, only in one case did vaccination have to be performed three times before it took effect. The cause of each failure could easily be found in the circumstance that the operation had been carelessly performed, the lymph too old, or that it had been wiped off by the person in charge of the child. I think it right to note these observations, in the hope that they may elicit the opinion on the doctrine of insusceptibility of those more conversant with vaccination than I can pretend to be.

ROBERT COWIE, M.A., M.D., Lerwick, N.B.

ON A PECULIAR FORM OF NYSTAGMUS.

I HAVE lately had occasion to observe a peculiar form of nystagmus, which, I believe has not hitherto been noticed. My attention was first drawn to the subject by my friend and colleague Mr. Seaton, who has met with several well marked cases of the kind among his hospital patients. These cases I was enabled to examine minutely, and to enter into the chief clinical facts of interest which presented themselves to my notice.

The history and symptoms differ but little in the cases already observed, but a fact worthy of special note is, that all the patients as yet examined are by occupation colliers. The disease is ushered in by no premonitory symptom, is persistent, not amenable to treatment, and usually occurs after the age of twenty-one. Further than the oscillation of the globes, which is usually a horizontal one, no trace of disease —either local or constitutional—can be found. The eyes are normal in shape and colour; the pupils act well; and the muscular movements are performed naturally, when the body is in the erect posture. The last patient under my care, suffering from this disease, had hypermetropic astigmatism; but as astigmatism does not, so far as I am aware, produce nystagmus, and the anomaly of refraction in this case is most likely congenital, we may, I think, with certainty assume that it has no essential bearing in the production of the disease under consideration.

One peculiar feature of the disease is the influence which the position of the body has over it. In the stooping posture—the position of a miner when at work—the oscillation of the globes occurs: as soon as the body is erect, the eyes cease their unnatural movements. Family history does not point to the inheritance of cerebral disease. Syphilis is not a factor in any one of the cases, The urine is healthy, the eyes present no ophthalmoscopic appearance of disease, and the power of vision is perfect.

In some patients the globes oscillate as soon as evening advances, but this is an unfrequent symptom. I was at first impressed with the belief that pigmentation of the retina lay at the root of the mischief, but no single case under my care has presented any disease of that structure.

The following is the history of one case. The patient describes the commencement of the attack thus. "I was stooping at work, being quite well in health, and my eyesight good, when suddenly the light from my lamp appeared to be moving to and fro, and objects became indistinct. When I stood up the sight returned. This peculiar condition has always since occurred, when I have stooped to begin work; and my eyes have rolled from side to side so long as I have continued with my body bent. As soon as I stood erect, the rapid movements of the eyes ceased and clearness of sight returned. During the past two years I have been accustoming myself to work with my eyes moving with great rapidity, consequently I cannot get much coal, and lately I have given over working, vision has become so dim."

This man I purposely admitted as an in-patient to watch his case, and try various kinds of treatment. Iron, strychnine, arsenic, quinine, and other drugs were taken without the slightest benefit. He was therefore made an out-patient at the end of six weeks, and has since twice presented himself for examination; but I was unable to detect any fresh symptoms which would tend to throw a light upon one of the most interesting class of cases I have ever seen.

R. P. OGLESBY, Leeds.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

UNIVERSITY COLLEGE HOSPITAL.

AMPUTATION OF THE BREAST BY AN ELASTIC LIGATURE.

(Under the care of SIR HENRY THOMPSON.)

IN our number of November 29th, 1873, we gave an account of an operation performed at University College Hospital by Sir Henry Thompson, in which an elastic ligature was used for the removal of the female breast, according to the plan first introduced in 1862 by Dr. Silvestri of Vicenza, and lately more extensively practised by Professor Dittel of Vienna. The patient is now convalescent, and we are enabled, by the courtesy of Mr. Buckston Browne, the house-surgeon, to give some particulars respecting the progress of the case, and the lessons to be learnt from it.

The operation took place on November 21st, the base of the breast being transfixed and each half constricted by a separate ligature. The patient was a middle-aged woman of very nervous and excitable temperament. Next day, one of the ligatures snapped, and was not replaced; indeed, Professor Dittel himself, in dealing with tumours having a broad base, generally constricts but one-half at a time, thus diminishing the size of the open wound, the amount of the discharge, and also, as he thinks, the danger of purulent infection. On the 23rd, symptoms of erysipelas appeared, and, for the next ten days, the progress of the case was complicated by a sharp attack of this disease. On December 2nd, 1873, the rash had nearly gone, and the patient was improving; the elastic ligature, which had become quite loose, was tightened. On December 9th, 1873, the broken ligature was replaced, and advantage was taken of the opportunity again to tighten the first cord. On the 15th, the first ligature came away, and the second was tied afresh; this also came away with the whole of the breast and tumour on the 19th. A somewhat excavated granulating ulcer was then left, measuring about four inches by two, which is now nearly healed.

It will be seen, from this brief abstract, that the progress of this first case was not quite as satisfactory as might have been wished—chiefly, however, owing to accidents which may be avoided another time. In the first place, the ligature used was by no means well adapted for its purpose; it was composed of the elastic tubing which, when stamped with perforations, is called "fine drainage-tubing," and was adopted by Professor Dittel as a makeshift, because it was the only material at all suited to his purpose which he could find in commerce. Although as large as a No. 3 or 4 catheter, it has comparatively little strength. Sir Henry Thompson, at the time of the operation, remarked that he was afraid to use much force before tying, for fear the elastic should break, adding that, although two or three fingers could be readily passed under it, he thought the ligature was as tight as any girl would be likely to wear to keep a net on her head. In spite of his caution, however, one of the ligatures did actually break next day. In future, Sir Henry will use a ligature which he has caused to be made specially; it is a *solid* India-rubber cord, a little finer than the tubing used by Professor Dittel, but immensely stronger; indeed, it requires a very considerable amount of force to break it. Messrs. Weiss have now a quantity of it in stock. We have only to add that, after the second tying, as after the first, the pain was not severe, and was entirely relieved by the subcutaneous injection of a quarter of a grain of morphia.

Unless the immunity from pyæmia, which Professor Dittel claims for his method of operating, can be clearly proved, we do not anticipate that it will be frequently practised, or, at all events, recommended by the profession in general. There is, however, a large class of patients whose almost insane horror of the knife drives them to submit in preference to any other treatment, no matter how prolonged; and we trust that surgeons will not at once hand over Professor Dittel's invention to the quacks who now trade upon these cowardly fears, and who, while torturing their patients with chloride of zinc paste or potassa cum calce, entertain them with the vilest slanders on the profession they disgrace.

THE GENERAL INFIRMARY, LEEDS.

PRIMARY AMPUTATION OF UPPER EXTREMITY, INCLUDING SCAPULA AND OUTER HALF OF CLAVICLE: ENTRANCE OF AIR INTO SUBCLAVIAN VEIN: RECOVERY.

(Under the care of Mr. JESSOP.)

[Reported by Mr. A. W. M. ROBSON.]

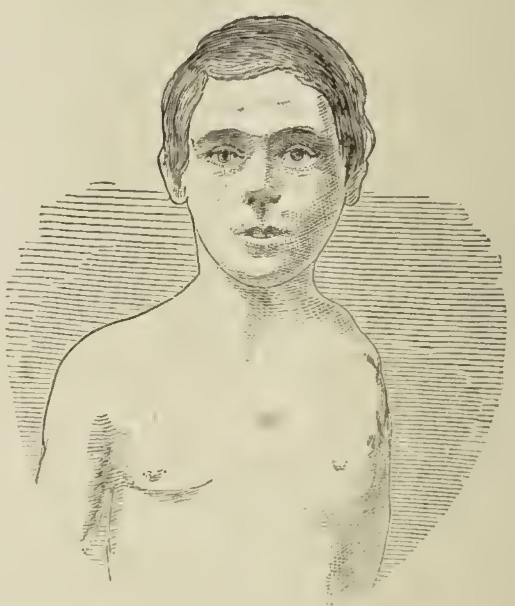
JOHN CLARK, aged 14, a factory operative, residing at 4, High Street, Leeds, was admitted on April 28th, 1873. On the day of admission, whilst passing underneath some machinery by a route which he had been accustomed to take, his left arm was caught between large cog-wheels, the teeth of which were about two inches long, and dragged, he thinks, quite through. He did not lose consciousness immediately, but was able to walk a few yards towards some fellow-workmen, when he fainted. After a temporary rally, he again became insensible, and in that condition was brought to the Infirmary. He had lost some blood, but not a large quantity.

On admission, he was extremely pale and very restless, tossing his head from side to side. The pulse was hurried and scarcely perceptible; the breathing irregular; the pupils dilated, and the eyelids closed. He was covered with cold sweat, and lay insensible, except when roused to temporary consciousness by loud shouting. The left humerus was found to be broken across between the anatomical and surgical necks; and the fractured ends, which were fully exposed, were very rough and jagged. The soft tissues connecting the limb with the trunk were all divided, except about three fingers' breadth of skin on the outer and posterior aspect of the shoulder. The subclavian artery, securely plugged, was seen faintly pulsating beneath the clavicle.

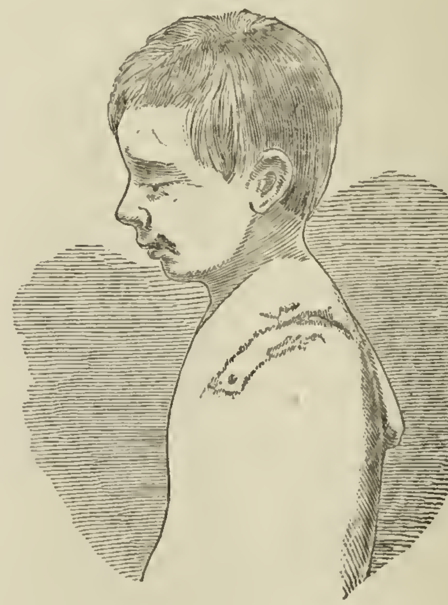
The operation was performed during the continuance of the shock. Ether having been administered on a sponge, the small bond of union between the arm and the trunk was divided by means of a small catlin. The tissues in front of the shoulder-joint, though severely bruised, were carefully dissected up so as to make an anterior flap. The joint was then opened, and the head of the bone removed. The subclavian artery in the third part of its course was made secure by careful torsion. It was now discovered that there was a considerable deficiency of cover; hence it was decided to remove the scapula, which was at once proceeded with by reflecting the skin and dividing its upper attachments. The body of the bone was then grasped by the left hand, so as to put the muscles attached to the base on the stretch, which were divided from before backwards. Whilst cutting through the last attachments of the scapula, two distinct and loud whiffs were heard, caused by the rush of air into the subclavian vein. Digital pressure was immediately applied to the open vessel; but the patient became suddenly deadly pale and pulseless. The administration of ether was at once stopped; and, without waiting for a rally—whilst assistants were busy with artificial respiration, drawing the tongue forward, and dashing cold water on the face and chest—the operation was proceeded with, the remaining connections of the scapula being divided, and the outer half of the clavicle being removed by bone-forceps.

Only about three ounces of blood were lost; and only three arteries, including the subclavian, required twisting. The wound was well sponged out, and the edges were brought as near as possible by wire sutures; nevertheless a small space was left uncovered, from a deficiency of integument. A pad of lint was firmly strapped over the wound, and over that a flannel bandage was applied. Twice during the operation, his condition was most critical. As soon as he became conscious, brandy and water was administered. He was wrapped in blankets, and allowed to remain on the operation-table for several hours, occasionally taking a little brandy and water; thence he was removed to the ward, and, after lying for a few minutes before the fire, was placed on a water-bed.

For the first few days after the operation, he was feverish and delirious; but after that the temperature gradually decreased, his pulse became slower and stronger, and his general condition improved in all ways. The edges of the flaps and a considerable part of the anterior one sloughed; the sloughs separating on May 6th, leaving a healthy granulating surface, which on May 7th had about a dozen grafts of cuticle implanted, after which it healed rapidly.



He was allowed to get up for the first time on May 8th, ten days after the operation, and felt no inconvenience from so doing. The wound had perfectly healed on the 17th; and he was made an out-patient on June 21st, previous to which he was photographed from the front and from the left side, as seen in the accompanying engravings, taken from the photographs.



August 18th. As he was walking in the streets, his foot tripped against a stone, and he fell heavily on his left side, hurting himself severely. He came to the Infirmary soon afterwards, when swelling and ecchymosis were found over the situation of the recent wound. He was put to bed, and had evaporating lotion applied to the injured part; but he became feverish and poorly, and on August 20th (two days after he fell), an abscess about the size of a hen's egg was opened over the cut end of the clavicle, giving exit to a quantity of fœtid sanious pus, with some bubbles of air. This was followed by a slight attack of erysipelas, the redness extending for a few inches round the wound and in streaks down the back, from which he recovered in a few days. The discharge gradually diminished in quantity, and the wound healed, so that he was discharged cured on August 27th.

October 20th. He came to report himself at the Infirmary, looking well nourished and strong. He said he had no pain, and was as well as before the accident.

BRISTOL ROYAL INFIRMARY.*

EXCISION OF THE ELBOW.

By Charles Steele, F.R.C.S.

This case illustrates the advantage to be derived from the adoption of Mr. Maunder's modification of the operation for excision of the elbow, whereby the extensor power of the triceps muscle is retained.

George Hall, aged 13, in October 1872, while jumping over a hedge, caught his foot in a bough, and fell on his left side. He felt little ill-effect for a week, but afterwards the wrist and forearm became swollen, and the elbow stiff. No dislocation or fracture occurred. The swelling subsided; but, three months afterwards, chronic inflammation of the elbow-joint showed itself, for which he was under treatment. On March 10th, 1873, he became under my care; and, after a fortnight's observation, I wished to excise the joint, as I saw that no improvement would take place, and that this operation must ultimately be performed, or that disease, if left alone, would so spread and impair the general health, that amputation alone would be justifiable. I was urged, as disease was not far advanced, to try some weeks' change of air in the country, and consented.

However, when I saw the patient again, he was much worse; he was thin, his appetite was bad, and hectic was commencing; the elbow was much swollen; all the synovial membranes had undergone gelatinous degeneration; there were two sinuses discharging pus, and the bones were partly denuded. Amputation or death would soon have followed. On May 13th, with the approval of my colleagues at the infirmary, I excised the joint, cutting through the triceps to the bone, cleared each half off carefully from the bones, retaining on the outer side the continuity of the triceps, anconeus, and fascia, and completed the operation as usual. The case did very well; the wound healed kindly, though it discharged pus at some points for several weeks. The appetite and strength returned. I began passive movements gently from the first week, increasing as the patient and the parts could bear them; and soon taught him to perform them himself. The result you see; he can flex the arm so as easily to put his hand to his mouth, extend perfectly as well when the hand is held horizontally as when the arm is dropped by the side; showing that muscular power, and not gravitation, is the cause. He can also supinate and pronate to some extent; but the power of extension is the one specially retained by Mr. Maunder's operation; and this boy has extension so perfect, and such a degree of flexion, that, with his coat on, it is really difficult, while he moves his arms about, to judge which elbow has been operated upon, or rather, to believe that either can have been interfered with.

MANCHESTER ROYAL INFIRMARY.

POPLITEAL ANEURISM (RIGHT); LIGATURE OF FEMORAL ARTERY; FLUCTUATION IN ANEURISMAL TUMOUR FOR SEVEN WEEKS AFTERWARDS.

(Under the care of Mr. Smith.)

[Communicated by Mr. Jones, Pathological Registrar.]

I. J., aged 47, was admitted on June 2nd, 1873, with a pulsating tumour, about the size of the closed fist, in the right popliteal space. Pulsation was eccentric, and accompanied with a distinct *bruit*. There was considerable œdema of the leg, and pain of a burning character extended down the back of the limb. The patient first noticed the pain about two months prior to admission, and thought it was rheumatic. Pressure by means of a tourniquet, combined with flexion of the limb, was first tried, but soon had to be abandoned, in consequence of the large amount necessary to control the circulation and the pain which the patient suffered as the result. It was, therefore, determined to tie the femoral artery in Scarpa's triangle. The operation was performed on June 18th. The artery was exposed by an oblique incision from without, inwards, and tied with a catgut ligature. Pulsation in the tumour instantly stopped, and the patient progressed favourably for some days, when erysipelas of the thigh, accompanied with the formation of numerous abscesses, set in. The wound took on sloughy action; its discharge became ichorous, and very offensive. The aneurismal tumour was examined a week after operation, and found to be smaller, but quite soft and fluctuating. There was no return of pulsation.

July 3rd.—The patient had a severe rigor, accompanied with a high pulse and temperature, and followed by profuse perspiration. He was ordered two grains of disulphate of quinine, and half a grain of powdered opium, in a pill, every two hours; also six ounces of brandy daily.

July 5th.—He had another rigor, which was, however, far less severe than the first.

July 10th.—His condition was improving; the tongue was cleaner; the appetite returning. He was ordered iron, in the form of tartrate. Redness and suppuration continued for another fortnight.

July 30th.—His condition was so much improved as to allow his being sent to the Convalescent Home at Cheadle. About a week after his admission there, the tumour began to harden, the abscesses left him, and his general health rapidly improved.

Nov. 28th.—He came to report himself; he walked two miles without any inconvenience. The only evidence of the original aneurismal tumour consisted in a hardened fulness. There was still pain down the back of the limb, with some puffiness about the ankle.

REVIEWS AND NOTICES.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By William Leishman, M.D., Professor of Midwifery in the University of Glasgow. Pp. 835. Glasgow: Maclehose. 1873.

Practitioners and students, as well as teachers, will, we feel sure, welcome the appearance of this, the latest, treatise on midwifery. It is written in a clear and intelligent manner; showing, not only a thorough knowledge of the science and art of obstetrics, but also great skill in representing fairly the conflicting opinions of the various authors of eminence who have written upon this important branch of practice. When we consider how much this includes, and how difficult it is to speak dogmatically, we think Dr. Leishman deserves great credit for presenting to the profession a work that will unquestionably supply a want that has been long felt, coming, as it does, from one who can speak with authority, both as a teacher and as a practitioner, and who is already favourably known by important contributions to obstetric literature. In presuming to criticise the author's views, we do so in no hostile spirit; for, after a careful perusal of the work, we feel that he deserves our gratitude in having embodied, in one comprehensive volume, the modern experience of midwifery, which, during the last few years, has been elaborated into a science as well as an art.

The introductory chapter is one of great interest, including, as it does, the History of Midwifery from the earliest times. Hippocrates taught that the head was the only natural presentation, enforcing his argument by the well-known illustration of the olive in the neck of the oil-jar, but failing to see that it was immaterial which end presented first. Several centuries elapsed before Celsus advocated *vel etiam in pedes*, thus correcting an error. The advantage of this is manifest; the expense of maternal and fœtal life during all the years that the Hippocratic rule of practice held good, is impossible to compute. Later on, we have the description of the crotchet, and also a method of delivery by the application of two crotchets, one to each side of the head; the mechanical principle of the midwifery forceps being thus foreshadowed. The use of this important instrument by the Arabian physicians, about the tenth century, is clearly referred to by Avicenna. Not till 1565 was there any work in English on midwifery, and then only a translation of Eucharius Rodian, under the title of *The Byrthe of Mankynde*.

To Ambroise Paré we are indebted for the suggestion of turning by the feet in difficult cranial presentations. He was the famous restorer and improver of midwifery, and gave an impetus to the study of the subject, which was continued by his pupil Guillemeau, and other distinguished surgeons, till the Parisian school became, undoubtedly, the first in the world. Then we have the consideration of the Mechanism of Parturition, set forth first by Ould of Dublin, developed in the celebrated essay of Nägele, and critically analysed by our author himself in a recent treatise, as well as in the present work. The description of the comparative anatomy of the pelvis, with which the introductory chapter concludes, facilitates materially the study and comprehension of this too often neglected basis of a sound understanding of the art of midwifery.

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* Read, and patient exhibited, before the Bath and Bristol Branch.

The Anatomical and Physiological chapters, including Menstruation and the Development of the Ovum and Embryo, are clearly written, and are illustrated by plates. More than one hundred pages are devoted to this portion of the subject; but we are sorry to find that only six are allotted to a consideration of the placenta and its circulation—scarcely sufficient to give a full and impartial account of what has occupied the attention of many distinguished anatomists, and which even yet, as Dr. Braxton Hicks has shown in his recent elaborate paper, can hardly be looked upon as finally settled. We fully agree with Dr. Leishman, that it would be impossible to enter upon a full consideration of all the differences of opinion that still exist; but, whilst these differences remain, we think it would be better to state the arguments on both sides, thus enabling future observers to investigate yet further the points that are still *sub judice*.

In giving instructions for a digital examination, sufficient stress is not laid on the placing the patient in the semiprone position, or the employment of the left hand—matters of no small importance where the presentation is difficult to ascertain.

In regard to the Treatment of Extrauterine Fœtation, the author's views are hardly as advanced as we should have expected to find, considering the attention that has recently been given to the subject at the Obstetrical Society and elsewhere, and the discussions that have taken place upon it. The probability of a patient's recovery after the operation of gastrotomy is certainly greater than if the case be left to itself, when death from rupture of the sac and subsequent hæmorrhage is almost inevitable. The almost unanimous opinion of those who have met with these formidable cases is in favour of extracting the child and leaving the placenta *in situ*; and yet Dr. Leishman tells us that the great and special danger which attends the performance of gastrotomy is the removal of the placenta, attached, as it probably is, to an undulating and irregular surface—an opinion which few will endorse.

In discussing the Treatment of Excessive Vomiting during Pregnancy, sufficient prominence is not given to the employment of pessaries of morphia and atropia, and other local remedies—agents which often prove of great value when all other means have failed.

Dr. Leishman's management of the Third Stage of Labour is certainly not that of most modern obstetricians. Expression of the placenta by compressing the uterus externally, as advocated by Credé, is far preferable to making traction upon the cord, or introducing the hand into the uterus, and is much more in accordance with Nature. The risk of subsequent hæmorrhage, as well as of "after-pains," is also materially lessened by Credé's method.

The description of the Mechanism of Labour, as we should expect from the author's previous investigation, is very clear and explicit; and the accompanying plates will prove of much assistance to a proper understanding of this important basis of all scientific management of operative midwifery.

In the chapter on Transverse Presentations, we cannot agree with Dr. Leishman that, though "there are signs which, when distinct, may lead us, before the occurrence of labour, to suspect the existence of a transverse presentation, yet it is very doubtful whether they can ever enable us to form a confident opinion until the presenting part comes within reach of the finger". Not only can the experienced accoucheur suspect, but he can also detect, a transverse presentation by external manipulation alone; and we think Wigand's views worthy of being better known and more forcibly insisted on—much valuable time being gained, and much risk to both mother and child being avoided, by resorting to this expedient. Dr. Leishman tells us that no one point is of so much importance as to recognise the position of the fœtus at the earliest possible moment; and we quite agree with him, but not in waiting until the presenting part comes within reach of the finger.

The chapter on Placenta Prævia with hæmorrhage before delivery is very clearly given; and the *resumé* of the various plans of treatment will prove of great service. The author concludes that "the operation of turning is that in which the great majority of experienced practitioners still place the greatest confidence".

The subject of Hæmorrhage after Delivery is ably and exhaustively treated, and the author's remarks on it will well repay perusal; more especially at the present time, when it is exciting much interest.

In describing the various methods of treating Chronic Inversion of the Uterus, we fail to notice any mention of Dr. Barnes's method of incising the cervix, as described by him in a recent number of the *Obstetrical Journal*, and which bids fair to supersede the extreme resort of amputation.

The application of the Forceps at an early stage of labour, in some cases even before the os uteri is fully dilated, where, from feeble uterine action or disproportion between the size of the fœtal head and the capacity of the pelvis, labour is considerably retarded, has been ably advocated by Dr. Hamilton and most modern obstetricians, but finds no support in the views expressed by Dr. Leishman in his chapters on this subject. We feel confident that many maternal as well as fœtal lives are annually saved by the more frequent application of these instruments than was formerly the case; to say nothing of the unnecessary waste of time on the part of the practitioner, and the anxiety and distress occasioned by allowing patients to become worn out by fruitless efforts, when, by the timely application of the long forceps, labour could be successfully completed. Dr. Leishman's opinion may be due partly to the author's expressed preference for the short over the long forceps, a matter in which we differ entirely from him; and the sooner the student is taught to regard their application as a simple and effectual aid to delivery, in place of a serious operation to be avoided if possible, the better. We ourselves have frequently been called in to cases where labour has been terminated successfully to both mother and child in a brief quarter of an hour, after hours of useless suffering and pain had been unnecessarily incurred. The advantage of the long forceps in enabling us to employ them at a much earlier stage than would be possible with the short forceps, the much greater facility in simulating the natural efforts of parturition in the extraction of the head, the increased power of traction, and the diminished risk to the perinæum, as well as to the fœtal head, by pressure, are arguments, in our opinion, incontrovertible. In cases of uterine inertia, we consider the application of the long forceps much safer than the employment of ergot, upon which the author seems almost wholly to rely. The risk in most cases is not in applying the forceps, but in not doing so. We think, however, that the application of the ordinary obstetric binder, or manual compression alone, will often obviate the necessity of employing instruments; a dose of ergot being given as labour is being completed, to ensure efficient uterine contraction, and to lessen the risk of *post partum* hæmorrhage.

The various methods of inducing Premature Labour are fully discussed, that of Barnes being the one to which preference seems to be given.

We are glad to notice that the author expresses a great reluctance to send patients suffering from Puerperal Insanity to be immured in a lunatic asylum; and we quite agree with him, that to permit free association with relatives and friends is in the highest degree injudicious.

The chapter on Puerperal Eclampsia is well written; and, as the author states, "next to rupture of the uterus, this is the most disastrous affection which it is possible for us to encounter in the practice of obstetrics," and therefore is a subject with which all practitioners should be familiar.

Space will not admit of our going *seriatim* through the several chapters, nor is it necessary. We can conscientiously recommend the work as one of unusual excellence; and, though we may differ from the author in some points, as we have ventured to state, still we have little doubt that it will take its place as the recognised system of modern midwifery, to which the busy practitioner will gladly turn for reference in anxious cases, and the student adopt as his manual. It reflects great credit upon the author, and he well deserves the best thanks of the profession for supplying them with such an able and exhaustive treatise.

MILK-ANALYSIS: A PRACTICAL TREATISE ON THE EXAMINATION OF MILK (INCLUDING CREAM, BUTTER, AND CHEESE). By J. ALFRED WANKLYN, M.R.C.S., Corresponding Member of the Royal Bavarian Academy of Science, Public Analyst for Bucks. London: Trübner and Co. 1873.

THIS book is one of a class of manuals much needed at the present time. Its object is to place milk-analysis within the reach of the medical officer of health, and to diffuse sound knowledge relating to milk and dairy-produce generally. In the first chapters there is a description of milk; then comes an account of the instruments in use for the testing of milk, and the various defects of the lactometer are minutely described. Very plain directions for the performance of the analysis of milk follow in succeeding chapters. An official investigation into the condition of the milk supplied to the metropolitan workhouses furnishes an example of the methods of analysis. Cream, butter, cheese, koumiss, and condensed milk, are treated of in separate chapters.

One of the difficulties hitherto existing in milk-analysis has been in the calculation of the results; that is to say, the finding how much water has been added to a given sample of milk. Mr. WANKLYN shows that there is a constant ratio between the water naturally present and the "solids not fat"; and on the departure from this ratio in any given case he bases the calculation of the extraneous water. The removal of the cream does not alter this ratio, which, indeed, is maintained in the cream itself as well as in the skimmed milk. A complete milk-analysis, which used formerly to occupy three or four days, can now be executed in four or five hours. This shortening of operation is brought about by some apparently trifling alterations.

NOTES ON BOOKS.

Dr. Flint's *Treatise on the Principles and Practice of Medicine, designed for the Use of Practitioners and Students of Medicine* (Philadelphia, Lea; London, Trübner) appears thoroughly revised and brought up to the day in its third edition. Dr. Flint's treatise is a thoroughly reliable guide from beginning to end: in the chapters on the diagnosis of the diseases affecting the respiratory and circulatory system, the conscientious work of this able physician is especially noteworthy.

Professor Bentley's unrivalled *Manual of Botany* (Churchill and Co.) appears enlarged and revised in its third edition. It is a model of careful, conscientious, clear, and exhaustive description, and is one of the best of Churchill's admirable series of manuals.

Dr. Prosser James's Address on *The Progress of Medicine* (London, Baillière, Tindall, and Co.) might be more properly entitled "The Comic History of Medicine." It is curiously jerky and unconnected, and naïvely bald and incoherent. The novel information chiefly to be gathered from it is that, in respect to the uses of hydrate of chloral, bromide of potassium, and the electric cautery, Dr. James has been an illustrious inventor whose claims were unrecognised; and that, in respect to laryngoscopy, his claims are prior to those of Czermak. So little does the medical world know of its greatest men.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

The Action of Eucalyptol.—In a communication to the Medico-Physiological Society of the Lower Rhine (*Blätter für Heilwissensch.*, No. 14, 1873), Dr. Binz of Bonn described the results of some experiments which he had made, in conjunction with Herr Siegen, with eucalyptol, the ethereal oil of eucalyptus globulus. According to Cloëz, eucalyptol is not a simple body, and is volatilised at a temperature of 170 to 175 deg. cent. (338 to 347 deg. F.). Its antizymotic power is, Binz says, greater than that of quinine. It diminishes reflex irritability by direct action on the spinal cord or its prolongations. The temperature of the body in healthy subjects is reduced by it as by other ethereal oils; but the local and general action is milder, especially than that of camphor, which is chemically nearly allied to it. The administration of 5 grammes in water in the course of two hours was followed by a moderate sensation of dulness and weight in the limbs. There was no disturbance of the appetite, nor of sleep during the following night. The frequency of the pulse was slightly reduced. The urine showed no trace of irritation of the kidneys; it had a smell of eucalyptol for thirty-six hours, especially on being warmed, and had on its surface a brownish layer presenting a remarkable variation of colour. The smell of eucalyptol began to be observed about an hour and a half after the first gramme was taken. In all the four cases in which eucalyptol was given, the perspiration had an odour somewhat like amylic alcohol. Eucalyptol could be perceived in the respired air the next day. The dose of five grammes, given twice with an interval of two days, always produced the same results, and was never attended with mischief. The therapeutic value of eucalyptol, Binz says, depends on the fact that it can be given in large doses, that it remains long in the system, and is partly eliminated from it without undergoing change. In three cases of traumatic fever under the care of Von Mosengeil, and in one of acute articular rheumatism, it produced a marked diminution of the febrile symptoms; while it had no effect on the hectic fever attending advanced phthisis, or on an old quartan fever with chronic enlargement of the spleen.

Eucalyptus Globulus as a Febrifuge and Expectorant.—Dr. Hermann Œffinger, in describing (*Blätter für Heilwissensch.*, No. 14, 1873) the experiments which he has made on the therapeutic action of eucalyptus, states that there are two distinct kinds, distinguished by the form of their leaves, which he names *Eucalyptus globulus latifolius* and *longifolius*. The former he found to have little or no effect, while the latter scarcely ever failed. To this difference, Dr. Œffinger ascribes the contradictory results obtained by various writers on the subject. The *eucalyptus globulus longifolius* or *ensiformis* has short-stemmed, ensiform, parchment-like, grey-green leaves, from four to fourteen inches long; the greatest breadth is about one-sixth of the length. The surface is smooth, with scanty venation. The smell is pleasantly aromatic, somewhat reminding one of sage; the taste is bitterish, rather pungent, and remains for some time. The leaves of the *eucalyptus globulus latifolius* are from three to six inches long, and one-and-a-half to two-and-a-half inches broad: the colour is almost the same as of the *longifolius*, but the leaves are much less compact, and the venation is much more distinct. The smell is the same; the taste is not essentially different, but perhaps rather more bitter and less pungent. Comparing the effect of dry and of fresh leaves, Dr. Œffinger agrees with Lorinser, that a much smaller dose of the latter is required than of the former. While as much as half an ounce of the dry leaves was given in a day, the same result was produced by a few teaspoonfuls of Lorinser's tincture. This agrees with the experience of Gubler, who gave from sixty grains to half an ounce of the dried leaves in a day. The Vienna tincture of eucalyptus is made by bruising 100 parts of fresh leaves in a mortar with 200 of highly rectified spirit, digesting the mixture for fourteen days at a moderate temperature, then pressing out and filtering. The dose is two teaspoonfuls, given in some aromatic water, four and two hours before the expected paroxysm. Recovery often follows the use of about an ounce. Sometimes, however, twice or even four times as much is required.

Treatment of Diphtheria with Calomel and Soda.—Dr. E. L. Duer, of Philadelphia, highly extols (*American Supplement to Obstetrical Journal of Great Britain and Ireland*, July 1873) the efficacy of small doses of calomel and large doses of the bicarbonate of soda, and the free use of nutritious food and brandy. He states that he has treated a large number of cases of all grades of severity by this plan with satisfactory results, which, he says, was first suggested to him by Dr. Harlow. Two cases are related to illustrate this mode of treatment. Grace V., aged 5, previously strong and well, after short prodromic symptoms and a marked chill, presented all the general and local evidences of diphtheria. Her sister Alberta, aged 7, was taken sick the same morning, and presented an almost identical condition. The former had ten grains of chlorate of potassa every third hour, as recommended by Vogel; and the other one-eighth of a grain of calomel and five grains of bicarbonate of soda. A weak solution of carbolic acid as a disinfectant was applied locally, and the same supporting and stimulating plan was adopted in both cases. The following morning there was little change in either case. On the evening of the second day, however, there was the most marked improvement in Alberta, while Grace's symptoms showed little evidence of yielding. Dr. Duer now withdrew the calomel and continued the soda. By this time, in this case, the false membrane was coming away in detached fragments; but in the other child, there had as yet been no change for the better. On the evening of the fourth day, Alberta's tonsils were again covered with false membrane; calomel was again given for twenty-four hours, with the same positive result. From this time the soda was depended on entirely. At no time was there the slightest ptyalism; but as soon as the child had been long enough under the influence of the calomel, the false membrane seemed to yield up its connection with the tonsils, while at the same time the general symptoms began rapidly to abate. On the morning of the fifth day, the temperature had fallen to 99 deg. and the pulse to 90 deg., and from that time she steadily improved under the use of tonics and nutritious diet. On the other hand, Grace, to whom the chlorate of potash had been given, continued so ill that Dr. Duer substituted the calomel and soda treatment on the fourth day, with a like immediate result so far as the local trouble was concerned; but her convalescence was tedious, and was subsequently complicated with bilateral paralysis of the palate and lower limbs. In the course of a few weeks, Dr. Duer treated five other children in the family by the same plan, with complete success.

DISEASES OF WOMEN.

Gastrotomy for Uterine Tumours.—M. Boinet (*Gaz. Hebdomadaire*, Nos. 8, 13, 16, 23, 28, and 29; *Revue des Sciences Médicales*, vol. ii, part ii) endeavours to show that this operation should be rejected whenever the fibrous tumour is sessile, and especially when it is necessary to remove the uterus wholly or in part. The following are the conclusions to be drawn from this long memoir. In 14 gastrotomies, performed by surgeons who thought they had to deal with ovarian cysts, fibrous tumours more or less attacked by the bistoury or trocar were left *in situ* and the operation was abandoned. In spite of this, 9 women recovered; 5 died. Of 23 cases of extirpation of fibrous or fibro-cystic tumours, multilocular cysts, the uterus being left in its place, we must distinguish the cases of pediculated tumours, which alone gave 8 cures and 5 deaths, from the cases of sessile or interstitial tumours, 10 of which gave 10 deaths. Finally, 42 total extirpations of tumour and womb gave 32 deaths and 10 recoveries. In these three categories, hæmorrhage is the most frequent cause of death; and next to that peritonitis. Boinet concludes by practical advice concerning the performance of the operation, which does not differ much from ovariotomy.

Treatment of Laceration of the Female Perinæum.—Dr. D. Hayes Agnew (*American Supplement to the Obstetrical Journal of Great Britain and Ireland*, June 1873) speaks, after further experience, with great confidence of the value of his operation, described in 1867 (*Pennsylvania Hospital Reports*), for the cure of lacerations of the female perinæum. The chief points of practical interest are the closure of the recto-vaginal septum, and the restoration of the perineal continuity at a single operation; the use only of the interrupted wire suture, and no lateral division of the sphincter. The bowels are freely moved early in the day previous to the operation, and one or two grains of opium are afterwards administered, in order to prevent the descent of feculent matter into the rectum. After etherisation, the patient is placed on the back, in the lithotomy position, the limbs supported by assistants, and the sides of the laceration denuded to the extent of one inch in breadth, removing the thinnest possible layer of tissue. Next, the recto-vaginal septum is freshened. This is sometimes best done with the scissors. A long needle, supported on a handle—the eye being near the extremity—is armed with an iron thread, well coated with silver. Dr. Agnew uses for the first suture iron, in order that it may not break. The needle is entered three-quarters of an inch from the margin of the wound, below its lowest point, at the anterior part of the ischio-rectal fossa, and carried forwards and upwards, until it appears on the middle of the vaginal surface of the septum, just above the line of denudation; the thread is then picked out of the eye of the needle, and the latter withdrawn, and made to pass unarmed through the corresponding parts on the opposite side, emerging on the septum, close to the first. The wire is now passed through its eye, and, as the needle is withdrawn, makes the complete circuit of the wound, so that, when it is tightened, the parts are pursed together. Two or three other silver sutures are inserted, the blood carefully sponged away; or, what is better, washed away by a stream from a syringe, and the parts approximated, to favour which the limbs should be brought together. To maintain the apposition, perforated shot are run down the wires, and clamped with a pair of compressing forceps. A superficial suture is sometimes inserted with a curved needle between the deep ones. The subsequent treatment consists in securing the limbs of the patient together, removing the urine two or three times in the twenty-four hours, or by allowing a self-retaining catheter to remain in the bladder, having a small India-rubber tube attached to its extremity, in order to conduct the urine into a vessel properly placed. The bowels are to be kept quiet for seven or eight days with opium, and any painful accumulations of flatus in the rectum are to be removed by carefully introducing a female catheter. The diet should consist of milk, animal broth, eggs, cream, toast, and, after the fifth day, some solid food. The stitches are not removed until the seventh day; and on that day, or the day following, the bowels should be opened by small doses of castor oil, or some saline, at considerable intervals (two teaspoonfuls of oil every fourth hour). The utmost caution is to be observed in securing this first evacuation. The nurse should be directed to support the nates—the patient to avoid any strong straining effort; and, if necessary, the contents of the rectum may be softened by throwing into the bowel, very gently, a little warm water. The rectum may become impacted with a large mass, the expulsion of which would certainly tear asunder the tender line of union; and then it is proper to pick a channel through the centre of the mass, until its walls fall together, and it may safely be expelled. Once opened, the bowels should be locked up for four or five days, in order that the cicatrix may become solid.

Ovarian Tumour removed by Enucleation.—Dr. Walter Burnham, of Lowell, Massachusetts, reports (*Boston Medical and Surgical Journal*, July 24th, 1873) a case of this. It was his one hundred and ninty-ninth ovarian operation, and he says that it required somewhat less time than his previous ones. After opening the abdomen and drawing from the cyst, with Wells's ovarian trocar, nearly fifty pints of clear limpid serum, he made a small slit through the peritoneal coat near the pedicle, and with the handle of a scalpel separated the two coats to a small extent, until he could grasp them in each hand, and pulled them apart, and thus removed the entire sac proper of the tumour; the portion composed of peritoneum was laid back upon the abdomen. The atmosphere, though at a high temperature, soon contracted and corrugated the peritoneum. On the inner surface of the peritoneum, the vessels formed a complete network; but there was no hæmorrhage, except from one small artery where the peritoneal coat was divided, and here a small clot had formed. A ligature was applied here, and also one to an artery of the omentum, the ends being left out at the lower angle of the incision to keep it open for the discharge of matter. After waiting more than an hour, the sac was placed back in the cavity of the abdomen; the wound closed by three sutures, one of which passed through the edge of the peritoneum where the slit had been made. Over this, adhesive straps and a compress of cotton were placed, and secured by a straight bandage. The patient made a speedy recovery.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE WINGED SCREW TOURNIQUET.

By Surgeon Major A. Moffitt, Netley.

In consequence of the reports of Professor Longmore and other writers on Military Surgery, regarding the evils arising from the constriction of the limb in the application of the tourniquet for the arrest of hæmorrhage in gun-shot wounds, numerous experiments were conducted by me at Netley, with the view of obtaining an instrument, the use of which would not be attended with the serious and often fatal consequences described as occurring in warfare. The instruments at my disposal were, Lee's tourniquet, Mott's tourniquet, the field tourniquet of the British Service, Petit's tourniquet, Signoroni's clamp, and the artery compress used in the cure of aneurism.

The following were the qualities which it was decided a tourniquet for use in military surgery should possess: 1, portability; 2, simplicity; 3, good compressing power; 4, steadiness, so as not to shift position in lifting and laying the patient; and 5, not to constrict the limb.

Lee's tourniquet answered well for the arm, and was found to be portable, simple, and steady; but for the thigh it had not compressing power enough, and, in addition, it constricted the limb where the patient was at all muscular.

Mott's tourniquet answered fairly for the thigh, though deficient in compressing power; but in the arm, owing to its convex pad and peculiar shape, the slightest movement of the patient caused it to slip on one side or the other of the bone, where it could exercise no pressure on the vessel. It is not very portable, from its awkward shape.

The field tourniquet of the British service was found to have very little compressing power over the artery—the pad being too small. It, however, constricted the limb to a dangerous extent, and often, when it had no effect upon the arterial circulation, it completely arrested a return of blood through the veins. It has no quality but portability to recommend it.

Petit's tourniquet was found to have a good compressing power, which could be easily and quickly brought to bear or slackened. It is also very portable; but it constricts the limb, is liable to shift its position, and is rather complicated.

Signoroni's clamp possessed power of compression and did not constrict the limb; but it is too clumsy for field purposes, and liable to slip off the vessel.

The artery-compress for the cure of aneurism was found to have good compressing power, and did not constrict the limb; but it is deficient in all other requisite qualities. The idea of depressing the pad by the screw is good, and is the principle carried out in the tourniquet which will presently be described.

Thus far none of the tourniquets tried came up to the requirements sought for. A combination of the good qualities of all was then attempted, and for this purpose Petit's tourniquet was selected, as the base on which to work. The idea of wings and the shape of the pad were taken from Lee's. The wings, made of steel bars, were attached to the lower plate of Petit's tourniquet, and the strap carried across rollers at their points. When open, these wings extended out at each side, so as to give a span of 6½ inches, which extends the diameter of any ordinary thigh. A quadrangular wooden pad half an inch thick, two inches long, and one and a half broad, and slightly concave on its under surface, was fastened by a loop on the under surface of the lower plate. The tourniquet thus constructed was tried and found to be portable, had good compressing power, did not constrict the limb, but was a little complicated, owing to the strap having to pass over so many rollers, and had a tendency to turn over the long axis of the limb. This tendency to turn over, however, was remedied by lowering the points of the wings; but then it was found these latter constricted the limb.

The wings were then attached to the upper plate, instead of to the lower one; the lower plate was removed altogether, and a small square plate substituted and attached to the pad by four screws, having the strap permanently fixed under it. The instrument thus constructed is shown in the accompanying figure (1). On trial, it was found to possess all the qualities sought for—it is portable, simple, has good compressing power, is steady, and does not constrict the limb. When folded up, it forms a package 3¾ inches long, 2 inches broad, and 1¾ deep (Fig. 2). There is a double shortening of the strap at each side, and in this way the requisite amount of pressure is rapidly reached, the pad is pressed down upon the vessel by the action of the screw, as in the artery compress for the cure of aneurism, and at the same time the wings are raised and all constriction of the limb at each side of the pad removed. The double shortening of the strap is of great importance, as it was tried to cut the strap and sew the end of one piece round the cross bar at the point of each wing for the purpose of greater simplicity, and with this arrangement, which gave only a single shortening at each side, the screw reached the head before the requisite amount of pressure could be made.

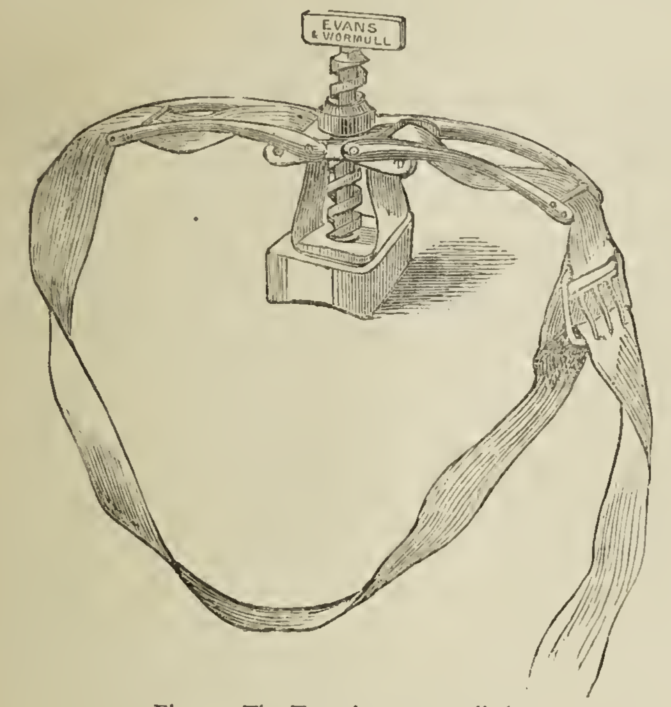

Fig. 1.—The Tourniquet as applied.

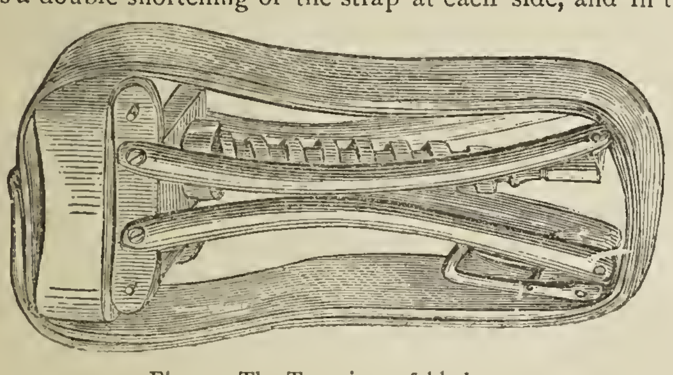

Fig. 2.—The Tourniquet folded up.

As to the concave pad employed, instead of the usual convex one, I need only refer to Lee's arguments on this head.

It is a matter of importance that all old screw tourniquets are convertible into this pattern at a small cost, by the makers, Messrs. Evans and Wormull, Dowgate Hill, who ably carried out my ideas in the manufacture of the instrument.

The Conjoint Examining Scheme for Ireland.—The Committee of Reference appointed under the Conjoint Examining Scheme for Ireland, are busy elaborating the details of the scheme, and, we trust, will soon have a full and complete report prepared for submission to the various co-operating bodies. We regret to say that the Queen's University still holds aloof from joining the other medical authorities in their useful and, we believe, necessary work.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

Subscriptions to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. Francis Fowke, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 3rd, 1874.

STATISTICAL REPORT OF THE HEALTH OF THE NAVY FOR 1871.

This annual report assumes larger dimensions yearly, owing to the superaddition of new strata on the old. Undoubtedly the presentation of these reports annually, dating from 1832, was the forerunner of those for the Army; and they have been from the first in the hands of the Medical Department, while in the Army, previously to the Russian war, they were compiled by Colonel Tulloch.

In the first instance, statistics of health, or rather of sickness, in the services were chiefly aimed at, without many deductions therefrom; but of late there has been an allotment of space for monographs from the pens of medical officers, that has been productive of many collective accounts of disease of singular interest to the profession at large, as well as to the medical officers of the services. In this respect, we think the palm must be conceded to the Army report, in which the official statistics are given in a more condensed form, by which more room is secured for printing the communications from officers. We understand that this limitation of space has damped the energies of naval surgeons; to correct which damaging effect on the spirit of the service, we think that not only a closer style of printing might be employed, but that the statistical tables, some of which are only valuable as a continuous series from the first, might be condensed into a more useful form, while others may be omitted altogether without depreciation of the value of the volume. Under one head, that of "Total Force," the Navy details are far more explicit than those of the Army, which, on this point, may well take example from the sister service. We are glad to find that in the present volume there is an advance in this direction; and we fully agree with Dr. Mackay, whose industry is worthy of all praise, considering the smaller staff in comparison with that of the Army, with which he is bound to work, when he states that the later additions "furnish interesting results, and in time cannot fail to prove of the utmost value." We say, persevere in this direction, omitting much that is only time-honoured, and a new era will have been commenced that will raise the statistical as well as the utilitarian value of the Navy report, while space will be afforded for productions from the pens of surgeons of hospitals and ships. Medicine is sadly wanting in a system of Climatology, and knowledge of the endemic diseases peculiar to climatic regions, to which the attention and efforts of naval surgeons might be profitably directed; and we know that those of the French and Dutch navies have already made many most valuable contributions not yet sufficiently well known among ourselves.

At the present moment, the diseases to which our united forces serving in the Ashantee war are exposed, form an absorbing topic, to gain reliable information on which we look eagerly around. We lately presented our readers with remarks on "The Remittent Fever of the West Coast," from the pen of Dr. John Hunter of the Royal Navy, who, admitting the similarity of the continued and remittent types of fever in their accession, points to a simple means of diagnosis in that stage by means of the thermometer, which, he states, indicates the continued type when it marks under 102 degs. in the axilla, and the remittent type when it rises above it, from 103 degs. to 105.8 degs.

If this be established as a clinical fact, it must be one of the utmost diagnostic and therapeutic importance, if we regard the relative ratios of death and invaliding in these differentiated types. These we learn from the statistics of 1871, page 201, were, for continued fever, 1.5 death, and 0.7 invaliding, per 1,000 of force, and for remittent fever, 0.7 death, and 4.6 invaliding.

Here we notice a greater ratio of death in the continued types, and of invaliding in the remittent types of African fever, from the "cachexia" which follows it, but does not attend on the continued types.

All naval surgeons rely fully on the prophylactic power of quinine in warding off malarious fever on river service; and it would appear that they employ it largely as a remedial agent in both types, in the continued, from the early stage, and in remittent, after vomiting has ceased. Its success cannot be doubted in the latter; while its too early use in the former may perhaps be not equally beneficial, if we are guided by its greater death-rate; and probably ammonia and the chlorates might be substituted for quinine until the pulse and temperature had fallen.

We now reprint, from the Navy Reports, some official remarks by Surgeon P. Comrie, Her Majesty's Ship *Dido*, showing the difficulties that beset the accurate diagnosis between the continued and remittent types of African fever, hoping to be enabled to record the opinions of others of our naval medical brethren.

> There were seventy-five cases of simple continued fever in the *Dido*, in reference to which the surgeon of the vessel makes the following observations. "The nature of the 'coast-fever' so called, is very puzzling at first, as the effects of early teaching, and works on tropical diseases, tend to induce one to look for intermissions or remissions, and to consider miasmatic influences as giving rise only to intermittent or remittent types. This confusion, which I felt at first, was soon rectified by the use of the clinical thermometer, which is most valuable as a means of diagnosis, prognosis and treatment. Apparent remissions take place, but the temperature does not show any change, and it is only when this returns nearly to normal that you can feel certain that the neck of the disease is broken, and also how far to push quinine. The temperature, on an average, seldom rose above 103 degs. in mild cases, while in severe cases 107 degs. was reached. Murchison's description of the 'ardent fever of Burmah' is that most nearly approaching coast-fever that I am familiar with. As to the cause, exposure to the sun, fatigue, malaria, inebriety, all are factors. Age also exercises predisposition, and the numerous cases in this ship may be ascribed to the large proportion of the crew, about seventy per cent., being under twenty years of age. The symptoms were irregular. Chills rarely preceded the attack, bilious vomiting or diarrhœa being the usual prodromata, followed by headache, heat of skin, thirst, and loss of appetite. Pulse 120. Temperature of skin 103 degs. to 105 degs.; occasional delirium, the crisis being attended by herpes on the lips or profuse perspiration. The defervescence in a considerable proportion of cases was attended with condensation of the lungs, which seemed to replace the febrile symptoms and cut short the disease, nothing remaining but the condensation of the lungs. As a rule, this took place without anything to call attention to the state of the chest; little or no cough, or pain in the chest, or increased number of respirations, the inflammation of the lungs seeming to be a levelling up of the inflammatory condition, caused by the presence of a blood-poison, which, travelling upwards, first implicated the stomach and bowels, as shown by the diarrhœa and vomiting, and ended, subsequently, by hepatisation of the pulmonary tissue, as if the exudation into the air-cells eliminated the poison. In whatever way this may be explained, it is my own experience, and that of the surgeons in the Oil Rivers, the most notoriously unhealthy portions of the coast. The experienced surgeons in the Bonny, Calabar, and Brass rivers, some of whom had upwards of four years' residence, all looked on the supervention of pneumonia as a most favourable symptom, limiting the tendency to the most fatal of all complications, 'head-symptoms.' The chest-symptoms are, dulness on percussion, tubular breathing and crepitant rales being inaudible except on careful auscultation. A symptom of great importance, and one which can be discovered easily without disturbing a weak patient in a hammock or cot, is the 'Bruit Skodique' of Trousseau, when, on percussing the anterior portion of the chest, a sound is elicited on one side of a tympanitic character, and on further examination, if puerile respiration exist, the posterior and depending portions of the chest will give dulness and other signs of congestion.
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> "As regards treatment, if no diarrhœa existed, the rule was to administer a full dose of the sulphate of magnesia with four grains of sulphate of quinine, followed, after its operation, by twenty grains of sulphate of quinine, which was repeated after an interval of twenty four hours, if the temperature and pulse remained high. In fact, the quinine in these doses was rapidly pushed to cinchonism, until the temperature of the skin fell to 99 degrees; generally two, or at most three, such doses were required. In severe bilious forms, attended with a high temperature and foul excretions, chlorate of potasss was given as a drink, and repeated sinapisms applied to the epigastrium."

VIVISECTION.

THE allegations of cruelty to animals which have been brought against M. Schiff, the eminent physiologist of Florence, to whom science owes many valuable discoveries, have been made the text of several unsparing and unqualified denunciations of vivisection in the public prints. M. Schiff is the special scape-goat on this occasion, as he has been before. Several years ago he was obliged, for the sake of peace and quietness, to discontinue his lectures, which were experimentally illustrated, owing to a great outcry raised against him by certain well-meaning and humane countrywomen of our own resident in Florence. Cruelty to animals is said to prevail in Italy to a lamentable extent; and visitors to Rome are shocked at the horrid brutality and want of feeling displayed by owners and drivers of wretched half-starved cattle. It is a laudable desire of the Society for the Prevention of Cruelty to Animals to see this state of things amended; and that they may be successful in their endeavours, must be the heartfelt wish of all right-thinking men. When, however, they seek to accomplish their object by attempting to put a stop to the scientific investigations of M. Schiff, or hope to strengthen their cause generally by raising a popular outcry against vivisection, as practised by physiologists, they at once lose the sympathy of all who have human progress and the relief of human suffering at heart, and who can take broad and philosophical views of what is requisite and necessary for the furtherance of the common good. Whether vivisection is necessary or not, is a matter on which not every one is fitted to decide. As to its coming under the objects for which the Society in question exists, need not be very difficult to answer. When accused of cruelty to animals, many experimenters have contented themselves with retorting on their accusers the fearful sufferings which the recognised sports of this country must entail on many poor wounded creatures which escape immediate death. This appears to us very false ground on which to rest a justification of the practice of vivisection. There may be difference of opinion as to the morality of field-sports; but science, like Cæsar's wife, should be above suspicion.

There exists great confusion in the popular mind between cruelty and the infliction of pain. The two things are essentially different. It is often the greatest cruelty to avoid inflicting pain. Vivisection is supposed by many to consist in wantonly cutting up animals and enjoying their writhings and sufferings, like a young Nero who transfixes an insect and exhibits fiendish delight at its contortions. Were it so, nothing could be said in its defence. But surely men engaged in the study of the science of life and the art of cure may be credited with nobler motives. Experiments on living animals are absolutely necessary to elucidate many problems, the solution of which is fraught with the most important immediate and ultimate results in relation to the theory and practice of medicine and surgery.

It would be an utterly false and ill-directed sentiment which should denounce such endeavours to mitigate the sufferings of humanity by ascertaining the laws of life and the nature of disease. Even if vivisection were practised without any attempts to render the subjects of it insensible to pain, yet with such objects in view it surely could not be termed wanton cruelty. If so, then surgical operations, vaccination, etc., must be condemned. These are all instances of infliction of pain by processes of vivisection which are not usually regarded by even the most humane as objects for inquiry into by the Society of Prevention to Cruelty to Animals.

Nothing can be more unjust than to attribute to scientific investigators a disregard for the feelings of animals. We happen to know eminent vivisectors who are consistent supporters of the humane purposes of the Society for the Prevention of Cruelty to Animals; as, indeed, what educated Englishman, and, above all, what medical physiologist, is not? Moreover, there are few experiments made on living animals by modern physiologists which would not be vitiated or complicated by the physical expression of suffering; so that, for two reasons, animals are usually rendered insensible by ether or chloroform. Some experiments, it is true, would be vitiated by the administration of an anæsthetic; but they are the exception, and not the rule. It is a libel on M. Schiff to say that he utterly disregards the sufferings of the subjects of his experiments. We have the best authority for stating that he hardly ever performs an experiment on an animal without previously administering ether or using chloral. Frightened and timid ladies, who are prepared to imagine all horrible things, can readily convert the howling of a dog or the mewing of a cat into some dreadful orgy of the human monster who delights in torturing animals. Thoughtful persons will not on that account raise an unreasoning outcry against the earnest labours of scientific men for the good of humanity. That a person should be found who pretends to be scientific, and styles himself the author of a work on *Medicine and Surgery one Inductive Science*, and yet denies that vivisection has ever been productive of benefit to humanity, would be incredible, but that persons are often found of eccentric character but high pretensions, who are ignorant of the fundamental facts of research with which they profess to be conversant. We can hardly hope, perhaps, to have heard the last of these periodic outbursts; but it is not difficult to show that this method of research, properly and humanely applied, is one which may exhibit a more truly humane and philanthropic spirit than that which would lead to the maintenance of ignorance and perpetuate preventable suffering.

THE HISTORY OF A PROVIDENT DISPENSARY.

III.

One of the most important points on which the history of this dispensary furnishes us with information, is the amount of remuneration to the medical officers which may be expected from a limited number of members in a self-supporting institution. It has been stated by writers on this subject, that a *clientèle* of from 1,000 to 1,500 members to each doctor would furnish him with an income of £100 to £150 a year; and so it probably would, if each member of a dispensary numbering 3,000 or more paid one penny a week all the year round; but the statistics of the St. Marylebone Provident Dispensary show that the average sum per head (including the fines for immediate attendance, etc., but exclusive of the midwifery fees) is much less than four shillings a year—a fact which may partly be accounted for by the large proportion of children under fourteen, and partly by the short time for which many of the members continue their contributions. Thus in 1848 the total number of members on the books (who must not be confounded with the cases of illness occurring among them) was 792, and the payments received from them amounted to £89 3s. 10d., or 2s. 3d. per member. In 1853 the total number was 896, and the payments were £151 17s. 8d., or not quite 3s. 5d. per member; while during the past five years the members have averaged 2,039 each year, and their payments amounted to a yearly average of £241 7s. 1d., or 2s. 4½d. per head.

Comparing these figures with the amounts received in provident dispensaries in the country, we find that the average for 1853 is considerably above, while the others are somewhat below, those of the most successful institutions. It was authoritatively stated at the late meeting in Manchester, that in Leicester, Coventry, and Nottingham, 38,893 members had last year paid £5,000, which gives an average of but 2s. 7d. per head; and in fourteen other dispensaries, a synopsis of which has been prepared by Dr. Ford Anderson, a total of 46,839 members paid last year £6,220 6s. 10d., including midwifery fees, being at the rate of 2s. 8d. per member. If, therefore, we take a yearly payment of half-a-crown a head as the basis of our calculations, it is evident that 5,000 members would be required in order to pay three medical officers £100 a year each, besides defraying the other expenses of the institution; while with 3,000 members the yearly income from their payments would not exceed £375 (it was, in fact, a few pounds less at the Paddington Dispensary with that number of members last year), a sum which, in the case of the St. Marylebone institution, has been proved to be barely sufficient, after paying current expenses, to provide £100 between the three medical officers. How totally inadequate this latter sum is, may best be shown by comparing it with the salaries of the Poor-law medical officers in the same parish, three of whom receive respectively £230, £220, and £120 *per annum*, while equally with them the provident dispensary doctor is liable to be called upon to render his services at any hour of the day or night. Considering that this is the case, and that the members of provident dispensaries are quite above pauperism, we do not think that any system which would be likely to provide less than £100 a year each for the medical men could be considered a satisfactory one, or one which should be advocated for adoption on a large scale; and, indeed, it has been rightly urged, as one of the chief arguments in favour of provident dispensaries, that in several provincial towns such handsome amounts are paid to the medical officers.

We may here mention that the different arrangements for paying the doctors which have been tried at various times in this dispensary are very similar to those which have been permanently adopted in some of the most successful provident dispensaries in the country. Thus, at Northampton, the cost of drugs is deducted from the members' payments, the doctors taking the remainder; and all the other expenses have to be provided for by the honorary fund, as was the case in the St. Marylebone when it was first started. At Coventry, the doctors receive about two-thirds of the members' fund, the remainder, with the honorary fund, paying for drugs and other expenses—an example of which arrangement will be found in the balance-sheet of the St. Marylebone for 1853, already given. At Derby, the payments of the free members and the subscriptions of the honorary members form one fund, from which all payments are made, as has been the practice in Marylebone from 1857 till the present time.

When we come, however, to ask how it is that an institution which in some parts of the country has been such a great success, and which, as Mr. Fairlie Clarke has shown, can flourish in a town of 25,000 inhabitants, has proved such a comparative failure in a district of London containing more than four times that population, the answer is neither difficult nor far to seek. The advantages which the St. Marylebone Provident Dispensary has enjoyed is its central situation; in such names as Burrows, Erichsen, and others on its staff; in the long-continued services of Mr. Gayleard and Mr. Sedgwick, and in the most economical administration of its funds, have all been more than counterbalanced by the opposition which it has met with in the gratuitous out-patient departments of two large hospitals in its neighbourhood (Middlesex and University College Hospitals) treating between them more than 40,000 out-patients every year. According to the estimate of the Committee of Hospital Physicians and Surgeons who three years ago investigated the subject of out-patient administration, one-fourth of these out-patients belong to families earning from 30s. to £2 a week; and no one, we suppose, will doubt that these at any rate could well afford to pay half-a-crown a year for medical attendance and medicine for each member of their families. If, then, we take one-fourth of the 40,000 patients (or cases of illness) and suppose them to represent 5,000 individuals, we have at once a number sufficient to form a flourishing dispensary which might be entirely self-supporting, and would yet be able to pay three medical officers £100 a year each. It is idle, indeed, to suppose that the working-classes will ever join provident dispensaries in large numbers, while the out-patient departments of hospitals continue to be practically open to all comers; and the proposal to multiply tenfold the provident dispensaries of London while those departments remain unreformed, has always appeared to us a great mistake, while the recent proposal of one of our contemporaries to bring hospitals more directly into competition with provident dispensaries, by sending out students to visit patients at their own homes, savours strongly of the ludicrous. As to the necessity for reform in the opposite direction, men who differ so widely on some points, as Dr. Peter Royle, Dr. Ford Anderson, and Mr. Fairlie Clarke, are, we believe, quite agreed; and we cannot but think that the more such a history as we have now given is studied, the more will their opinion on that point be shared by the great bulk of the profession.

METROPOLITAN DWELLINGS.

An important Report on this subject has been issued by the Dwellings Committee of the Charity Organisation Society. The Committee was specially appointed by the Society to take this matter into consideration, and report thereon to the Council; and consisted of eight members of the House of Lords, including Lord Napier and Ettrick, the President; twenty-one members of Parliament; fourteen representatives of the dwellings companies, including Sir Sidney Waterlow; two representatives of the Association of Medical Officers of Health; and forty ordinary members; making a total of eighty-five. They held sixteen meetings, at the first of which, on the 14th of February, Sir Sidney Waterlow presided; and they completed their labours on the 26th of July; so that very considerable time and labour have been expended in making the inquiries and taking the evidence on which the Report is based.

The Committee begin by stating that "how to check the tendency in large cities to the formation of squalid and unhealthy quarters, where the poor are crowded together in unsuitable habitations, has long been one of those social problems of which the solution appears to become more difficult with the development of modern industry." They then proceed to state that, in their opinion, the contracted dimensions, defective arrangements, and decayed condition of the habitations of the poor, tend to perpetuate the depravity, degeneracy, and pauperism, which weigh so heavily on the community.

Having expressed this opinion, they considered how far existing agencies had counteracted or were capable of removing existing evils; and point out that the new dwellings erected by the Peabody Trust, Miss Burdett Coutts, and various companies, have accommodation only for twenty-seven thousand persons, which is a not much larger number than the annual increase of population in the metropolitan area, and therefore utterly inadequate for the purpose.

It is somewhat singular that, whilst the Improved Industrial Dwellings Company, established in 1863, has expended nearly £250,000; the Metropolitan Association a very large sum, including the purchase of a large estate at Penge and the erection of a hundred and sixty-five cottages there for the accommodation of mechanics; and the London Labourers' Dwellings Society a further large amount—in all of which 5 per cent. per annum has been realised,—the Peabody Trust, with £600,000, could only find sites for expending about £220,000. This is much to be regretted, and shows much supineness on the part of the trustees.

The Committee next consider by what agencies the task of housing the London poor could be most efficiently prosecuted hereafter, and arrived at the following conclusions.

1. That the mass of the poorer classes must be provided with habitations near their work.

2. That the only agency efficiently to carry out this work is municipal government, through the instrumentality of commercial enterprise.

In regard to the first point, they state that, whilst the suburban cottage is desirable for some of the skilled mechanics, it is evident that the drawbacks arising from limitation of the hours of labour, fatigue and expense of daily journeys, prolonged separation of the family, and sacrifice of the midday meal, render this class of dwellings impracticable for the bulk of the working classes.

As to the second point, they consider that, whilst the reconstruction or repair of the interior of London must be carried out on the commercial principle, yet the difficulty of draining sites, without the power of compulsory purchase, is so great as to present an almost insurmountable obstacle. But they consider that this power should not be granted to associations formed for the purposes either of profit or philanthropy; for in the former case it might be used so as eventually to constitute a monopoly, and in the latter so as to impair the principle of self-dependence in the working classes by providing them with dwellings below the market value. They therefore conclude that "it is indispensable that municipal government should step in as an intermediary between the builders of the future dwelling and the possessor of the existing one".

The Committee next enumerate the Acts of Parliament affecting the improvement of dwellings in the metropolis; viz., the Common Lodging-House Acts of 1851 and 1853; the Nuisances Removal Acts; the Sanitary Act, 1866; the Artisans' Dwelling Act, 1868; and the Metropolitan Building Act, 1855; also the Labouring Classes Lodging and Dwelling-Houses Acts of 1851 and 1866, which enable local authorities to construct dwellings with money borrowed from the Loan Commissioners at 4 per cent.; but we believe that these powers have not been exercised. As to the Acts under which houses can be closed or pulled down, it is pointed out that there is no provision for compulsory purchase of the condemned or vacated property; and that, even if there were, this would not be sufficient, as, under existing laws, full compensation cannot be paid to the owner under arbitration, which is considered to be indispensable.

The important question as to whether the municipal or local body should reconstruct or retain possession of house-property, the Committee answer in the negative, unless considerable difficulty occurred in selling the property, and then only till a convenient opportunity offered for its disposal. For carrying out this part of the scheme, it would be necessary that the authority should have power to contract loans, which might be charged in the first instance on the property, and then on the rates; and they refer to the action taken by the municipalities of Glasgow, Edinburgh, and Liverpool, to show that these arrangements can be carried out with but little loss, and in some cases with profit. As regards Glasgow, where the Town Council have expended above £1,000,000, and the loss was calculated at no less than £200,000, it appears that the deficiency will not reach £50,000; whilst the two model lodging-houses erected by them have proved a very profitable investment.

The Committee express a very strong opinion against investing the vestries and district boards of the metropolis with the powers necessary to purchase and reconstruct the present dwellings of the poor, as they think their number too large, and the areas under their jurisdiction too limited. Therefore, until there shall be a central municipal authority for the metropolis, the Corporation of the City of London, or the Metropolitan Board of Works, severally or jointly, should exercise the powers now suggested. In addition to this, they advise that associations and companies formed for improving or erecting such dwellings should be enabled to purchase land under the Land Clauses Consolidation Act; and, further, that certain provisions set out in the Report should be inserted in an amendment of the Artizans' Dwelling Act, 1868, to make it more efficient.

The last point of importance is the proposition that there should be a "standard of habitability", below which no inhabited dwelling should be allowed to fall. They consider that, if this standard were once settled for the metropolis, the thirty-fifth section of the Sanitary Act, 1866, might be put in action to enforce it; and express their regret that this section has been so sparingly adopted by the metropolitan vestries and district boards. As to the Building Act of 1855, after stating their conviction of its want of harmony with existing sanitary law, they express a hope that it may be speedily improved, and its provisions then extended to the area outside the jurisdiction of the Metropolis Local Management Act, but within the boundaries of the Police Act, if not to urban districts generally.

The Report concludes with an appendix containing a Report of the Subcommittee on Workmen's Trains, with extracts from the Reports of the Medical Officers of Health for St. Marylebone, Hackney, and St. Giles.

The length to which this analysis extends precludes us from considering now the various points raised in the Report, but we shall probably revert to the matter on another occasion. We wish, however, to direct especial attention to two matters. The first is, the proposition to give the power of purchase only to the Corporation of the City, and to the Metropolitan Board of Works. It is true that, by extending the cost of such improvements over the whole metropolis, the burden would not fall so heavily on the poorer parishes as if each parish paid its own quota; but we think it unwise, considering the present mode of levying rates, to cast the whole cost on the occupiers of houses, and especially to forestall the decision of the legislature on the question of a municipality for the whole metropolis. The other point is one which can be attended to at once, and that is to obtain a "standard of habitability" of dwelling-houses for all London. This can be done by an Act of Parliament only; as, although it might perhaps be worked out from the different Acts now in force in the metropolis, yet, as each magistrate has his own opinion as to the interpretation of the Acts, and each local authority has issued different regulations under the Sanitary Act, no standard can possibly be arranged. It is much to be regretted that the regulations were not made uniform for every district, which could readily have been done, as they were not in force until the signature of the Secretary of State had been affixed thereto. This opportunity of uniformity having been lost, we now wait for further legislation.

DR. TILBURY FOX's work on *Skin Diseases*, is, we hear, in course of translation into the Italian and German languages. It has been republished in America.

THE illness of the late Dr. Fuller of St. George's Hospital was one which was characterised by singularly obscure symptoms. Its clinical character and the results of the necropsy are recorded in the notes of Mr. Fuller and Dr. Dickinson, published in another column.

IT will be seen from the report of the St. Andrew's Association, that it has been resolved to dissolve that Association. As a dining club, and one aiming at supporting the interests of the University and strengthening the bonds of regard among its graduates, it had an excellent *raison d'être*. Its *Transactions* have never held a very high place in scientific esteem; but the dissolution of such an Association, however well grounded, cannot be mentioned without regret. In an age so full of contests, and marked by so much eager and hard competition, there is great reason to cherish all habits of association, all occasions of fraternal greeting, and all occasions of meeting under a common impulse of generous good-will, if only for the mere purpose of letting men know each other more intimately, see under the crust of the outer man, learn to appreciate the humour, the kindliness, and the good intention which often underlie rough or common-place exteriors. To all charitable associations, wisely directed; to all associations having a generous and unselfish object; to all dining clubs, we wish a series of prosperous years: we regret to record the demise of any one of them.

AMONG the new charities of lastt year, is one entitled The Provident Surgical Appliance Society, 37, Great Ormond Street; and of this the secretary writes in the month just ended.

> The object of the institution—which commenced its operations on the 1st of January last—is to assist the working-classes and persons of small means to obtain all kinds of surgical appliances at a reasonable price and on easy terms of payment. Already about six hundred and eighty instruments have been supplied, two-thirds of which have been wholly paid for by patients. The Society has during the present month removed from 25, Bartholomew Close, to 37, Great Ormond Street; and a special meeting to inaugurate the new offices was held on the 16th inst. under the presidency of Bishop Claughton. On this occasion Sir Rutherford Alcock, who moved the first resolution, remarked that this institution "was one of the few charities which not only met a great want, but met it in the best way".

Such a Society is a very useful one, and many of our readers will probably be glad to be reminded of its existence.

WE are requested to publish the following. The Committee of the British Medical Benevolent Fund earnestly appeal at this season to the profession for help towards the relief of the many cases of distress among their poorer brethren, which continue to reach the Committee from various parts of the kingdom. In addition to these urgent demands from the needy and destitute upon the department for immediate relief, the great desirability of increasing the slender amount to which the annuities are of necessity at present limited, and which ranges from £15 to £20, has especially pressed itself upon the consideration of the Committee. Indeed, a glance at the cost of the necessaries of life will be sufficient to show the painful inadequacy of such a pittance, which in not a few instances is all the recipients can count on for their own. In view of this, a movement has been set on foot in the hope of obtaining a sufficient sum to enable the Committee, by investment, to raise the incomes of the annuitants (in succession, as the fund permits) to £26, or ten shillings a week; and a nucleus has been already kindly contributed, amounting to something over £150. The details of cases within the ordinary experience of the Committee would amply support, in the strongest terms, this call for help. The Committee, however, feel confident that, even without such, the good cause they advocate will plead for itself to the generosity of the profession at large, and will not plead in vain. Contributions, either to "the special fund for augmentation of annuities", or for "the general purposes of the charity", will be thankfully received by the Treasurer, C. J. Hare, M.D., 57, Brook Street, Grosvenor Square; or by C. S. Webber, F.R.C.S., Financial Secretary, 1, Upper Berkeley Street, West, Hyde Park, W.

THE usual Christmas-tree *soirée* took place at University College Hospital on Monday evening. The traditional fir was replaced by a large model of a ship, the deck and yards of which were loaded with knick-knacks; this was flanked by long tables covered with very substantial and useful presents for the nurses and patients. During the evening, some members of the University College Musical Society delighted the patients with some capital songs and glees. At the Middlesex Hospital, Christmas evening was enlivened by the exhibition and demolition of a well laden tree which had been prepared by Miss Thorold, the indefatigable Lady Superintendent.

A CURIOUSLY bitter and ill-tempered letter appears in the *Daily News*, signed "Lex", denouncing Mr. Simon's salary as excessive. All except a few legal officials in the Local Government Board are well convinced that no item in the public expenditure has been more splendidly remunerative in life, as well as in the economic results which always follow from the prevention of disease. The services to the country of Mr. Simon and his assistants have been inestimable, and we deeply grieve to see how little they are understood by the small class of persons whom "Lex" represents. The miserable blundering of the legal members of the Department of the Local Government Board, and the failure to which their maladministration has led, may make them sore; it should not make them or their friends malicious.

DR. FERRIER, who is as little like Falstaff as any man we know, had certainly no intention of being humorous when he published, in the last volume of the *West Riding Reports*, and subsequently reported at the British Medical Association at Bradford, his famous researches on the localisation of the functions of the brain; nor is it probable that he expected to be the source of humour in others. These researches of

Dr. Ferrier, however, and their bearing on phrenology, afford, however, to the veteran George Cruickshank an excuse for reissuing his droll *Phrenological Illustrations;* and, after enlightening himself by reading Dr. Ferrier's essay, we do not know that a man could do better than amuse himself by turning to Cruickshank's volumes of grotesque and mirth-moving caricatures.

DEATHS IN NORTHAMPTON.

NORTHAMPTON has been saddened during its Christmas-tide by the loss of two of its most respected citizens. Mr. Henry Terry, the first president of the South Midland Branch, an old Waterloo veteran (for he served in that famous battle as assistant-surgeon to the 30th Foot), consulting-surgeon to the Northampton Infirmary, and lately surgeon to the Gaol, and many years an alderman, has passed away full of honours at the ripe old age of eighty-three. Mr. Arthur B. Markham, brother of our associate, Dr. W. O. Markham, died, after a short illness, in the prime of life, at the house of his brother at Clapham. He was of such energy, ability, and public usefulness, as to have held a singularly large place in the public view and in public regard; and his sudden death has given a great shock to the public mind of the town.

HARVEIAN SOCIETY OF LONDON.

BY the recent death of Dr. H. W. Fuller, this society has lost one of its oldest and most esteemed officers. The deceased gentleman had for many years held the post of Honorary Treasurer. He took office at a time when the Society owed about £30, and at his decease it possessed more than £300 of funded property. This change for the better was in great part due to Dr. Fuller's painstaking administration. The Council have shown their respect for the memory of the deceased Treasurer by sending a letter of condolence to Mrs. Fuller, and by resolving that the *conversazione*, for which the cards of invitation had been printed, shall not be held this year. The annual meeting will take place on Thursday next, January 8th (not January 1st, as previously advertised), when the usual official business of that meeting will be transacted, viz., the election of officers and council for 1874, the reading of the council's annual report, and the president's address. The following is the list of gentlemen proposed by the council as officers of the Society for the year 1874: *President:* J. R. Lane, Esq. *Vice-Presidents:* E. Sercombe, Esq.; Thomas H. Hill, Esq.; J. Hall Davis, M.D.; O. A. Field, Esq.. *Treasurer:* Henry Power, Esq. *Honorary Secretaries:* George Eastes, M.B.; Robert Farquharson, M.D. *Council:* T. Ballard, M.D.; G. Benson Baker, Esq; T. Rayner, Esq.; T. Thorman, Esq.; E. P. Young, Esq.; W. J. Bryant, Esq.; S. Gibbon, M.B.; A. J. B. Squire, M.B.; G. De G. Griffith, Esq.; J. Lennox Browne, Esq.; A. W. L. C. Meredyth, M.D.; W. F. Teevan, Esq.

THE LATE LORD DENMAN.

THE memoir of the late Lord Denman, by Sir Joseph Arnould, which has recently appeared, contains, besides many points of legal and political interest, a study of aphasia, which ought not to escape the notice of those who pay particular attention to nervous diseases. On the 2nd of December, 1852, the Lord Chief Justice had a paralytic attack. This is what his biographer says of the condition in which it placed him. "While he retained his intellectual and emotional faculties almost unimpaired, his powers of communication with others, by writing as well as by speech, were absolutely and entirely taken from him. That speech, indeed, should go, was quite in the ordinary course of paralytic seizures; but it does not, it is believed, always, or indeed often, follow to the extent that it did in Denman's case, that the power of self-originated writing should be so totally extinguished. He could frame written letters with a pen; he could readily distinguish one ivory letter from another when ranged in lines before him; but to form these letters into words, or words into sentences, was utterly beyond his powers, unless the words or sentences were written, or put together as a model for him to copy. When he had received letters—and many kind correspondents, knowing the delight he felt in perusing them, were constant in writing to him—the only way he could acknowledge them was by copying, in a sort of formal print-hand, any passage in them that had particularly pleased him, and causing that to be sent to the writers, in token that he had read and been pleased by their communications. . . . He soon wrote very tolerably with the left hand, but it was found that he could 'originate nothing'; and when some deeds were sent from England for his signature, he could only sign his name by seeing it written out and copying it; and yet his mind was as clear as ever to receive impressions. He could read, and could clearly understand everything that was either read or said to him. Law reports, debates in Parliament, etc., interested him as much as ever; and he showed by his countenance and by signs that he not only appreciated fine passages, but that he perfectly understood controverted points, and, could he have expressed himself, was as capable as ever of deciding them" (vol. ii, p. 338). In this state he continued for nearly two years—his death taking place, rather suddenly, on September 22nd, 1854. Many interesting particulars of his life during this period are mentioned by Sir Joseph Arnould: these we cannot transcribe here, but we are glad to call attention to them.

SIR HENRY THOMPSON ON CREMATION.

SIR HENRY THOMPSON, in the current number of the *Contemporary Review*, discusses with force, clearness, and spirit, the question of cremation of the dead. The arguments in favour of such a mode of disposal of the dead carcases of men are rationally unanswerable. There is absolutely nothing to be said against it, and there is little present likelihood of argument doing much for the cause. It is a case for example, which would be of much more effect than precept. No doubt there is nothing but prejudice and an ignorant misinterpretation of certain texts, which could be advanced against cremation as a means of disposal of the dead. But there is a rooted sentiment which is opposed to it. It is ignorant; it is old-fashioned; it is contrary to the laws and the economics of Nature, and to the interests and almost the proprieties of civilisation; but there it is, and nothing short of the initiation of a Society of Incremators, like the recently formed Société de la Mort of Zurich, will produce any effect. If a few hundred men of notable character, ability, and respectability, were to agree to commit their bodies to the flames after death, and make suitable arrangements, they might probably soon be imitated by many more thousands, and so the foul practice of committing a rotting body to the ground, there to poison the soil which it encumbers, would be replaced by the more reasonable and cleanly reduction of the body to ashes by the speedy agency of flame. Perhaps what Sir Henry Thompson has written may be the precursor of a plan of action. He has the ability, the courage, and the social influence, which fit him to lead the way in so useful a reform. If he succeeded, he would prepare for himself an earthly immortality.

METROPOLITAN SICK POOR ASYLUMS.

AN interesting account of the annual results of the activity of these great infirmaries during the past year is published in the *Standard*.

"These magnificent establishments, in regard to their proportions and their fittings, and which are supplementary to the great lunatic asylums of the metropolitan counties, were erected under the Metropolis Poor Act of 1867, and resulted from the outcry raised as to the want of proper accommodation and care for the sick poor provided in the metropolitan workhouses. They are under the control of a board of managers elected by the guardians, but subject to the supervision of the Local Government Board, who also have the power of appointing a limited number of *ex officio* members. The classes of sick poor for whom the hospital accommodation of what is termed the metropolitan asylum district is provided are imbeciles and small-pox and fever patients. The imbecile asylums, at Leavesden, Herts, and at Caterham, Surrey, were opened in the latter part of 1870, and afford bed accommodation for 1758 and 1882 respectively. When the subsidence of the small-pox epidemic rendered it no longer necessary to use the buildings at Hampstead as an infectious hospital, they were added as an auxiliary to the Leavesden Asylum, thereby giving 500 additional beds. There has been some divergence of opinion amongst the managers not only on the question as to uniformity of dietary, but as to the economical expenditure in the management of the larger institution. Upon this point the returns are interesting. During the last half year, for maintenance and clothing of patients at Leavesden, the cost amounted to 8½d. per patient per day, the cost for salaries, maintenance of officers, and other charges, 3d. per head per day. At Hampstead the charges were respectively 11d. for patients, and 8d. for officers and other charges, this latter high rate being accounted for by the fact that the wages and maintenance of the staff were going on for a considerable time while only a few patients were in the Hampstead Asylum. At Caterham, the cost for the half year amounted to 10d. for maintenance and clothing of patients, and 3d. for other charges. The number present at Leavesden Asylum is over 1750, at Caterham above 1700, and at Hampstead 450. Recreation halls have recently been erected at Leavesden and Caterham, in which the inmates partook of their Christmas festivities, and which have been found to conduce greatly to their happiness and comfort. For infectious diseases, the managers have the most perfect fever and small-pox hospitals at Homerton and Stockwell, and a site ~~in the~~ Kent Road for further accommodation, if required. The small-pox hospitals are certified to hold 102 patients each. The Homerton Fever Hospital is certified for 200, and Stockwell for 172. In 1871, when the epidemic of small-pox was at its height, the pressure was so great that both the recently finished fever hospitals were temporarily utilised for small-pox, and other provision was found necessary. At this period the managers had under their care at one time upwards of 1900 small-pox patients, and up to the present nearly 4000 have passed through them with that disease. At present there are no small-pox patients at Stockwell, and but five at Homerton. Of fever patients, there are at Homerton about 100, and at Stockwell 50. During the half year ending Michaelmas, the cost for maintenance and clothing of fever patients was 2s. 3½d. per head per day at Homerton, and 2s. 6½d. at Stockwell; the cost per head for small-pox patients being necessarily much higher in consequence of the small number of inmates."

RECENT MORTALITY IN LONDON.

THE very dense fog which prevailed in the metropolis on December 9th and three following days, accompanied, as we have already noticed, by very high readings of the barometer and by great depression of temperature produced serious increase in the death-rate. In the four weeks ending, respectively, on December 6th, 13th, 20th, and 27th, 1,484, 1,759, 2,415, and 1,540 deaths, were registered. The increased mortality was chiefly due to diseases of the chest; it was most noticeable in the central and east groups of districts, where poverty prevails, and amongst persons advanced in years. Infants and young persons suffered but slightly. Of the 2,415 deaths registered in the third week of December, 168 were due to measles, the highest number which has yet been registered during the present epidemic of that disease; and 70 were caused by whooping-cough—a large increase on the number certified lately in any other week. It will be noticed that these are the two epidemic diseases which are most likely to prove fatal by thoracic complications. The mortality has haply, as the last return shows, again fallen to its normal proportions, although two weeks ago it was higher than the rate returned in any week since the cholera epidemic in the autumn of 1866.

PROFESSOR TYNDALL ON AGREEABLE EMOTIONS.

IN his admirable lecture on Niagara, Professor Tyndall indulged in a little digression on the therapeutical effect of agreeable emotions, which is worth putting on record here, not, perhaps, from its novelty, but as an apt and forcible illustration of a wholesome truth.

"An eminent friend of mine often speaks to me of the mistake of those physicians who regard man's ailments as purely chemical, to be met by chemical remedies only. He contends for the psychological element of cure. By agreeable emotions, he says, nervous currents are liberated which stimulate blood, brain, and viscera. The influence rained from ladies' eyes enables my friend to thrive on dishes which would kill him if eaten alone. A sanative effect of the same order I experienced amid the spray and thunder of Niagara. Quickened by the emotions there aroused, the blood sped healthily through the arteries, abolishing introspection, clearing the heart of all bitterness, and enabling one to think with tolerance, if not with tenderness, of the most relentless and unreasonable foe. Apart from its scientific value, and purely as a moral agent, the play, I submit, is worth the candle."

It is odd that Professor Tyndall should have taken that opportunity of thinking of his foes; but we have no doubt that his prescription of a visit to Niagara as a cure for the bile is a very good one. We can answer for its being a most healthful as well as a gloriously interesting trip, at whatever season of the year. The prescription of "agreeable emotions" generally as an aid to digestion deserves consideration; it is too little thought of in the arrangement of dinner-parties. At medical dinner-parties, indeed, the influence which in the case mentioned proved so potent is commonly altogether omitted; and generally it may be said that the consideration of psychological influences calculated to promote digestion is altogether omitted from the *menu*. No emotion, for instance, is more agreeable on such occasions than a pleasurable surprise; and, on this account, the monotony of clear soup, saddle of mutton, etc., should certainly be varied by something less likely to create a bilious discontent, if only a rump-steak and marrow bones, or kangaroo-soup and a cutlet.

THE LATE DR. F. C. WEBB.

THE sudden death, at the age of 47, of Dr. Webb, the Editor of the *Medical Times and Gazette*, occurred on December 24th. Dr. Webb had been for many years subeditor of the paper; and, although not widely known in medical society, was greatly respected and regarded by all who enjoyed his acquaintance as a man of great intelligence, amiability, and rectitude. His death was painfully and distressingly sudden. He was, it is stated, engaged during the previous day in correcting the proof-sheets of his journal, and subsequently in preparing for the domestic festivities of Christmas. He leaves a wife and large family, besides many friends and colleagues, to lament his loss. Dr. Webb was a physician of the Great Northern Hospital, and for a short time a lecturer on Medical Jurisprudence at the Grosvenor Place School of Medicine, after the interest of Mr. Lane, its founder, had been transferred to St. Mary's Hospital Medical School. He was a man of modest and retiring disposition, although of sound judgment; and his public appearances were few, but always creditable. We shall publish next week a fuller obituary notice of Dr. Webb, from the pen of his friend Dr. Cockle.

HOW TO DETECT FRAUD IN WET-NURSING BABIES.

AT the Academy of Moral and Political Sciences in Paris, M. Levasseur reported upon his observations at the Vienna Exposition on the nursing of infants. He called the attention of the Academy to a kind of cradle sent to the Exhibition, by Dr. Goussin of Bellevue, arranged so as to indicate the weight of the child. M. Huszane, hereupon made an interesting communication on some other varieties of cradle-scales tried in the hospitals of Paris, to estimate the weight of infants at successive periods. This apparatus had been used in administrative surveillance. It is really true that every two or three weeks shows a difference in the weight of the infant, and, as indicating the amount of nourishment the infant receives, it cannot be overlooked. But the necessity of disrobing the infants is not without its inconveniences.

KOUMIS.

DR. SCHWAIGHOFER of Vienna writes in the *Irish Hospital Gazette* that amongst the various new medicines which have been much talked of, koumis—the national drink of the Kirghizes—has created most sensation. Though it has been for some time known and praised as a specific for tuberculosis, it was only this year that a Russian physician—Dr. Stahlberg—attempted to introduce it into general practice. With this intent he opened, in the neighbourhood of Vienna, an establishment for the koumis-cure, and made known, far and wide, by pen and word of mouth, the new specific against lung-disease. According to him, koumis is mare's milk in process of fermentation, and not when it has ceased fermenting; in point of fact, the essence of its curative powers consists in the fact that the process of fermentation is going on. Further, it must be mare's milk, for it is in it alone that the caseine and sugar are in the necessary and most favourable proportions, viz., 1 : 4. Ass's milk is the only other milk that at all gives an approach to this proportion; while in cow's milk, the quantity of sugar is relatively much less, without taking into consideration that, in the process of fermentation, its cheesy constituents separate in lumps, which sink to the bottom, while in mare's milk they separate in small flakes, which remain suspended in the fluid. This latter fact is said to be one of the chief reasons that koumis is easily digested. The cases which have proved most suited to the koumis treatment are those cases of chronic phthisis, in which there is great wasting of the body, and where the indication is to increase the weight of the patient, and thereby also the general strength. In such cases, the koumis seems really to work wonders, often performing a complete cure, or at least changing the type of a case from the more acute to the more chronic form. The quantity for an adult to begin with is two half bottles *per diem*, increasing this dose by half a bottle each day, until the measure of three or four bottles be reached : indeed, in order to obtain effectual results from koumis, the patient should live almost exclusively upon it. On the fifth or sixth day, the change in the quantities of the various salts excreted begins, and the amount of chlorides and of urea in the urine diminishes—these being probably again used to build up the new tissues ; the difficulty of breathing is moderated ; the exhausting night-sweats cease ; the tendency to hæmoptysis is lessened (for the stimulation to the circulation removes any stasis of blood in the lungs) ; and the quantity of urine secreted is increased in the most striking manner. Long-continued and unprejudiced experiments which have been made with koumis—some in private practice, some in the St. Anna Hospital for children, and some in Professor Bamberger's Clinique—have robbed it of its fame as a specific against consumption, but have settled beyond question that it is wonderfully suited as a form of nourishment for badly nourished, wasted, rachitic, or scrofulous children, or for convalescents; and also that it can often cure cases of obstinate chronic diarrhœa, or old catarrh—always provided that the patient can bear the remedy, which, however, is by no means always the case. While acknowledging the favourable results that it brings about, its high price and the difficulty of always procuring a freshly fermenting milk, must make its more extended use, especially among the lower classes, very problematic. The greatest service that koumis can render will probably be in strengthening the opinion that it is necessary to nourish patients suffering from phthisis as much as possible, and thus wean people from whey-cure : in this indirect manner koumis may be the means of saving many a life that would otherwise be lost, or at any rate shortened.

THE HOWARD MEDAL.

BY referring to our advertising columns, it will be seen that the Council of the Statistical Society have given effect to the views of the President, Dr. Guy, F.R.S., regarding John Howard, and his claim to be considered at least as much of a statist as a philanthropist, by establishing a Howard medal. This medal is to be given every year to the author of the best essay on some subject in social statistics, giving a preference to those in which Howard himself was most interested. The subject of the essay for which the medal will be given in 1874 is—"The State of Prisons, and the Condition and Treatment of Prisoners, in the Prisons of England and Wales during the last half of the Eighteenth century, as set forth in Howard's 'State of Prisons,' and his work on 'Lazarettos.'" Full particulars may be obtained on application to the assistant secretary of the Statistical Society, 12, St. James's Square, S.W.

PRIMITIVE COLONIAL PRACTICE.

IN an interesting outline of the progress of surgery in the Dominion of Canada, Dr. W. H. Hingston (Address to the Canadian Medical Association, August, 1873) mentioned that, in Canada, the earliest practitioners were all called surgeons—the term physician or *médecin* was not used by the early settlers. Surgery, therefore, had precedence in this colony over medicine, as both had precedence, in point of times over law ; and whilst practitioners treated diseases, prepared medicaments, and operated on the wounded, in all the early public acts they were called surgeons, and were qualified by that title ; and on the vessels the name of surgeon was given to the officer of health who accompanied. The reason given was this ; that in a country where the whites were exposed incessantly to the attacks of the natives, in which nearly all the first colonists were destroyed by them, the art of surgery was, as the documents state, "d'une necessitė plus pressante, et d'une usage plus fréquent". For twenty years thereafter, there were but five surgeons in what is now the largest city in the Dominion ; their names are given, and a writer of that period wonders how so many could have subsisted. But to prevent any possibility of interfering with each other's interests (would that their successors had continued to be as scrupulous !), they threw their whole earnings into one common fund, and, by a contract of association, their books, furniture, food, merchandise, furs, and the fruits of the earth, instruments of surgery, medicines, and their whole revenue, and also contracted that none of them should go into debt for a greater sum than five coppers, and that only in case of urgent need. At the end of four years their books were balanced, and each one received an equal share. It was also stipulated that, if either of them died before the expiration of the term, all his interests belonged to the survivors. Those men, and their early successors, have passed away, and, so arduous was then the struggle for existence, they have left no written record. Pale-faced women from old France exercised the healing art more than two hundred and fifteen years ago, when Nova Scotia, New Brunswick, and Ontario were unexplored wildernesses. At two spots—Montreal and Quebec—were they to be found, screened by palisades from the Iroquois—warding off their encroachments with one hand, and, with the other, by kindness giving evidence of their love of Him who healeth our diseases and redeemeth our life from destruction.

IRELAND.

THE ELECTION FOR 1874 AT THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE ensuing annual election at the Irish College of Surgeons is already (at a distance of six months) exciting an unusual amount of interest in the profession. It is understood that a sharp contest will take place for the office of Vice-President, and as the Vice-President of the College becomes (as a matter of custom) President for the following year, the contest will really be for the Presidency of the College for the year 1875. Several candidates (including Messrs. J. Hamilton and Tabuteau) have been mentioned, but we believe that the contest will virtually lie between Dr. Edward Hamilton and Dr. Mapother, both excellent men, no doubt, but the former much the senior of the latter. We regret to hear it reported, that something of the nature of a politico-religious battle is likely to take place. We trust that no qualification other than those of professional fitness will be recognised by the fellows, and that political and religious warfare, which have done so much to damage the material interests of Ireland, will not be introduced among medical institutions, from among whom they have, up to the present time, been almost completely excluded. It has also been stated that, at a recent election at this College, where there was a close competition, tricks were resorted to, such as would not be tolerated by the present law of elections, as, for instance, the sending of presents of first-class railway and steamboat tickets to doubtful supporters. We trust that we will have no more of such doings at elections in medical corporations.

CRIMINAL LUNATICS IN IRELAND.

THE asylum at Dundrum, county Dublin, was the first institution erected specially for the "criminal insane" in Europe. Since its establishment twenty-three years ago, three thousand persons have been confined therein; and, with the exception of one case of suicide, no untoward event affecting life has occurred, or any serious act of violence. On January 1st, 1872, there were in the institution 172 patients, 122 males and 50 females. In the twelvemonth, twenty patients were admitted ; nine were discharged, seven of whom were recovered, and their legal detention was determined at the close of the sentence of imprisonment. Both classes of criminal lunatics are admitted; those acquitted on the ground of insanity, and those who during imprisonment have become insane; but the relative proportions of these we are unable to state. The offences for which the inmates were arraigned are stated to be—homicide, 50 males, 14 females; violent assaults, 19 males, 6 females; assault with intent, 1 male; common assault, 26 males; arson, 4 males, 3 females; robbery from the person, 5 males; burglary, 4 males; minor offences, 17 males, 26 females. The cost per head for maintenance during the year was £32 : 8 : 7, against £27 : 16 : 10 in the preceding twelve months. At the Dundrum Asylum, there is nothing distinctive in its general aspect from what is observable in ordinary hospitals for the insane; in fact, the grounds of twenty-eight acres may be considered quite open, surrounded only by a wall of from eight to ten feet. Up to the present time, but six patients permanently escaped, four malingerers and two convalescents.

HOSPITAL SUNDAY FOR DUBLIN.

WE believe that Dublin will have an Hospital Sunday, in spite of the many difficulties which seem to lie in the way; and, moreover, that Hospital Sunday will be a success in Dublin as it has proved in Belfast. It has been affirmed that the dignitaries of the Roman Catholic Church are opposed to the movement; but we know that, up to the present, Cardinal Cullen has not expressed any opposition, and that many Roman Catholics, both lay and clerical, are in favour of the institution. Many influential lay Roman Catholics have attended the meetings of the promoters of the movement held under the auspices of the Lord Mayor, himself a Roman Catholic. Some of the gentlemen, no doubt, are members of the medical profession, but there are also many others who have no professional interest in the success of our medical charities, but who take an interest in the progress of Christian charity. The real difficulty the movement has to contend with is, that there are Roman Catholic hospitals, a Protestant hospital, and mixed hospitals, but many of the latter have a decidedly Protestant or Roman Catholic complexion, as the case may be, from the nature of their original foundation, or from the accident of their present mode of management. Thus many have been founded by Protestants, and have, among their *ex officio* governors, archbishops and bishops of the old Irish Protestant Church; another institution, of the religion of whose founders we are ignorant, has a decidedly Roman Catholic complexion, from being nursed—and well nursed, too—by a sisterhood belonging to that Church. It is thus evident that there are all shades of opinion represented in Dublin hospitals, from what might be characterised as extreme exclusiveness to the widest liberality. But who profit by these hospitals—there are sixteen of them—when considered collectively? The sick poor of Dublin; and surely it is not acting the part of the Good Samaritan to inquire the religion of the sufferer before affording relief. We may mention, by the way, that the Roman Catholic population of Dublin far outnumber the Protestant, and the lower we descend in point of wealth, the more is this proportion increased; and, in fact, probably ninety per cent. of the hospital patients of Dublin are of the Roman Catholic persuasion. Let each member of the Dublin public, be he ecclesiastic or lay member, be the Good Samaritan, and following the words of our Great Master, adopted as the motto of one of the Dublin hospitals, "Do likewise."

DUBLIN UNIVERSITY EXAMINATION IN STATE MEDICINE.

THIS examination has been held, after an interval of two years; and we are sorry to find that but one candidate presented himself. We have carefully read the examination questions (the whole examination was a written one). They are eminently of a character calculated to test the capacity of the candidate's fitness for the holding of public health offices of the highest class. We believe that the small number of candidates who have, up to the present, presented themselves, is owing to the high academic standing required. We think that the authorities o the university should reconsider this part of their regulations. It should be remembered that gentlemen who have passed their qualifying examinations (M.B. and Ch. M.), almost at once enter upon the active duties of their profession, leave the neighbourhood of their Alma Mater, and many go abroad for years. In such cases it is always inconvenient, and generally impossible, for these graduates to return to their university to undergo another examination at he end of three or four years; and thus we find that all the State Medicine diplomates are, at present, Dublin hospital physicians. We think the university might safely lower the standard to that of M.B. standing, but should in no way depart one jot from the high curriculum at present required.

THE LATE DR. GRAVES OF DUBLIN.

DR. HUDSON, late President of the College of Physicians, Dublin, in resigning the chair after his term of office had expired, spoke of the desirability of placing a statue of the late Dr. Robert J. Graves in the hall of the College. A Committee has been formed for the purpose of receiving subscriptions for such a statue, which, according to a resolution of the College, will be placed in its hall. Dr. Graves was one of the physicians who have done honour to his profession and his country. He is justly regarded at home and abroad as the representative man of Irish Medicine. His lectures, widely diffused and taking a leading place in foreign as well as British literature, not only founded a great clinical school, but have been the sources of inspiration of many of the most distinguished clinical teachers of late years. Trousseau especially, among Frenchmen, resembling Graves in many of his characteristics, was never tired of expressing his obligations to the distinguished Irish physician. There are many of Graves's pupils among our readers in England, as well as in Ireland and in the colonies; and we feel sure that they will be glad of the opportunity of doing honour to the memory of their master, and of erecting an enduring memorial to one of Ireland's greatest medical worthies; and, as the services and worth of such a man are possessions which transcend territorial limits or merely personal feelings, probably other than Irishmen and other than his pupils may desire to join in the subscription. The honorary secretaries are Dr. Stokes, Dr. Hudson, and Sir W. Wilde. A satisfactory amount of subscriptions, in sums varying from one to ten pounds, has been thus far subscribed.

ULSTER MEDICAL SOCIETY.

AT the annual meeting, recently held at the Belfast General Hospital, the Council reported that the progress of the Society during the past year had been most satisfactory. Ten new members had been enrolled, and eighteen meetings of the Society held; the meetings were well attended, the papers read, the specimens exhibited, the patients introduced, the cases narrated, were interesting. The Council regretted to have to record the death of three of the most estimable members—Drs. Thomas Reade, Pirrie, and Murray. The former was one of its oldest members, and occupied a most prominent position in the province; his researches on the effects of the syphilitic poison, were the first to demonstrate that the nervous tissues were not exempt from the ravages of that disease. Dr. Pirrie was cut off in the prime of manhood, and in the midst of his labours. Dr. Murray was a painstaking, skilful, and judicious practitioner, and had formed a large circle of friends. The Council looked forward with interest to the meeting of the British Association for the Advancement of Science, in Belfast, in August next, and recommended the Society to make arrangements to welcome the medical visitors. The appointment of a sanitary committee would, it was hoped, be attended with advantage. The following were appointed office bearers for the session 1873-4—*President:* John Moore, M.D. *Vice-Presidents:* J. W. T. Smith, M.D., H. Murray, M.D. *Ex-President:* H. M. Johnston, L.R.C.S.I. *Members of Council:* W. K. Mc Keown, M.D., J. J. Charles, M.D., J. Mc Crea, M.D., B. H. Spedding, L.R.C.P.Ed., Brice Smyth, M.B., R. Stewart, M.D. *Treasurer:* J. Fagan, L.K.Q.C.P. *Secretary:* H. S. Purdon, M.D.

THE ASHANTEE WAR.

[FROM OUR OWN CORRESPONDENT.

Gold Coast, December 4th.

FOR the first time in the history of this Protectorate, its affairs—military, political, and social—are being fully ventilated by means of the pens of the many correspondents who have cropped up during the war. You have now ordained that its affairs, medical and sanitary, are to remain no longer dormant, but be also unfolded to the general view *de die in diem*. Happily, the first scene in this drama of war is about to terminate, and with it those horrors which have shocked the sensibilities of humanitarians. Cutting off of heads, lopping off of arms, and such like interesting performances, can no longer be had recourse to within our territory, for the enemy are in full retreat to the Prah, and before this letter reaches England will have crossed the banks of that now rather celebrated river. For more than ten months these savages have been burning, enslaving, and destroying, until once gay villages have been turned into mere refuges for the many beautiful lizards which bask in the sun upon their now roofless walls. Everywhere where they have passed have they left their mark, and it will be years before the remembrance of the Ashantees will have passed away from the minds of the inhabitants. Now that we have an opportunity for doing so, it is most interesting to trace the progress of the Ashantee army from Prashu to Yaucomassie, where the first general action with the natives took place. The remains of the encampments are still to be seen, roofless shanties of palm midribs, neatly formed together, which, when covered with leaves, afforded shelter from the tropical rain and dews, so heavy in this country. These little bush dwellings line the path to the Prah every two or three miles, showing that their progress must have been most leisurely. For a savage nation, the Ashantees are adepts in the art of war. They march in companies and divisions, encamp and hut themselves, progress in easy stages, send out foragers or slaves for provisions, and are perfectly acquainted with the advantages of ambushes, shouting, tom-tomming, and such other means as act upon the rather sensitive nerves of their hereditary foes. Their ambushes are beautifully constructed of leaves and vines in the narrow paths; from behind these they have a ready means of retreat. Scouts occupy all the paths to their permanent encampments, so that it is quite impossible to steal upon them unawares, as often proved during the progress of the present expedition. The care these people take of their instruments of war, the construction of their houses, and many other points evident in their domestic history, show that, although savages in almost every sense of the word, they are still not without the pale of our admiration. That they are endowed with physical courage is undoubted, while the reverse of the picture may be drawn of the Fantees, who, while finely made men, are the most miserable cowards. Of the two races, the coast tribes are the larger and more muscular. As with other cognate races, they have evidently become enervated by more intimate contact with Europeans. The Ashantee army is made up of two distinct races—Ashantees proper, and Donkas or slaves; these last, without guns and perfectly naked, do all the menial work of the camp—erect shelter sheds, forage for plantains, and carry their masters' furniture and belongings. A number of these have been captured, nearly all in a starving condition, and some with every bone standing prominently forward; three small cuts upon each cheek denote their nationality. These Ashantee slaves appear to be very little above the animal in their ideas and feelings; food is devoured with avidity, and the unfortunate wretch who tries in the struggle to conceal a dainty morsel, when discovered, is belaboured most unmercifully. Appearing to have no animosity towards the white man, they all tell the same story of want of powder, food, disease, and death. It is an undoubted fact that small-pox, dysentery, bronchitis, and starvation have here been making sad ravages. This can be easily understood, for they have no idea of vaccination; and when one of their number is afflicted with variola, he is hutted in the bush and left to die, or allowed to roam about amongst them. The dearth of proper food, and consequent necessity of falling back upon unripe plantains, bananas, pine-apples, pawpaws, and the wild or bitter yam are, no doubt, the principal causes of the dysenteric attacks from which they suffer. Exposure to vicissitudes of temperature and wet, drinking of impure surface-water, largely impregnated with albuminous and decaying vegetable matter, must also contribute to the production of the disease. The odour and nature of the fæcal accumulations which cover their camps sufficiently indicate the prevalence of this affection amongst them. Their sick and wounded they nearly always remove either upon men's backs, or in baskets roughly made from the midrib of the palm-leaves—a not very uncomfortable means of transport. All the chiefs and men of influence crossed the Prah with a number of slaves; many of these have died during the past eight months. One prisoner related that his master crossed with twenty-four, and only two remained; another, on being asked why he deserted, replied, that, "as his master had died during the campaign, he was afraid to return to Coomassie, as his head would be taken off, in order to allow of his at once leaving for the world of spirits, to there resume his menial capacity and former servitude"—a condition of affairs to which he strongly and very naturally objected. These Ashantee gentlemen have not forgotten the attractions of female society in their wanderings. Amenquachie, the general-in-chief, is credited with no fewer than eight wives, who are carefully housed in camp in his own particular quadrangle. A chief's hut may be always known by this peculiar arrangement of the building; the shelter-huts are better made, and face each other in the form of a hollow square. Here the palavers are held; the voice of the solitary speaker, and the round of applause which follows upon his stirring words, have been frequently heard from our advanced posts, which are close upon those of the enemy. A few female slaves have been captured—all as wretched as the men. One in rather better condition surrendered herself not long since—a Crepi. When asked why she deserted her lord and master, she replied, "Well, I was taken as a slave from my own country to Coomassie a year and a half ago, *enceinte*, and there delivered of a baby-boy. Since then, no one has admired me, so I have left them upon the first opportunity." Her good-humoured face grinned from ear to ear. We all naturally laughed at such a pretty speech. It is to be hoped the fair dame has regained already her lost love. The Ashantees have some peculiar modes of burying their dead. Only free men are honoured with burial; the unfortunate slaves are left in the bush; higher chiefs are placed upon elevated biers, wrapped up in their clothes, and covered with leaves, there to remain until decomposition and ants clean the bones; these last are then collected on the return journey, and brought back to Coomassie. We have seen several of these in the forest, and the odour from them is anything but agreeable. An Ashantee warrior is, after all, a picture to look at; his clothes, a loin-cloth, over which are buckled the leather bandalier and bags containing his ammunition; a formidable knife stuck in this girdle, and a long flint musket, with a few amulets, complete the *tout ensemble* of his military furniture. Such is the savage soldier who has given us so much trouble, and spilled some of our best blood. Well-knit, lithe, active, he is perfectly capable of giving us plenty of trouble yet, and it is folly to suppose that our march to Coomassie will be a bloodless one. The wounded in the coming campaign will not be among the least of its difficulties after we have crossed the Prah. Such, then, are the Ashantees as we have seen them during the past few months. You can judge for yourself whether our enemies are to be despised.

I have thought it best to commence my letter with this brief account of the Ashantee army, as much of what I have written must be new to your readers.

By the latest accounts, the enemy were encamped near Faysoo, some twenty-four miles from the River Prah—slowly and leisurely retreating in three divisions. Their rear-guard was come up with on the 1st instant, attacked and driven upon the main body. In this attack, we lost one Houssa killed, and four men of the 2nd West India Regiment were wounded; some of the irregular troops were also "touched up." These last, it is whispered, were mindful of the old adage on this particular occasion—

> "He who fights and runs away,
> May live to fight another day."

Sir Garnet Wolseley, the Adjutant-General, Major Baker, Captain Lanyon, Aide-de-camp, and the principal medical officer left for the front on the 1st instant on a flying visit of inspection. Fifty blue jackets accompanied the General. Sixty miles of the road are now open, and it is being pushed on with vigour under the superintendence of Major Home, R.E. The insecurity of the road has hitherto been one of our great drawbacks; now, stores of all kinds are being pushed on to the first base of operations—Mansue—until the station on the Prah, or in its immediate vicinity, has been determined upon, so that one meets on the road nothing but a long line of carriers of ammunition, biscuit, preserved meat, rum, rice, tea, sugar, and other luxuries too numerous to mention. Now and then, a hospital-bath, or one of Fyffe's patent close stools, is observed in the distance—an indication that war has to be looked upon in quite another aspect, and that honour and glory are, after all, only the bright side of the picture.

According as the outposts are being advanced, temporary hospitals are established. That of the head-quarters of the 2nd West India Regiment is at present established at Mansue. These are evacuated of their sick as quickly as possible. Cape Coast has consequently become one large hospital. At Connor's Hill are located the Marines, of whom twenty-eight are on the sick-list, chiefly suffering from attacks of dysentery and fever, the latter disease predominating. The form is the usual Coast remittent or eight-day fever. I must defer to a future letter a description of this disease. Here also an officers' hospital has been opened; and at Cape Coast is the garrison hospital, chiefly occupied by men of the 2nd West India Regiment, of whom some forty are under treatment. Quite recently, the church has been equipped for twenty-two patients, and is now available for its future sick population.

Twelve men of the Army Hospital Corps arrived by the mail of the 3rd instant, two of whom are compounders. One of the latter has been told off for duty at Connor's Hill; the other joins the head-quarters of the 2nd West, at present in charge of Surgeon Thornton, at Mansue. The men of the Army Hospital Corps have hitherto behaved themselves very well. Sergeant Mahony, one of the earlier arrivals, Sergeant Edwards, Hospital-Sergeant 100th Regiment, and Sergeant Ronchier, have done very good work since their arrival. The men are endeavouring to do their best; and, in such a trying climate, they deserve every consideration.

Surgeon-Major Reade arrived by the mail of the 30th ult., and Mr. Waters by the succeeding one for Sierra Leone. Drs. M'Naltey, Ley, Horton, and Moore, are the other officers at head-quarters. The last officer has had a most severe attack of dysentery, which, in all probability, will necessitate a change to England. The disease was contracted at Bula, a camp now abandoned. Dr. Yore, Sanitary Officer, has returned from Acrofroom, and resumed his duty on the staff of the Quartermaster-General. Surgeon-Major Jackson has left in the *Simoom* for Ascension, for a change. We are consequently at present without a hospital ship, and anxiously looking out for the arrival of the *Victor Emmanuel*. A change of vessels will be of advantage, as, owing to the prolonged period of her stay here, the *Simoom* was becoming rather unhealthy. It should be remembered that hulks cannot with safety to their inmates remain anchored for any length of time in the waters of the Coast of Africa. Every one praises the *Simoom*, the courtesy of her medical officers, and the liberality of the treatment of the sick. Fresh provisions were instantly supplied, and everything conducive to the care and comfort of those labouring under the symptoms of disease.

The rains at Cape Coast are not yet finished. We had a regular downpour on the 1st. Up country, afternoon rains and thunderstorms still continue; these are accompanied by vivid lightning—indications that the African monsoon is drawing to its close. In the interval, the cool sea-breeze blows regularly, and the heat in the shade is not excessive. Up country, one scarcely feels the sea-breeze, although many of the stations are elevated some hundred feet above the level of the sea.

Lieutenant Grey, of the Royal Marines, was buried on the 1st instant with military honours; he died of dysentery the day previous. This is the third officer who has died since the arrival of Sir Garnet Wolseley—Eardley Wilmot, killed at Dunquah; Harry Mouat, of the Commissariat; and the last mentioned officer. Poor fellows! they lie side by side in the European cemetery near the Salt Pond. The town and its immediate vicinity are at present comparatively healthy. The executive officers of the Sanitary Commission have been working vigorously, and in time Cape Coast will present a very different appearance. The number of tumble-down houses is a great drawback, as they impede ventilation, and allow of accumulation of filth. At present, this must remain, unfortunately, as the legal rights of owners cannot be lightly interfered with. I must defer to a future letter many points of sanitary and medical interest.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

The second ordinary meeting of this Branch was held at the Royal Hotel, Bristol, on Thursday, December 18th; E. L. Fox, M.D., President, in the Chair. There were sixty-four members present, and nine visitors.

New Members.—The following gentlemen were balloted for and elected members of the Association and of this Branch: Kirwan F. Sylvester, L.R.C.P.Edin., Trowbridge; T. Inman, M.D.; John Moir, L.R.C.P.Edin., Keynsham; J. W. Roeckel, M.R.C.S.Eng., United Hospital, Bath.

Communications.—1. Dr. Spencer read a paper on the principle of action of different forms of Stethoscope, including a new form designed by himself.—Dr. Shingleton Smith made a few remarks.

2. Mr. Steele showed a boy on whom he had performed Excision of the Elbow-Joint, demonstrating that the perfect power of flexion of the limb retained by the boy was due to the fact that the triceps was divided longitudinally and turned to each side, instead of being cut across as has been usual in this operation.—Drs. Marshall and Inman, and Messrs. Dobson, Leonard, and Tibbits made remarks on this case.

3. Dr. J. G. Davey read part of a paper entitled Jottings in Lunacy. At the close of the meeting, Dr. Caddy asked several questions bearing on the subject; the answers to these will be given with the second part of the paper at the next meeting of the Branch.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

The third general meeting for the session 1873-74 was held at the Midland Institute, Birmingham, on December 11th: present, Furneaux Jordan, Esq., President, in the Chair, and fifty-five members and visitors.

New Members.—Five members of the Association were elected members of the Branch, and eight gentlemen were elected members of the Association.

The British Medical Benevolent Fund.—Mr. Watkin Williams, with the permission of the President, called the attention of the meeting to the British Medical Benevolent Fund, and very strongly urged its claims.

Communications.—The following communications were made:

1. *Soft Cancer of the Kidney.*—Dr. Russell presented a large tumour of soft cancer weighing between ten and eleven pounds, originating in the left kidney, and nearly destroying that organ, extending to the neighbouring glands, which constituted the main mass, and occasioning secondary deposits in the liver and on the pleura. The patient was below middle age. The history of the tumour did not extend beyond four months. The tumour increased with great rapidity, producing great œdema of the lower extremity and of the penis. Death occurred in three weeks, suddenly, from effusion in both pleuræ, doubtless from partial compression of the abdominal vena cava. There was entire absence of cachexia, specially remarkable, considering the rapid growth of the tumour.

2. *Anencephalous Fœtus.*—Dr. Malins showed an anencephalous fœtus, having also a deficiency in the posterior arches of the first three or four dorsal vertebræ. It occurred in the practice of Dr. Thompson of Kingswinford; its main interest being in the fact that it was the offspring of an idiot girl, an unmarried inmate of the workhouse.

3. *Ovarian Tumour.*—Mr. Ebbage showed an ovarian tumour, removed after death from a maiden lady aged 85. The chief inconvenience caused during life was œdema of the extremities. The tumour filled the pelvis, and was firmly fixed by fibrous bands to the uterus. The tumour was in parts of bony hardness. It was referred for examination to the Pathological Section.

4. *Fibroma of the Uterus.*—Mr. Bartleet exhibited a fibroma uteri removed the previous day by the *écraseur*. Tinted microscopic specimens of the growth, kindly prepared by Dr. Malins, were placed on the table.

5. Mr. Sampson Gamgee read notes on Esmarch's Bandages for Bloodless Operations; and Mr. Bond Moore a paper on the Connexion between Sewage-poisoning and Typhoid Fever. Each paper was followed by an interesting discussion.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

A Meeting of the Section took place in Queen's College, Birmingham, December 9th; Dr. Wade in the Chair.

The Optic Nerves and Chiasma.—Mr. Priestley Smith read a paper on this subject, and referred to recent articles in the *Archiv für Ophthalmologie* which seemed to establish a total decussation of the optic tracts in the chiasma, and also the accepted belief in a semi-decussation. The settling of this great question would be of great importance in connection with hemiopia as a means of localising brain-lesion. The subvaginal space existing between the inner and outer sheaths of the optic nerve was described in its important relation to the conditions known as "choked disc" and staphyloma posticum. The paper was illustrated by diagrams explaining the different theories of the causation of hemiopia, and by a number of sections of the chiasma and trunk of the optic nerve, showing the normal structure and the changes produced by inflammation and atrophy.

Epiphytic Growths of the Skin.—Dr. Carter contributed a paper on this subject, illustrated by specimens of tinea tonsurans, tinea circinatus, and tinea sycosis, and gave some instructions also for obtaining and mounting specimens for microscopic examination. Dr. Carter recommended glycerine as the best medium for preservation. The specimens should be first cleaned by liquor potassæ, and then well washed in water prior to mounting. Certain authorities having denied the existence of ringworm in the adult, Dr. Carter showed a specimen of tinea tonsurans from an adult aged 37.

Spindle-shaped Sarcoma of Orbit.—Mr. V. Solomon showed microscopic specimens of a tumour which had been removed, and gave an interesting account of its relations and the nature of the disease.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Tuesday, December 16th, 1873.

Sir William Jenner, Bart., K.C.B., M.D., President, in the Chair.

Leucocythæmia with Lymphadenoma.—Dr. Frederick Taylor brought forward an example of this occurring in a boy aged 12. His grandfather and an aunt had suffered from cancer, but his brothers and sisters were healthy. He had had scarlet and rheumatic fever. He was ill about five weeks, with slight œdema and ascites. The spleen was enlarged as well as the lymphatic glands; the white corpuscles in the blood were increased in number, forming one-tenth, as seen under the microscope. The temperature kept up over 100 degs. Fahr., being often 102 degs. He became dropsical, had purpura, dyspnœa, probably from enlarged tonsils, and died on August 2nd. *Post mortem*, the liver was found to be enlarged, weighing fifty-four ounces. The spleen weighed fifty-one ounces. In the mediastinum there was a large tumour, consisting of glands; under the pleura there were bands of tissue like lymph glands. The case resembled that described as Hodgkin's disease, but the stroma was more delicate, and of more rapid growth than was usually found in these cases.—The President remarked that he had never seen a case of enlarged spleen without elevation of temperature. In Hodgkin's disease, this was not so, and there was no increase in the white corpuscles. The stools were often pale in colour.

Spleen and Lymphatic Glands from a Case of Adenoid Disease.—Mr. Cripps related a somewhat similar case to the above, where the spleen weighed nine and a half pounds, and the lymphatic glands, had they been collected, would have weighed five or six pounds. The patient, a female, noticed, in 1869, that her abdomen was enlarged; but she felt no inconvenience until the present year, when the swelling increased; she became anæmic and emaciated, had sickness and diarrhœa, refused everything except milk and farinaceous food; the glands of the neck and axilla became enlarged, she had cough, and ultimately succumbed.—Dr. Cayley remarked that the relation between enlarged spleen and lymphatic glands, and leucocythæmia, was not what Virchow asserted; viz., that the latter was dependent upon the former, for such enlargements frequently occurred without its production. Dr. Hughes Bennett's original theory, that leucocythæmia was a suppuration of the blood, *i.e.*, in modern language, a multiplication in the blood of white blood-cells, explained the facts better. According to this view, the splenic and granular enlargements would be secondary to the condition of the blood; for, though leucocythæmia was always attended by these enlargements, they were frequently present without leucocythæmia.—Dr. Crisp thought this condition was due to muscular efforts. He instanced a case occurring in a lady who had a difficult confinement; another in a young man who over-exerted himself in running; a third case being also apparently attributable to muscular efforts.—The President remarked that the spleen might have been enlarged at the time of the exertion—a coincidence, not a consequence.

Imperforate Rectum.—Dr. Crisp showed the dry distended bowel of a child—a male—where sickness and abdominal distension, with absence of defæcation, had been the prominent symptoms. The anal aperture was perfect, the intestine being distended above. *Post mortem*, the intestine was seen to terminate in a *cul-de-sac*, which might have been opened had an operation been attempted. Dr. Crisp mentioned that, in one case observed by him, the child lived over a hundred days without any operation having been performed. He cited one instance, recorded among "Remarkable Cases," of a girl, aged 15, with this condition still existing; the fæces being vomited every few days, and the urine being excreted through the nipples. There was one remarkable circumstance in these cases—that boys were much more liable than girls to be affected by it, the former being two-thirds of the number.—Mr. Fairlie Clarke corroborated the case of the girl, aged 15, referred to by Dr. Crisp.—Mr. Wood also stated that these cases occurred more often in males than in females.—Mr. H. Morris narrated a case where liquid fæces passed through a hole in the vagina, and where operation was resorted to successfully.

Ossifying Enchrondroma.—Mr. Godlee exhibited three, developed on the upper end of the tibia, there being a layer of cartilage outside, and a dense layer of fibrous tissue covering them; there were centres of ossification just as in exostoses.

Renal Calculi.—Dr. Dowse exhibited the kidney removed, *post mortem*, from a man aged 45. He had no dysuria, and had only experienced pain in the left lumbar region shortly before his death, which took place suddenly.—The President referred to a case where Sir Benjamin Brodie had diagnosed calculus forty years before the patient died, at the age of 80, in which there had been no symptoms.

Psammoma of the Cerebral Dura Mater.—Dr. Cayley showed a specimen from a man, aged 52, who had died of capillary bronchitis in October last. In August, he had epistaxis and hemiplegia of left side. At the necropsy, there was found attached to the dura mater a firm tumour of the size of a bean, lodged in a hollow of the anterior lobe of the brain, consisting of tough fibrous bands and calcified bodies with concentric rings.

Peri- and Myo-carditis from a Case of Blood-poisoning following Whitlow.—Mr. Godlee showed a specimen of a heart removed from a man who had a thecal abscess from having cut his finger with block tin. There was much pain, and an incision was made. Four years afterwards, after walking, the knee became swollen and painful. The pulse was dicrotous, the temperature 103 degs. There were cardiac friction, dyspnœa, delirium, and death. *Post mortem*, there was found to be suppuration in the theca; the bone was rough and bare; the joints were opened and disorganised. There was an abscess in the thigh, extending to the knee-joint; the lungs were engorged; the external surface of the pericardium was rough; the muscle had lost its natural red colour, being almost yellow. There were no symptoms leading to a suspicion of cardiac disease until within a few days of the patient's death. Chloroform had been administered with perfect safety, to complete anæsthesia, only a few hours before the patient's death. There was a multiplication of cells between the fibres of the muscle.—The President had seen the specimen removed; there was great irritability of the pulse in pericarditis generally.—Mr. Goodhart had seen a case of multiple abscess of the tissue of the heart, and no irregularity of pulse.—Mr. Godlee stated that it was not a case of pyæmic abscess in the heart.

Cystic Disease of Kidney in a Boy aged 6 *Years.*—In this case, paracentesis had been performed several times. A tumour was detected in the right side of the abdomen, which was thought to be hydatid. Four ounces of chocolate-coloured fluid were drawn off, and the operation was repeated. Marasmus ensued, and death followed. *Post mortem*, the bladder was found occupied by a firm tense tumour of the size of a fœtal head. The child's urine was perfectly normal.

Perforating Wound af the Chest.—Mr. De Morgan showed about six inches of the spike of an iron railing, just removed from the upper part of the chest of a man suffering from mania, who had thrown himself out of a two-storey window. On admission, he was lying quiet. Pulse 136; slight cough. Emphysema had taken place in the axillary region. The spike was removed, and collodionised lint was immediately applied after its extraction.

Enchondroma of Tibia.—Mr. De Morgan exhibited a specimen removed from a young woman. In 1871, after her confinement, she noticed a swelling in the calf of her leg, which subsided and recurred again, rest and a bandage relieving the condition. In March, 1873, the knee began to enlarge rapidly, and she became cachectic. There was no malignant disease found in the specimen; there was a tendency to the development of cystic tumours from softening of the interior. The disease had extended up behind the femur, but was limited to the tibia.

Peculiar Deformity of Knee-joint.—Mr. Adams showed a case occurring in a small feeble man, who had fractured his patella two years ago. Fibrous union occurred in six weeks; but he was unable to walk except with crutches. Death occurred from inflammation and suppuration of the lymphatic glands. The crucial ligaments were found to be loose and swollen, and the cartilage separated from the bones, probably in consequence of chronic arthritis.

MEDICAL SOCIETY OF LONDON.

Monday, December 8th, 1873.

S. O. Habershon, M.D., President, in the Chair.

What is Diphtheria?—Dr. Semple read a paper entitled "What is Diphtheria?" illustrated by a recent epidemic in Italy. The author, in the first place, gave a general sketch of the successive epidemics which appeared in the world; that of 1856, and those of the following years, being the most severe which had ever visited Great Britain. Until that time, English physicians knew but little of the malady, and what they did know was derived from French sources. The researches of Bretonneau had contributed materially to diffuse a knowledge of its characters, but even now the true nature of the malady was not perhaps fully understood. At the commencement of the present century, viz. about 1818, the disease broke out as an epidemic in France, and then it spread to this country. The loose way in which the word "croup" was used, both by French and by English writers, contributed very much to obscure the real characters of diphtheria, for, while Bretonneau used the terms croup and tracheal diphtheria as synonomous, the English writers included under the name of croup at least three diseases, viz., tracheal diphtheria, laryngitis stridulus, and laryngismus stridulus. Dr. Semple's own opinion was that these three affections ought to be called by the above names, and then the word croup might be abolished altogether. Italy had very lately suffered from an epidemic of diphtheria, which recalled the former epidemics in that country recorded by Cainova, Sgambati, Nola, and Ghisi, in the seventeenth century; but the Italian physicians of the present day were more fortunate than their predecessors, for they were well acquainted with the history of former epidemics, and however dangerous and fatal the malady now was, the visitation was only a repetition of previous outbreaks in Europe and America. The Italian epidemic of diphtheria began in 1863, and then it somewhat declined till it broke out again in 1867; but it burst forth with greater vehemence in 1869, and reached its maximum in 1871 and 1872. The fearful ravages it committed might be estimated from the fact that in the year 1872, there were 1058 cases of diphtheria reported as occurring in France, of which number 563 died and only 495 recovered. A committee of medical men had been appointed to take the whole subject into consideration and to report upon certain questions connected with the outbreak. They had unanimously come to the conclusion that the so-called croupous form, and the diphtheric form, were only modifications of the same morbid process; that laryngeal and tracheal diphtheria (generally called croup) was consecutive in the great majority of cases to the appearance of the disease in the pharynx. On question of treatment, the results were unsatisfactory, although local treatment was mentioned with a certain degree of approbation, and tracheotomy was considered, at best, a very doubtful remedy.

Dr. Fothergill read a paper on "the Depressants of the Circulation and their use", a portion of which appears in the present number.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

Wednesday, November 19th, 1873.

James F. Duncan, M.D., President, in the Chair.

President's Inaugural Address.—Having dwelt upon the advantages of a Society such as that of the College of Physicians, the President vindicated the claims of medicine to be regarded as a science, rather than as an art; its practice being based upon the perpetual exercise of the reasoning powers, brought directly to bear upon the individual instance. When this principle was lost sight of, and the practitioner, leaving out of view the personal peculiarities of his patient, treated him in a blind routine manner, he abnegated his high function, and proclaimed that he was no longer fit to be entrusted with the solemn responsibilities of the medical calling. An analogy was traced between the science of the physician and that of the astronomer—the former dealing with life, subject to epidemic and other influences; the latter with electricity and gravitation. But there was this difference between them—that, while the laws of gravitation were fixed, uniform, and fully known, the forces with which the physician had to deal were variable in their duration, intensity, and nature, and as yet but very imperfectly investigated. These forces (as affecting the individual) were inherent, and unaffected by external agencies—as, for example, what was termed "idiosyncrasy"; or extraneous—such as conditions of weather, etc. Again, there were other forces at work which influenced the health of the community in a similar manner. These were at present known only from their results, One of this class was what has been described under the name of "epidemic influence". Proofs of the existence of this morbific force were cited, and examples were given of the chief peculiarities of epidemic visitations. Considerations like these led the President to believe that other forces of a different kind, and equally obscure, might exist, extending to the whole family of man, producing their changes at longer intervals of time, and lasting for many years without perceptible alteration. He thought there was good reason to believe that disease, in the course of a long series of years, ran through a cycle of change, beginning at one end of the scale with a decidedly sthenic character, passing thence by slow and imperceptible changes until it reached the lowest point of asthenia, and once more returning in a similar fashion to its original character. Examples of this change of type in disease were quoted from his own experience. One of these was peculiarly interesting. Acute mania, with its great nervous excitement, exalted functions, and wild delirium, had become comparatively rare; while asthenic forms of insanity, such as melancholia, and various morbid delusions, were met with in increasing numbers. This might explain the reading of a paper in the Psychological Section at the last meeting of the British Medical Association on the subject, "Is there such a Disease as Acute Primary Mania?" The argument from the change of practice was then adduced. In conclusion, the President referred to the recent removal by death of Professors William Barker and Robert W. Smith, and to the hopeless illness of Professor Robert Law. The closing words of his address were the following. "Gentlemen, it is not my intention to say one word in praise of these distinguished men to whom I have referred, and whose loss is universally deplored. I am totally incapable of discharging the duty, were I vain enough to make the attempt. Nor is it necessary. Their lives, their labours, their acknowledged reputation, speak for themselves, and are their best eulogy. Wherever the English language prevails, wherever civilisation extends, wherever medical science is cultivated, they are more or less known, and honoured, and lamented. And one of them, at least, when other names that now stud the firmament of earthly glory shall have lost their lustre from the rise of other discoverers in the paths of science, shall continue to shine forth clear and bright, until the night of nature shall have passed away, and the morning of a better dispensation dawns upon the world."

Case of Blue Chomidrosis.—Dr. A. W. Foot detailed the particulars of an example of this rare affection in a young lady aged 17. He also showed a water-colour drawing of the patient. The blue exudation affected principally the forehead and temples; it also appeared beneath the eyes, on the side of the nose, on the chin, and on the back of one hand. It showed itself for six months, but it is now more than three years since it was last seen. Any mental agitation or excitement, quickening of the circulation, or temporary hyperæmia of the face, caused by stooping, increased the depth and intensity of the coloration. The exudation had been preceded by constant violent headaches, which had lasted for three weeks, when a "puce-blue" colour began to appear, first as a "shade", then of a deeper tint, under the eyes. Except on two or three occasions, the catamenia occurred regularly. The colour could be wiped off. It stained the lining of her hat and her pillow-cover. The lady was of small size, with brown hair and eyes, naturally high complexioned, of a nervous disposition, predisposed to blush, sensitive, quick, and excitable. She devoted herself to her studies so ardently as to give one the idea that she was suffering from congestion of the brain, the result of overwork. The headaches were accompanied by great photophobia and intolerance of sound. She was treated first with bromide of potassium; then with calumba and hydrocyanic acid (owing to irritability of the stomach). A zinc and lead ointment was ineffectually applied, with a view of constricting the vessels of the affected parts—an object which was attained by painting the surface with flexible collodion. After a time, arsenic (Fowler's solution) and decoction of aloes were given—the latter medicine at the menstrual periods. The repressing effect of the collodion seemed to cause the outbreak of the pigment elsewhere; and its application was inconvenient in other respects. Accordingly, acting on the hypothesis that the blue was indigo-blue formed by oxidation from indican exuded upon the face, Dr. Foot substituted a (theoretically) deoxidising lotion, consisting of half an ounce of hyposulphite of soda in four ounces of water. The intervals of freedom from the coloration gradually became longer, and in about six months it finally disappeared. Two years afterwards, the young lady had measles; but there was no return of the chromidrosis, nor was there any peculiarity in the eruption on the face or elsewhere. The deepest streaks of colour followed the course of the veins. In the commencement of the illness, this lady had an attack of somnambulism.—Dr. Stokes mentioned a case of this affection which he had noticed. A young woman of full, rather voluptuous habit, was exposed to mental depression in consequence of a difference between her and her parents as to "an affair of the heart". Gradually a bluish hue appeared, always under the eyes. This lady had no headaches; there was no increase of vascularity or determination of blood to the head; but she became subject to singular trances, in which she would lie to all appearance insensible, sometimes for several hours. While in this condition, she looked like one who was dead, except that her face was not shrunken. Her breathing was extremely low; her pulse (but little quickened) was feeble. She refused food. A slight tinge was seen on a cambric handkerchief, after wiping the affected part with it. Scarcely any medicine was given; but in a year's time the parents yielded, and the lady rapidly recovered her health in every respect.—Dr. Grimshaw alluded to another example of the affection which had come under his and Dr. Foot's notice. An hysterical girl, fond of evening entertainments, had overtaxed her strength. She suffered from headaches, and blackish pigment was exuded on the face. Dr. Grimshaw enjoined rest, and used iron and arsenic. The coloration did not appear when she followed the directions given.—Dr. Foot, in reply, observed that, in the case he had brought forward that evening, the patient's mental excitement arose from study, and not from fatigue consequent on dissipation. He confessed that he had a prejudice against the use of iron, and preferred arsenic in these cases. From Kollman's observations of a man subject to cyanidrosis or blue sweating, it was found that the sweating was increased whenever he took iron; and Scherer, having analysed the sweat, found that the blue colour depended on the proto-phosphate of iron. It had been observed that the blue colouration was most intense while the patient was using preparations of iron internally.

CORRESPONDENCE.

DR. BARNES ON THE SEAT OF THE PLACENTA IN PLACENTA PRÆVIA.

Sir,—I beg a few lines in your Journal, to answer the letter of Dr. Barnes which appears in your issue of December 20th, 1873.

It is to be regretted that Dr. Barnes introduces into his letter several statements regarding me which must be disagreeable to your readers, and which have no bearing on his own defence. In regard to them, I merely say that I have never published anything of the kind against any antagonist, living or dead; and I do not now attempt to respond to them when directed against myself.

My writings on placenta prævia have gone over ground on which Dr. Barnes has distinguished himself. On this account, I could not pass over in silence his great error of describing the cervix as the placental site. I thought of omitting mention of this error, but I still think I followed the right course.

Barnes's words are, "*The cervix is the placental site.*" When he denies that he makes the error, I can do no more than point to as plain words as can be found in the language—"*The cervix is the placental site.*"

Barnes's explanation is, that he used perhaps a little carelessly the word *cervix*, and that he really meant the lower zone of the body of the uterus. But surely he could not expect any reader to discover this special little carelessness. That would be tantamount to an author saying, "Oh, when I said England, I did not mean England, but really meant, and expected you to understand that I meant, the lower zone of Scotland."

Barnes not only uses the word cervix when he says that the cervix is the placental site, but he defines it as having to suffer great distension and contusion under the passage of the child, and possessing less contractile elements in its structure than the rest of the uterus, and as liable to paralysis for a time after labour. This definition is true only of the cervix—the real cervix; it does not apply at all to the lower zone of the body of the uterus, and it cannot be made to apply to it.

Barnes quotes in his vindication several passages in which he writes accurately. He has certainly published many such, but a volume of them does not wipe out his errors. He has no passage to the effect that the cervix is never the placental site.

My object in this note is to defend my accuracy in passages regarding Barnes which I thought proper to write. I wrote them, as I write this, in perfect good feeling towards the author; and I conclude by saying that I shall feel grateful to him if he point out errors in my writings. No doubt I have written much that is ungraceful and inaccurate, but, so far as I know, nothing malicious or dishonourable.

I am, etc., J. Matthews Duncan.

Edinburgh, December 23rd, 1873.

LARGE DOSES OF HEMLOCK AND DIGITALIS.

Sir,—In some remarks on the above subject, and in reference to a recent article "On the Doses of the *Pharmacopœia*," by the editor of the *Practitioner*, the following occurs at p. 731 of the last issue of the British Medical Journal: "More refined or more adventurous therapeutists may give half-ounce doses of tincture of digitalis, or *ounce* doses of succus conii, as Dr. Anstie suggests; but it must remain very doubtful how far such doses can be generally counselled even in extreme cases." And it is implied a little farther on that such doses are "dangerous."

Now, having shown in the *Practitioner* some two years ago, in a paper on the medicinal value of various preparations of hemlock, that not *one* ounce, but *four* ounces of succus conii may be taken with safety, and having previously advocated the use of hemlock in physiological doses, I hold myself responsible for any danger, real or imputed, attending the use of large doses of the succus. Any one who desires it may convince himself of the perfect safety of large doses of hemlock by doing me the honour of attending my prescribing room at St. Thomas's Hospital any Tuesday or Friday. He will there find at the present time a dozen or more patients from five years of age, upwards, taking from *one* to *three ounces* of succus conii for a dose. If he should wish to study the physiological and medicinal effects of hemlock, he will find, in Arthur ward, any day at about 11 A.M., a patient (No. 9) of mine under the influence of *four ounces* of the succus—which dose he takes morning and evening. I need not add that I am careful to give an efficient succus, prepared in strict accordance with the directions of the *Pharmacopœia*.

So much, then, for the succus conii. My observations on the use of hemlock have been long enough before the profession, and have been sufficiently corroborated by its members, to lead them to expect proper directions as to the use of this most valuable plant in any new issue of, or addendum to, the *British Pharmacopœia*. But this is a matter which now chiefly concerns the *Pharmacopœia* Committee, for I believe the profession is pretty well informed on the matter; and the essential object of this letter is to remove an impression which will necessarily result from the association of half an ounce of tincture of digitalis, and *ounce* doses of succus conii, as dangerous doses; the inference, I fear, being that an ounce of succus conii is as dangerous a dose as half an ounce of tincture of digitalis; or, according to my own showing with respect to hemlock, that half an ounce of tincture of digitalis may be given as safely as an ounce of succus conii. This is the mischievous impression which I wish to remove. I have used digitalis extensively, and have given it in powder, juice, and as tincture, in full physiological doses. I have given half an ounce of the tincture at one time, and have long ago satisfied myself that this is a dangerous dose, and that the use of digitalis in large doses is a dangerous practice; and I feel assured that it would be a matter of serious consequence if the *Pharmacopœia* sanctioned the use of large doses of this drug. Hemlock and digitalis are widely different in their effects. To paralyse the *voluntary* muscles for an hour or two is one thing, and to paralyse the *heart* for a minute is another. I am, etc., John Harley.

78, Upper Berkeley Street, Dec. 20th, 1873.

THE DISMISSAL OF DR. CHAPMAN.

Sir,—Under the above heading, you published, on December 20th, a letter by Dr. Drysdale. After giving his account of what took place at the meeting of the Medical with the General Committee of the Metropolitan Free Hospital on June 18th last, he says—"Such are the facts of the case, and no one can, I believe, alter them, except in detail." Dr. Drysdale's memory seems to have failed him, however, in some important respects when he wrote the account in question; and, as you have published that account, I must beg you, as an act of justice, to allow me to correct and supplement it.

As soon as the meeting in question broke up, Dr. Drysdale, Dr. Fotherby, and myself left together, and, as we walked from the hospital, talked over what had happened. Having been the last to enter the committee-room, I was, of course, ignorant of what had taken place before my arrival, and therefore listened eagerly to Dr. Drysdale's and Dr. Fotherby's communications of what had passed. From what they then told me, from Dr. Fotherby's answers to my subsequent inquiries, and from my own memory of what occurred while I was at the meeting, I am enabled to supply the following account.

Dr. Fotherby reached the committee-room before the members who had already arrived had sat down, and Mr. Murrell, one of the most influential members of the committee, said to him, "It seems we've got into hot water; the hospital is attacked in one of the public journals—the *Pall Mall Gazette*; have you seen the article?" Dr. Fotherby replied, "Yes, I have." Mr. Murrell then said, "I wonder who has written it; do you know?" Dr. Fotherby answered, "No, I do not." Mr. Murrell then remarked, "Dr. Chapman has several times spoken to me about the great number of out-patients."

Subsequently, Dr. Drysdale was asked, as Dr. Fotherby said, "point blank," if he had written the article. Having replied in the negative, he was then asked if he knew who had written it; he again replied in the negative, but in a hesitating manner, which induced a belief that the questioners were on the right track. He has himself informed you that he said he "thought it might possibly be written by some one connected with the *Lancet* or the British Medical Journal." In confirmation of the statement that Dr. Drysdale was himself interrogated, and that his "hesitating manner" of answering "induced a belief that the questioners were on the right track," I may mention that, even after the authorship of the article in question was known, he was distressed by being suspected of having had something to do with it, and wrote to me in July as follows:—"I must really trouble you kindly to exonerate me entirely from any knowledge of your article in the *Pall Mall Gazette*, or any solidarity with that transaction. You see they have mistaken my good will for participation in the act."

Dr. Drysdale's version of what passed between myself and the committee is amazingly inaccurate; and I can only suppose that, as he wrote it six months after the events, which it professes to relate, occurred, his impression of them has, during the interval, become in great measure effaced. Permit me to repeat a statement of what passed, written by myself last summer, shortly after the meeting in question. "The physician last appointed to the hospital (Dr. John Chapman) was the last to be interrogated. In reply to the direct question put to him, in an intimidating tone, as soon as he entered the room, by one of the most active members of the committee—Mr. Murrell, a city auctioneer—'Did you write this article?' (the paper containing it being handed to him at the same time), Dr. John Chapman said, 'It seems to me that that question is a very improper one to be put to any gentleman, and one which I decline to answer. Even if I had written the article, I should feel that loyalty to the editor of the journal in which it appears anonymously ought to preclude me from revealing its authorship.' This reply only seemed to strengthen the suspicion of the questioners; and Dr. Chapman, who was at once rudely assailed with a repetition of the question, in loud and menacing language, by the chairman of the committee (Mr. Joseph Fry), then said, 'Presuming that I am speaking to a body of gentlemen, and reminding them of what I have stated that I feel to be due from a contributor to the editor of a paper, in respect to the maintenance of the anonymous, I admit to you as a committee, and in confidence, that I wrote the article, as I have no wish to disavow my opinions.' Immediately on receiving this admission, the chairman, who became positively red with rage, poured on Dr. Chapman a storm of abuse, of a kind which, it is to be hoped, is not often addressed by chairmen of hospital committees to honorary medical officers."

You will see, sir, that this account presents the matter in an aspect very different from that suggested by Dr. Drysdale's words, viz., "Dr. Chapman then, laughing, said that he must confess that he was the author of the article." When commenting on Dr. Drysdale's letter, you say: "If a majority of the staff passed a vote, requesting Dr. Chapman to resign, which concurred with the opinion of the General Committee, it is not surprising that the latter exercised their powers." It would be difficult to deny the justness of this remark as it stands; but a majority of the staff did not pass a vote requesting me to resign. The staff consists of eleven gentlemen, and only four of these, at a meeting of only five, signed a resolution, not requesting me to resign, but expressive of their surprise that I "should deem it consistent with a feeling of honour to continue to hold the appointment of assistant-physician to a public charity" of which I had written in a public journal as follows.—"At the Metropolitan Free Hospital, during the early part of each week, not only is the waiting-room so densely packed with patients, that anyone would find it a somewhat difficult task to force a passage through it, but the lobbies and staircases are equally crowded." Your readers may be interested in learning that these words are almost identical with those in which the same waiting-rooms were described by the British Medical Journal for December 12th, 1868.

The coincidence is the more remarkable, because when I described those rooms I was not aware even of the existence of your article, in which you say: "The out-patient waiting-rooms are totally inadequate for the purpose. They are very dirty and far too small; the staircase is equally dirty, and generally crowded with male and female patients."

It is scarcely likely that you would expect me to be dismissed for writing about the hospital in language similar in form to, and identical in substance with, that which you had already employed four years and a half before; and hence, I presume, when you say, "it is stated that all their (the committee's) reasons (for dismissing me) have not been stated," you yourself think that they have not.

If all their reasons have been stated, I suffer a wrong by the statement that they have not, and, as you have published that statement, I beg to direct your attention to the fact that Mr. Jodrell, who has been a large subscriber to the hospital, and who is one of its life governors, did not publish his letter in the *Pall Mall Gazette*, exposing the unjustifiable conduct of the committee until, by means of a long private correspondence with its secretary, he had assured himself that there exists no other reason for my dismissal than that stated in the resolution requesting my resignation. I am, etc.,

John Chapman.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

CAUSES OF DEATH IN NEWCASTLE-UPON-TYNE.

The heavy mortality which has prevailed in the borough of Newcastle-upon-Tyne, and which is, to a large extent, made up of deaths due to defective sanitary conditions, and hence of a preventable character, has been investigated by a Committee of the Northumberland and Durham Medical Society, of which Dr. G. H. Phillipson is President. The report has just been issued, and, though brief, it is remarkably complete. The detailed statistics with which it opens leads to the following conclusions:—That, during the four months ending October last, the average gross mortality has been at the annual rate of 30 per 1,000 inhabitants; that this death-rate has ranged from 22 to 40 per 1,000, and that diarrhœa has been fatally prevalent; scarlet fever, epidemic, and enteric fever more common than usual. The circumstances named are, we fear, by no means exceptional, and we observe from the Registrar-General's weekly returns that since the month of October the average death-rate has been even higher than that recorded by the Committee, and that the number of deaths both from scarlet fever and from "fever" is still very considerable.

The principal conditions found to affect this large mortality are the vitiated atmosphere in overcrowded habitations, the use of unwholesome drinking-water, defective arrangements for the disposal of the excrement and refuse of the population, and imperfect sewer ventilation. It also appears that the foundations of houses are often sunk in heaps of refuse with which old excavations have been filled in, and that the evolution of certain noxious gases from factories have acted injuriously upon the population. With a view of dealing with the present epidemic of scarlet fever, the Committee urge upon the authorities the importance of isolating the sick, procuring the disinfection of all infected clothing, and of preventing children living in infected houses from attending schools or other places of public resort. As a step towards the improvement of the general health of the borough, stress is also laid upon the necessity for providing adequate ventilation for the public sewers, a matter which is everywhere of the first importance, and it is only as regards the method in which it can best be carried out that any difference of opinion can possibly exist. One of the plans suggested is by means of vent-holes and charcoal filters, and it is the use of the latter substance which we have considerable hesitation in endorsing. The value of charcoal in connection with sewer ventilation is entirely dependent on the facility with which the offensive effluvia become condensed in its pores and subsequently destroyed by a process of oxidation. But it has frequently been observed that the aqueous vapour which is constantly rising up sewer ventilating shafts entirely blocks up these pores and so deprives the charcoal of its special value; indeed, investigation has shown that recently dried charcoal placed over a sewer will at times, within a short period, become so charged with moisture as to be a serious hindrance, instead of an aid, to ventilation. The report of the Committee concludes with a reference to the value which which would result from a proper scheme for the registration of disease in outbreaks of disease such as that which has prevailed in Newcastle.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kingsholm St. Mary.—A report on the sanitary state of Kingsholm St. Mary, by Dr. Bond, the medical officer of health to the Gloucester rural sanitary authority, gives occasion for some observations on the *form* of such reports. The report is excellent in detail and suggestion; but, from want of a fitting connection between the several parts, the initiated in sanitary matters will not follow its recommendations with ease, and the uninitiated may largely fail, we should imagine, to comprehend its value. The reports of medical officers of health, while prepared, in the first place, for the instruction of the sanitary authority, become, in the second place, through their publication in local journals, a most important, and should, indeed, be the most important, means of instruction, in their sanitary needs, of the populations they concern. Too great care, therefore, cannot be given in the preparation of these reports, and to the arrangement of the different facts and conclusions, so that they may be presented in the clearest fashion to those whom they affect. Now, in the report before us, the facts and conclusions are put together so heedlessly, as to detract much from its value and do signal injustice to the author. Kingsholm St. Mary is a small dirty suburb of the city of Gloucester. Some of its houses are of such a class, and so arranged, that it is eminently undesirable that others should be built in like fashion; but, as the law stands in regard to rural districts, this desire is not to be attained. Its privies, next considered in the report, are trapped pans intended to be flushed with water, connected with drains; and Dr. Bond makes, perhaps, the most practicable suggestions for removing existing nuisance in connection with these pans. It is without some surprise, however, that, in the next section but one of the report, we come upon the important statement, that the drains with which these pans are connected are probably "only old ditches, which have been covered up, without any attempt to render them watertight;" and, in a preceding section on water-supply, we had learned that a considerable portion of the contents of the sewers, no doubt, find their way into such wells as exist (happily not the sole water-supply) in the village. We have here to do, then, with an utterly unjustifiable mode of excrement-disposal, unless the sewers, in the first instance, be properly constructed; but the provisional nature of Dr. Bond's recommendations, in regard to the privies, is to be inferred rather than expressly stated. As we proceed further with the report, we learn that a part of the sewers of Kingsholm St. Mary are connected with the city sewers, and we had previously learned that its chief water-supply was derived from the city water-works. Add that the suburb is topographically part of the city, and we can appreciate Dr. Bond's observation—"Nothing can be more absurd than that a district, which, for all practical purposes, is a part and parcel of the city, should be severed from it in its sanitary organisation; and it is eminently hoped, in the interests both of Kingsholm St. Mary and the city, that a separation which is so anomalous and unsatisfactory should be terminated with as little delay as possible." In fact, until the suburb has been included in the sanitary organisation of the city, any thorough sanitary work is practically hopeless. This is the essential point of Dr. Bond's report, and his recommendations for the abatement of various sewerage and other defects must, we gather, be regarded as provisional, pending such an arrangement. But, Dr. Bond dealing with each section of house-accommodation, closet-accommodation, water-supply, and sewerage, and the recommendations applying to each by itself, the reader does not readily see the necessary interlocking of the different subjects, and will be too apt to think that the definite recommendations may be sufficient for their proposed object. He may fail to observe the interdependence of the closet-accommodation, the water-supply, and the sewerage, and the recommendations relating to them, and thus underestimate the importance of the suggested inclusion of Kingsholm St. Mary in the sanitary organisation of the city. A summary of facts and conclusions at the end of the report, a very useful winding-up at all times, would have tended to prevent misunderstanding; but a discussion of the different subjects, in their relation to each, before making any suggestions, would have been more instructive, and would, doubtless, have carried more weight, besides doing greater justice to the author's opinions.

SIR,—I notice in this week's JOURNAL, in your notes upon Mr. Earle's letter, that the Public Health Act of 1872 makes no provision for a pure water-supply. Have not rural sanitary authorities power under some other Act to supply villages with pure water? In the *Digest to the Statutes relating to Rural Sanitary Authorities*, issued by the Local Government Board, at page 15 such powers seem to be conferred. The sanitary authority for whom I am medical officer of health have already determined, on my recommendation, to supply two villages, each of about five hundred inhabitants, with water from springs at a short distance off. In one village nearly all the wells are polluted, and cases of typhoid fever occur annually; in the other, the water-supply is got from a brook which is used as a main drain. The sanitary authority are getting plans and estimates prepared, and intend applying shortly to the Public Works Loan Commissioners for the money to carry out the works. I had, perhaps, better add that every encouragement is given to the schemes by the interested landed proprietors. I am, etc.,

Dec. 23rd, 1873. MEDICAL OFFICER OF HEALTH.

⁂ It is quite true that the Public Health Act (1872) "makes no provision for a pure water-supply"; but this applies equally to urban and to rural sanitary districts. Under the Sanitary Acts, all powers as to water supply lodged in urban sanitary authorities are extended to rural sanitary districts. The rural authority may dig wells, make and maintain tanks and reservoirs, or do any act necessary to secure an efficient supply of pure water; and may be compelled to do so by the action of the Local Government Board. It is doubted whether any sanitary authority can acquire land compulsorily without its district for water-supply purposes. We are inclined to think that the powers lodged in sanitary authorities for acquiring land apply as largely to water as to sewage outfall and distribution. But whether this be so or not, the facilities for obtaining pure water are, so far as general legislation can do so, placed equally at the disposal of the village and of the city.

MILITARY AND NAVAL MEDICAL SERVICES.

THE ASHANTEE WAR.

THE following additional officers of the Army Medical Department have embarked for service on the West Coast of Africa, viz.: Surgeons, J. Watson; T. Crighton; A. Minto, M.B.; K. Macaw, M.D.; J. Maturin; G. Andrew, M.B.; J. Williamson, M.B.; C. B. Jennings; T. Faris, M.B.; and G. B. Stuart. This brings the number of army medical officers attached to the expedition to eighty, viz: 1 Deputy Surgeon-General (local), 19 Surgeons-Major, and 60 Surgeons.

SURGEON-GENERAL HOME.

SURGEON-MAJOR A. D. HOME, V.C., C.B., has been gazetted Deputy Surgeon-General in recognition of his services on the West Coast of Africa. Dr. Home entered the Medical Department, March 17th, 1848, and has been Surgeon-Major since September 14th, 1866. He served in the Eastern campaign of 1854-55, with the 8th and 19th Hussars, including the battles of Alma, siege and fall of Sebastopol (medal with two clasps and Turkish medal); employed during the Indian Mutiny campaign of 1857-58 (medal with clasp and a year's service for Lucknow); served in the New Zealand campaign of 1865-66 (C.B., special promotion to the rank of Surgeon-Major, and medal). Dr. Home was decorated with the Victoria Cross "for persevering bravery and admirable conduct in charge of the wounded men left behind the column when the troops under the late General Havelock forced their way into the residency of Lucknow on September 26th, 1857." This makes the third reward already granted for the Ashantee campaign.

SURGEON-GENERAL CURRIE.

SURGEON-GENERAL S. CURRIE, M.D., C.B., who succeeds the late Dr. Scott as Honorary Physician to the Queen, entered the Army Medical Department as Assistant-Surgeon, October 14th, 1836, becoming Surgeon, February 12th, 1847; Surgeon-Major, October 1st, 1858; Deputy Inspector-General, January 18th, 1859; and Surgeon-General, August 15th, 1868. He served with the 16th Lancers at the battle of Maharajpore, December 29th, 1843 (bronze star); also in the Sutlej campaign in 1846, including the affair at Buddiwal, and actions of Aliwal and Sobraon (medal and clasp). He served as Field Medical Inspector of the expeditionary force in the north of China in 1860; present at the capture of the Taku Forts on August 21st, and minor actions resulting in the surrender of Pekin (C.B., medal with clasps); served as Principal Medical Officer with the Abyssinian expeditionary force (mentioned in despatches and promoted Inspector-General of Hospitals—medal).

PAY OF ARMY MEDICAL OFFICERS.

THE subjoined is from a well known officer on a foreign station.

SIR,—In accordance with the request made in the notice of the Supplementary Warrant for the Army Medical Department in the BRITISH MEDICAL JOURNAL of the 8th November, I write to state that the general feeling of the medical officers is, that nothing whatever has been conceded to them in the Supplementary Warrant, dated 23rd October, 1873, and the accompanying letter to you of the 3rd November, that is calculated in any way to allay the discontent and irritation that exist in our body at the treatment we have received.

It has been stated, and is generally believed, that Mr. Cardwell will make no concessions so long as he can procure candidates; and those who have watched the changes that have been made in our conditions of service during the past twenty years, know that every alteration in the pay of the department has been made for the benefit of the lowest grade, with the sole object of inducing young men to enter the service; the claims and rights of the seniors have been persistently ignored, and in many instances their emoluments have been cut down, and the saving at their expense has been applied to reduce the expenditure incurred by increasing the pay of the juniors. The emoluments of the seniors have been cut down in the most summary manner, by reducing or even doing away with allowances altogether.

Twenty years ago, a staff-surgeon of the first-class had allowances for two servants and forage for two horses, besides which, as principal medical officer of a small station, he had a pleasant appointment which, in most instances, he could hold until retired or promoted.

When surgeons (old grade) had the relative rank of major conferred on them, and their pay raised from 15s. to 18s. per day, a saving in that increase to the extent of 1s. 6d. was made throughout the service abroad, and to the full extent of 3s., or even more, on some stations, by reducing the number of servants and horses; so that the public were deceived into believing that the surgeons had received an increase of rank and pay equal to 3s. per day, and the allowances of the higher rank, when the fact was that what was given in pay under pressure of public opinion was surreptitiously recovered by docking the allowances.

It is a matter now of notoriety that the staff salary and head-money, of which the surgeons and assistant-surgeons in charge of British regiments in India were deprived, more than met the increased pay given to assistant-surgeons—Peter being robbed to pay Paul.

In spite of the increased pay forced from the Government by the voice of public opinion, the emoluments of medical officers in the aggregate have been decreased, partly by the sophistication of the allowances already alluded to, but also by the fewer chances of private practice and of supplementary appointments in the colonies, that now fall to the lot of army medical officers. The rapid and cheap communication by steam to all parts of the world, as well as the establishment of Colonial Medical Schools, has supplied the colonies with their own medical men, and deprived medical officers of no inconsiderable portion of their incomes, and has thrown them back on the bare pay and allowances of their military rank, which bears no equivalent to the present cost of living.

The staff surgeon-major ranking with lieutenant-colonel, when on foreign service, used to be entitled to forage for two horses until very lately. The present Government first deprived him of his second horse, and would, had it not been for the indignant outcry raised by the whole department, have deprived him of forage altogether, and in fact has done so to all who attain the rank of surgeon-major after date of the late warrant.

I cannot help feeling that the treatment we have received and are now suffering from, would never have arisen had our body been true to themselves. The complete want of sympathy with their seniors, and the apathy with which assistant-surgeons, during the last fifteen years, considered the matter of pensions which seemed so far off from themselves, has done much to encourage the Government to persist in its present course of giving no heed to the just demands of the seniors for some slight increase to their pensions, which are totally inadequate to their support when retired from the service, and unable to enter into practice in consequence of broken health. To a man with a family of children and unable to contribute to his own support, 16s. a day in England would be simply genteel beggary; he could scarcely house and feed his family. Education for them would be impossible at the present cost of living in England.

There is a general feeling throughout the department that an increase of at least twenty-five per cent. to the pensions now given is absolutely necessary to make the army surgeon feel that he is not destined to grinding poverty when broken down in health and unfit to work; and justice requires that the pension should increase annually for each year's service over twenty; for it is manifestly unfair that the man who breaks down after twenty-four years' good service should receive no higher pension than one who was retired at twenty years' service.

This is the most necessary and important change in our conditions of service, which would not only benefit the seniors but also the juniors. I much fear, however, that this justice will not be done us, unless our juniors, the present surgeons, and all candidates for Army Medical Commissions, will see that by improving the retirements of the seniors, they are doing the best for themselves, by expediting their own promotion and ultimately improving their own pensions. If the young surgeons and the candidates would demand increased retirements after twenty years service, they would be backed up by public opinion, and it would be granted; but the seniors may grumble and petition without result, for the Government know full well that the man who has spent his life in the service, cannot afford to sacrifice his pension, small though it be, as he knows that his broken health would prevent his entering on practice in England.

Nothing but increased retirements and a limitation of service in the administrative grades will give any but the pets of Whitehall Yard, or those with strong interest, a chance of those appointments which alone give the retired medical officer enough to exist upon when he becomes, as I feel I shall soon be, "WORN OUT."

OBITUARY.

WILLIAM AUGUSTUS HILLMAN, F.R.C.S.

MR. HILLMAN, whose death occurred on December 11th, at Argyll Street, was the elder son of the late William Hillman, Esq., a Member of the Royal College of Surgeons, and a retired Surgeon of the Royal Navy. After receiving a sound general education at the school of what was then termed "The London University", and under private tutors, he matriculated as a medical student at University College in 1836, and became a Member of the College of Surgeons in 1841. In the same year, after competitive examination, he was elected to a studentship in Human and Comparative Anatomy in that College. He highly valued that position; and those who remember him there well know with what zeal and singleness of purpose he worked at the duties which devolved upon him. Indeed, he held the appointment for three months longer than the stipulated period, being engaged with Mr. Stanley and Mr. (now Sir James) Paget in making the new catalogue of the pathological department of the museum; and, at the termination of that time, a very flattering report was sent up to the Council by the Museum Committee as to the way in which he had fulfilled the duties of the appointment. In April 1845, he became a Fellow (by examination) of his College; and in the December of that year he was elected, by a very large majority, Surgeon to the Farringdon General Dispensary. This position he held until 1853, when he resigned it in consequence of obtaining the appointment of Assistant-Surgeon to the Westminster Hospital, in the medical school attached to which he became Lecturer on Physiology and General Anatomy, and continued the course for ten years. It was long before a vacancy occurred which could enable him to become a candidate for the surgency to the hospital; but meanwhile he attended assiduously to the out-patient department, and from time to time did a good deal of work also in the wards. At length an opening presented itself, and in 1869 he was elected without opposition one of the surgeons of the Westminster Hospital. He was, however, compelled by the state of his health to resign his appointment at the beginning of 1871. He had long been suffering from dilatation of the heart, his health having been gradually undermined by the fatigue consequent upon his professional duties, combined with that from long and unwearied devotion to his sick and suffering father. To him he gave not only constant surgical care, but for years he acted by night as his nurse. His heart-affection became more troublesome, and permanent congestion of the bases of the lungs supervened so that for four years before his death he was never once able to lie down in bed or on a couch. Anasarca also came on; and, though this was prevented from accumulating in consequence of eczematous ulcerations of the lower extremities, from which a constant discharge took place, the pain from these surfaces added at times greatly to his sufferings. During these years, he was constantly attended by his friend Dr. Hare, in whom he placed implicit confidence. Mr. Hillman was deeply attached to the surgical department of his profession, and to the College of which he was a Fellow. As an operator, he was always ready for any emergency; but he was ever careful not to interfere with the knife unless such a procedure was clearly necessary. Above all, he was careful in the after-treatment of his cases, and always spoke in the strongest manner against that meddlesome interference with parts recently operated upon, which he constantly asserted to be the cause of fatal results in many cases which might otherwise do well.

Mr. Hillman died at the age of 54, and was interred on Tuesday, December 16th, in the Highgate Cemetery.

EDWARD HARRISON LINNECAR, M.R.C.S.ENG., SHENLEY.

THE death of Mr. E. H. Linnecar occurred on November 21st, in his seventy-fourth year, at Shenley, where he carried on an active country practice for more than twenty-four years; and gained the esteem and regard of both rich and poor. He was a student of Joshua Brookes's School; and in 1824, having obtained the licence of the Apothecaries' Company, he became manager of the medical department of Mr. Battley's well known druggist's business in Fore Street. He afterwards commenced private practice in Aldermanbury, where, having become an honorary student of Bartholomew's Hospital, and Member of the College of Surgeons, as well as of the Hunterian and London Medical Societies, he took a prominent part in the reform and advancement of medical practice during a period of about twenty years. In 1849, owing to the delicate health of his wife, he removed from the City and settled in Shenley, where he was appointed one of the district medical officers of the Barnet Union, and continued in practice up to within a few weeks previous to his decease. Mr. Linnecar leaves a widow and one daughter, but no son. He was a direct descendant from the celebrated Dr. Thomas Linacre or Lynacer, who obtained from Henry VIII in 1518 letters patent to found the present College of Physicians of London, of which he was the first President.

HENRY JAMES COLLET, M.D., WORTHING.

Dr. Collet died suddenly at Worthing, of heart-disease, on December 23rd, at the age of 64. He studied at Guy's Hospital, and became licentiate of the Society of Apothecaries in 1830, a member of the Royal College of Surgeons in 1831, and a Doctor of Medicine of the University of St. Andrew's in 1853. He practised in Worthing for many years, and ever manifested a lively interest in all that concerned the prosperity of the town and the welfare of its people. Latterly, owing to failing health, he had not taken so active a part in the public affairs of the town as he did previously; although his valuable advice was always readily obtainable. Till within the last few years he occupied a seat on the Local Board, of which body he was for some time chairman. For many years, he was an honorary surgeon, and latterly, to the time of his death, consulting surgeon of the Worthing Infirmary. Dr. Collet will be remembered in his locality for his upright character, his great energy, his public spiritedness, his private benevolence and many virtues. Dr. Collet was for many years a member of the British Medical Association, and one of the most highly esteemed members of the South Eastern Branch, of which he had been president. He contributed to this JOURNAL, papers on the Use of Ipecacuhana in the bites of Venomous Animals, Habitual Constipation, and the Drainage of Worthing. His son, Mr. A. H. Collet, succeeds him in his practice.

ALEXANDER DOUGLAS TAYLOR, M.D.

Dr. A. D. Taylor, who died at Liverpool on November 19th, was born in Limerick on March 17th, 1811. He was apprenticed to Dr. Cusack of Dublin; and ultimately became M.D. of the University of Glasgow in 1837. In the same year, he entered the army as Staff-Assistant Surgeon, since which time he served many years in the West Indies. In 1864, he was placed upon half-pay, retiring from the army with the rank of Deputy Inspector-General of Hospitals, and was appointed to the medical charge of the North Fort at Liverpool. This post he retained till the hour of his death, which took place in a cab in which he was returning to his residence after his hospital duties. He had been known to be suffering for some time from aneurism.

BENJAMIN CHARLES PINCHARD, M.D., COTTENHAM.

Dr. Benjamin Charles Pinchard died at Cottenham, Cambridgeshire aged 72, on November 24th. He was the second son of Mr. G. J. Pinchard of Portsmouth, formerly one of the surgeons to Haslar Hospital. He was educated at the Grammar-school, Bedford, and thence proceeded to St. Bartholomew's and St. Thomas's Hospitals; he was also a student at Brooks's School of Anatomy, and attended the lectures at the University of Glasgow. His private practice was commenced at Cottenham and continued until his last illness, embracing a period of fifty years. He was an accoucheur of considerable skill, and contributed a paper to this JOURNAL "On Unusual Presentations of the Fœtus." During his long practice, he attended nearly 10,000 cases of midwifery. He was a member of the British Medical Association from its origin. He was M.D. of Aberdeen, a member of the Royal College of Surgeons, a licentiate of the Society of Apothecaries, and a Fellow of the Obstetrical Society of London.

GEORGE BURT, F.R.C.S.Eng.

Mr. Burt, who died lately, in his 86th year, was a native of Suffolk. He attended as a student the then united hospitals of St. Thomas's and Guy's, where he studied under Astley Cooper, Cline, and other distinguished men of that day, and became a member of the College of Surgeons in 1810. He soon afterwards commenced practice in Norfolk, where he remained only a short time. He then removed to Colchester, but soon afterwards came to London, where he spent the rest of his life. With the exception of three very short holidays, he may be said never to have left London for pleasure during his long career. He was a great lover of his profession, and had scarcely any pleasure or recreation out of it. For many years he was a very regular attendant at the Skin Hospital, then in Bridge Street, where he sat for hours together assisting the late Mr. Startin, and frequently acting for him. He was afterwards appointed Surgeon to the Hospital, in the success and usefulness of which he took great interest. It was only his increasing infirmities—for he suffered for years with prostatic disease—that caused him to cease from attending at the hospital. He had but one son, who was a private pupil of the late Mr. Bransby Cooper, and, shortly after becoming a member of the College of Surgeons, died from the effects of blood-poisoning. His daughter became the wife of Mr. J. R. Gibson, of Russell Square. Mr. Burt was a good and skilful practitioner, and a kind hearted and honourable man.

JOHN IRVING, M.D., CHELTENHAM.

Dr. John Irving, who died at Cheltenham on December 21st, 1873, at the age of 88, was one of the oldest officers on the Retired List of the Honourable East India Company's Madras Medical Service. He was a native of Dumfries-shire, and took the degree of M.D. at Edinburgh. In 1806, he received an appointment in the East India Company's Service, through the late Mr. John Irving, of the well-known house of Reid, Irving, and Co., having previously declined the offer of a commission in the 42nd Highlanders. Dr. Irving served in India for over twenty years, during the latter portion of which time he was Staff-Surgeon at Poonamalee. On retiring from the service, he lived several years in Italy, and for the last forty years resided at Cheltenham, where for many years he took an active part in local affairs.

MEDICAL NEWS.

MEDICAL VACANCIES.

The following vacancies are announced:—

BIRKENHEAD BOROUGH HOSPITAL—Assistant House-Surgeon: £40 per annum to commence. Applications, 5th instant, to Chairman of Weekly Board.

BIRMINGHAM GENERAL HOSPITAL—Fifth (additional) Physician.

BRIGHTON AND HOVE DISPENSARY—Honorary Physician in Ordinary. Applications, 5th instant.

BROMLEY UNION, Kent—Medical Officer for District No. 3: £90 per annum.

CAMBRIDGESHIRE LUNATIC ASYLUM, Fulbourn—Medical Officer.

CITY OF LONDON LUNATIC ASYLUM, Stone—Assistant Medical Officer: £120 per annum, board, lodging, etc. Applications, 15th January, to H. F. Youle, Guildhall, London.

COTON HILL INSTITUTION for the INSANE, Stafford—Assistant Medical Officer: £100 per annum, board, lodging, etc. Applications to Dr. Hewson Bower, Coton Hill, Stafford.

DUNDEE ROYAL INFIRMARY—Resident Medical Assistant: £50 per annum, bed, board, etc. Applications, 7th instant, to D. Gordon Stewart, Solicitor.

DUNSTON LODGE LUNATIC ASYLUM, Gateshead-on-Tyne—Medical Superintendent.

ENNISCORTHY UNION, co. Wexford—Medical Officer for the Workhouse: £100 per annum. Applications, 15th inst., to John Kennedy, Clerk to Union.

GARSTANG RURAL SANITARY DISTRICT—Medical Officer of Health to March 25th, 1875: 21s. per case, and 6d. per mile. Applications, 8th instant to T. Noble, Clerk to the Rural Sanitary Authority.

GREAT NORTHERN HOSPITAL—Physician.

HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester—Resident Medical Officer: £100 per annum, board, etc. Applications, 15th instant, to the Hon. Sec.

HULME DISPENSARY, Manchester—Resident House-Surgeon: £130 per annum, house accommodation, etc. Applications, 10th instant, to Chairman of Medical Board.

INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications to Major-General Pears.

NAVAL MEDICAL SERVICE—Surgeons. Applications, 12th February, to A. Armstrong, Director-General.

NORTH LONDON HOSPITAL FOR CONSUMPTION—Consulting Physician.

NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th March, to E. M. Kidd, Sec.

RADCLIFFE INFIRMARY, Oxford—House-Surgeon: £105 per annum, board and lodgings. Applications, 10th instant, to F. J. Hallewell, Secretary.

ROYAL SURREY COUNTY HOSPITAL, Guildford—House Surgeon: £75 per annum, board, residence, and washing. Applications, 12th instant, to the Assistant Secretary.

ST. JOHN, Hampstead—Public Analyst: £50 for one year, and fees. Applications, 7th instant, to W. Gribble, Vestry Clerk, Hampstead.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, Quay Street, Manchester—Honorary Surgeon.—Medical Officer: £60 per annum, board, and residence

ST. MARY'S HOSPITAL, Paddington—Resident Registrar: £100 per annum, board and residence. Applications, 3rd instant, to J. G. Wilkinson, Sec.

SCHOOL FOR INDIGENT BLIND—Consulting Physician.

SEAMEN'S HOSPITAL, Greenwich—House-Physician: £120 per annum, and furnished rooms. Applications, 17th instant, to S. Kemball Cook, House-Governor and Secretary.

SLEAFORD UNION, Lincolnshire—Medical Officer for the Osbournby District: £25 per annum.

STAFFORDSHIRE GENERAL INFIRMARY, Staffordshire—Surgeon.

TEWKESBURY UNION—Medical Officer and Public Vaccinator for the Forthampton District; £55 per annum, and fees. Applications, 20th inst., to George Badham, Clerk.

TRURO UNION, Cornwall—Medical Officer for the St. Agnes District: £35 per annum.

UNIVERSITY OF DUBLIN—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.

WESTERN GENERAL DISPENSARY, Marylebone Road—Resident Surgeon and Apothecary. Applications, 8th instant, to the Secretary.

WEST HERTFORDSHIRE INFIRMARY, Hemel Hempstead—House-Surgeon and Assistant Secretary: £100 per annum, furnished rooms, board, etc. Applications, 15th instant, to F. G. Hamilton, Assistant Secretary.

WESTMINSTER HOSPITAL—Assistant-Surgeon. Applications, 10th February, to F. J. Wilson, Sec.

WORTHING INFIRMARY—Consulting Surgeon.

There is no vacancy at the Cambridgeshire Asylum, as was last week announced, owing to an accidental error.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*BROWNE, Lennox, M.R.C.S.Eng., appointed a Honorary Surgeon to the Royal Society of Musicians.

DAVIDSON, David Charles, L.R.C.P.Ed., appointed House-Surgeon to the Dorset County Hospital, *vice* A. Hollis, M.D., resigned.

MOIR, John, L.R.C.P.Edin., appointed Medical Officer to the No. 1 District of the Keynsham Union, Somersetshire, *vice* Richard Colthurst, M.D., resigned.

ORCHARD, J. S., M.B., M.C., appointed Resident Medical Officer to the Salford Union Hospital, *vice* T. N. Orchard, Esq., resigned.

ORCHARD, T. N., M.B., M.C., appointed Medical Officer and Public Vaccinator for the Townships of Pendleton, Pendlebury, and Broughton of the Salford Union, *vice* R. N. Ingle, M.D., resigned.

SHAW, J. E., M.B., C.M., appointed Assistant House-Surgeon to the Bristol Royal Infirmary.

SMITH, R. Ayre, M.D., appointed Honorary Surgeon to the Sunderland and Bishopwearmouth Infirmary and Dispensary, *vice* *H. J. Yeld, M.D., appointed Medical Officer of Health.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

HAMMOND.—On December 24th, at the Coton Road, Nuneaton, Warwickshire, the wife of William Hammond, L.R.C.P.Ed., of a daughter.

TOMKINS.—On December 20th, at 11, Euston Place, Leamington, the wife of A. Wellesley Tomkins, M.D., of a son.

MARRIAGE.

ARMSTRONG—THOMPSON.—At St. James's, Benwell, Newcastle-upon-Tyne, on December 26th, by the Rev. W. Maughan, Henry E. Armstrong, Esq., Medical Officer of Health to the Borough of Newcastle-upon-Tyne, to Mary, second daughter of Mark Thompson, Esq., Graingerville, Newcastle-upon-Tyne.

DEATHS.

APPLIN, George P., L.R.C.P.Ed., at Hastings, on December 24th, 1873.
ASH, Edward, M.D., at Bristol, aged 76, on December 23rd, 1873.
BAILEY, Henry Woodruffe, F.R.C.S., at Thetford, aged 86, on Dec. 17th, 1873.
*COLLET, Henry James, M.D., at Worthing, aged 64, on December 23rd, 1873.
LOMAX, H. T., Esq., Surgeon, at Stafford, on December 18th, 1873.
OGSTON.—At Aberdeen, on December 28th, 1873, aged 25, Mary Jane Hargrave, wife of *Alexander Ogston, M.D.
STUART, Abel, M.D., at South Bank, Regent's Park, aged 78, on Dec. 21st, 1873.
TERRY, Henry, F.R.C.S., at Northampton, aged 83, on December 26th, 1873.
*WEBB, Francis Cornelius, M.D., at 22, Woburn Place, aged 47, on Dec. 24th, 1873.

THE ST. THOMAS'S HOSPITAL PHYSICAL SOCIETY.—On December 18th, a microscopical *soirée* was given in the library of St. Thomas's Hospital by the President of the Physical Society (Mr. Wagstaffe), at which there was a large attendance, including the treasurer (Sir Francis Hicks), most of the members of the hospital staff, some old students, and nearly all the present ones. An ample supply of microscopes were distributed over thirteen tables. Among the many other objects exhibited were the following:—Sarcoma infiltrating muscle, exhibited by the president; a section of spinal cord, by Mr. Croft; living opaline from the intestine of a frog, in serum, by Dr. Ord; the phenomena of cyclosis in plants, and ciliary and amœboid motion, by Messrs. Wright and Jacob. Mr. C. Stewart exhibited a complete section of skin differentially stained, of almost diagrammatic exactness. Dr. Payne showed specimens of syphiloma of the lung; and Mr. Greenfield ossifying cartilage. Mr. Rainey illustrated diffusion in liquids by coloured experiments, and showed the artificial production of shells (carbonate of lime). Dr. Evans exhibited some perfect specimens of urinary crystals, and a section of kidney showing commencing tubercular disease. Mr. Arnott's table gave a most complete illustration of the histological varieties of cancer. Other members of the staff lent a very interesting collection of surgical photographs, and some of the most attractive objects in the room were the graphoscopes and stereoscopic slides of statuary and landscapes, lent by Messrs. Murray and Heath of Jermyn Street. In the adjoining physical laboratory, Dr. Stone exhibited spectroscopes and other philosophical apparatus, and illustrated the action of the polariscope by means of the lime light. Great satisfaction was expressed by all at the success of the meeting.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Broadbent: Lettsomian Lecture, "Syphilis as a Cause of Disease of the Nervous System."

TUESDAY.—Pathological Society of London, 8 P.M. Annual meeting for the election of officers, report, etc. The following preparations will also be exhibited:—Mr. Nunn: Cast of an Enchondroma; Pendulous Tumour from the Pubes of a Man. Dr. Silver: Mitral Stenosis. Dr. Goodhart; Syphilitic Phthisis. Dr. Crisp: Specimens of the Grouse Disease. Mr. Butlin: Recurrent Sarcoma of the Thigh. Dr. Coupland: Muscles from a case of Trichiniasis. Mr. Sydney Jones: Cancer of the Breast. Dr. Wickham Legg: Hydatids of the Liver, Omentum, and Recto-Vaginal Pouch; Jaundice; Xanthelasma Multiplex. Dr. Coupland: Mediastinal Tumour.

WEDNESDAY.—Royal Microscopical Society, 8 P.M. Mr. Alfred Sanders, "Further Notes on the Zoospores of Crustaceæ, etc."—Hunterian Society. Council Meeting at 7.30 P.M. General Meeting at 8 P.M. Mr. Hutchinson will read a paper, "When and how should Mercury be used for the Cure of Syphilis?"—Obstetrical Society of London, 8 P.M. Annual Meeting. Election of Officers. President's Address. Dr. A. W. Edis, "On the necessity for Caution in the employment of Intrauterine Stems"; Dr. W. S. Playfair, "On Puerperal Thrombosis"; Dr. J. J. Phillips, "On a rare form of Uterine Lesion during Pregnancy."

THURSDAY.—Harveian Society of London, 8 P.M. Annual Meeting. Election of Officers and Council for 1874. Reading of the Council's Annual Report. The President's Address. Casual Communications.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Douglas Powell, "On some Cases illustrating the Rheumatic Origin of Aneurism of the Aorta"; Dr. Cayley, "Case of Hæmoptysis"; Mr. Brudenell Carter will show a patient cured of Sarcoma of the Orbit by Extirpation and Cautery.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

X, Z. does not forward his address.

DR. M. PERRY (Spalding).—There are three recent Manuals of Public Medicine, by—1. Michael, Corfield, and Wanklyn (Smith, Elder, and Co.); 2. Dr. Wilson (Churchill and Co.); 3. Dr. E. Smith (Knight and Co.).

SIR,—Can you give me any information, through the JOURNAL or otherwise, of a Mr. Williams, 10, Oxford Terrace, Hyde Park, London, who advertises a "sure and certain remedy for epilepsy, never known to fail". If this be true, the gentleman ought to be sought out at once and "knighted". I am, etc.,

Greenside, Strathaven, N.B., Dec. 1873. HUGH BROWN, M.D.

*** "Benighted" is, no doubt, a proper adjuration to the person in question.

MEDICAL ADVERTISING IN RAILWAY STATIONS.

SIR,—Spending a day a short time since in London, I had occasion to travel by the Underground Railway, and there, to my disgust and astonishment, I saw placarded, for the information and edification of the vulgar, the contents of "this week's *Lancet*". I found, on inquiry, that the placard is frequently renewed. Remembering the virtuous wrath which that paper has repeatedly expressed at medical authors who advertise their books in the daily papers, I was both disgusted and scandalised at this impudent violation of decency and cynical contempt of its own accepted professional canon. Such proceedings can only make men unwilling to write for a paper which for its own purposes pillories them in a manner outrageously transcending that which the Colleges and itself have proclaimed to be disgraceful. I sent a protest to the proprietors of the *Lancet*, whose names are announced on the title-page as J. G. Wakley, M.D., and Thomas Wakley, F.R.C.S., but as it has not appeared: and as the practice is continued, I am particularly moved to refer to the subject now by reading the notice of the premature death of Dr. Fuller, of St. George's Hospital, on whom the *Lancet* made a most bitter and vulgar attack because his publisher advertised his works in the *Times*. I feel bound to ask you to waive any objection which you might otherwise have, and to allow me to openly denounce a proceeding which, I am sure, must be universally considered to be unprofessional and improper. I feel very sure that the founder of the paper would have been the first to denounce the practice, as he was to denounce the puffs of medical men attending "distinguished patients", by which the present managers so eagerly snatch newspaper notoriety. This sort of proceeding is lowering to professional morality, and cannot, I am sure, be to the ultimate advantage of any paper which desires the respect of the profession. It is sad, indeed, to see it carried to its extreme in a paper once conducted by a man who abhorred such practices, and who bitterly lampooned, as I can well remember, men not less eminent than Brodie, on the mere suspicion that he had furnished the information on which such puffs (miscalled bulletins) were based.

December 1873. I am, etc., RUSTICUS.

⁂ This letter is strongly worded, but we can only concur in censuring the exhibition at railway stations of the contents-page of a medical journal. It is a violation of professional propriety and of public decency, and of course a slap on the face to the Colleges whose resolutions as to advertising the journal in question warmly endorsed. The proprietors of the journal are, it appears, medical men, and are doubly bound to desist from what is hardly too strongly described by our correspondent as a professional and public outrage.

THE PROFESSORS OF "A DYING FAITH".

SIR,—By way of following up Dr. McVeagh's interesting case of miscarriage of the boasting and exclusive school of globulism and medical buffoonery, allow me to state briefly the particulars of a case in which I was consulted in the year 1868 for the first time. The lady was a spinster of West Indian bringing up, and about forty years of age. She was suffering from severe menorrhagia, which resisted the usual and best remedial measures; and I then insisted, much against the patient's wish, on making a physical examination, which resulted in the discovery of a small intrauterine fibroid polypus. I told my patient that there was nothing for it but the instant removal of the offender by operation. I saw no more of my patient for three years, the idea of a surgical operation being quite enough for her without the reality. The history of the interval is interesting. Two out of the three years were spent in London, under the care of a legally qualified homœopathic physician in large practice, who told her that a surgical operation was quite unnecessary, and that he would undertake to cause the tumour to undergo the process of *absorption*. Of course she believed this, even although the monthly and sometimes fortnightly flooding went on the same, if not steadily increasing. Circumstances forced her to return to Liverpool, and she there received advice for another year, first from one and then from another homœopathic practitioner, both in extensive practice, but all to worse than no purpose. At last the polypus made its exit through the os uteri, and became lodged in the vagina, accompanied by such a loss of blood as to place the patient *in extremis*, and to force upon the attendant the necessity of a physical examination; on making which, for the first time I believe, he at once told the patient that there was nothing for it but a surgical operation, to which the patient replied, "Why, that is exactly what Dr. Skinner told me three years ago, and you have told me all along that it was unnecessary, as you could cause it to be absorbed." The last medical attendant received his *congé*, as every spark of confidence was extinguished for the present, and my services were again required. I found the patient *in articulo mortis*; but with the assistance of my colleague, Dr. Grimsdale, I removed a pretty large fibroid, weighing half a pound. From the time of the operation until now, nearly three years, she has not lost a drop of blood, nor has she ever "looked over her shoulder". Here we have a fine specimen of the effects of homœopathic specifics in stimulating the absorption of uterine fibroids; the result being that the polypus grew from about half an ounce to eight ounces, and the patient lost time, blood, and comfort. I am, etc., THOMAS SKINNER, M.D.

Liverpool, December 20th, 1873.

"TUBERCULAR LEPROSY."

SIR,—In the JOURNAL of December 6th, I noticed the description of a case by Mr. Gaskoin under the above heading. As it occurred in England to an Englishman who had never been abroad, I commenced the perusal with great interest, but was greatly disappointed on finding that the case was one in reality of Elephantiasis Arabum or Barbadoes Leg. It is surely confusion worse confounded to speak in the present day of such a case as "coming very near to Elephantiasis Græcorum, if not already merged into this"; and on the strength of its so coming very near, to call it Tubercular Leprosy. Whatever confusion may have been caused by old writers giving the name elephantiasis to two *distinct* diseases, as any one who has seen numerous cases of these diseases must consider them, I thought the time for such confusion was past. I have always looked upon Barbadoes Leg as a tropical variety of erysipelas, all the symptoms in the acute stage being identical with those of the latter; but having a tendency from heat of climate, or malarious influences, or both combined, to recur at short intervals, a deposit from the exudation remaining each time of recurrence, instead of disappearing as in erysipelas. It is by no means impossible, therefore, if this view be correct, that erysipelas, occurring in a person living in a low-lying country, during hot weather such as we had last summer, might become recurrent, and in the end appear as a case of Barbadoes Leg. That some such malarious influence was at work in Mr. Gaskoin's case is probable, from the fact that "since being in town the patient has ceased to have those shiverings"—that is, probably since leaving the malarious locality in which he lived.

That the case is by no means (at least from the description given) to be considered one of tubercular leprosy, the following points appear to show.

1. The marks on the face are not symmetrical. They are always more or less so in real leprosy.
2. The lips, the lobes of the ears, and the eyebrows, and also of the nose, are not affected. They are the most commonly affected in real leprosy.
3. The hands are not swollen or affected in any way.
4. There is no mention of anæsthesia, or rather analgesia, as I prefer to call the want of power of feeling pain, which is generally present, at least in the tubercles.
5. There is no bronzing of the skin noticed.

Mr. Gaskoin's account is too short to pick out more points from which to show that the case is not one of Tubercular Leprosy, but of, as he rightly calls it at first, Elephantiasis Arabum, or a similar disease, which, as Bruce said of it after seeing it in Abyssinia, "bears no more resemblance to the leprosy of Palestine than it does to the gout or dropsy." That elephantiasis is not strictly a local disease, any more than erysipelas, may be admitted; but that it is a constitutional disease, as Mr. Gaskoin's words would seem to indicate, of the same nature, if not identical with, tubercular leprosy, everything I have experienced of the two diseases contradicts. In tubercular leprosy, there is a decided tendency to ulceration of parts affected by the disease, none to a healthy healing up of such sores. In elephantiasis, I have seen limbs amputated through the thickened subcutaneous tissue with the best results, healthy cicatrisation taking place, as in a case reported by myself in the *Edinburgh Medical Journal*, January 1873 (where I have also ventured to suggest a surgical means of cure or alleviation of such cases). Similar operations were proposed long ago by Larrey (*Rélation de l'Expédition de l'Armée d'Orient*, Paris, 1803) in cases of elephantiasis of the scrotum and labia, and were carried out in the West Indies successfully (*Edinburgh Medical Journal*, April 1825). In every case of elephantiasis which I have seen the disease, has begun locally, and has spread from its point of origin to other parts. No matter how far advanced elephantiasis may be, fœtor of breath or other constitutional symptoms are never seen.

I have seen a case of elephantiasis with joint-evil or anæsthetic leprosy, but had no more reason to think the one a part of the other disease, than Danielssen and Bœck had to consider that the cutaneous diseases such as itch, psoriasis, etc., with which nearly every case of spedalskhed is complicated in Norway (p. 318, *et seq.*), were part of, identical with, or "merged into" the leprosy from which the patients suffered.

Besides these considerations, elephantiasis has existed in places where leprosy was unknown, as in the Islands of the Pacific, where it was commonly known under the name of Fe-fe about and anterior to 1847, while leprosy was not introduced into the Sandwich Islands until 1848, and did not become common until ten years later. Elephantiasis also is only known as a tropical disease (to which Mr. Gaskoin's case may form an exception, which the profession is indebted to him for bringing before it), whereas tubercular leprosy is, I need hardly say, known in all climates.

In regard to the tubercular deposits about the face, is it not possible that they are either scrofulous or syphilitic, the febrile state acting as an exciting cause for their appearance? At any rate, such a doubt (and surely there is ground for such in a case where "glandular ulcerations" appear to have been so common) would make the case of little or no value in "serving to confute the idea that Elephantiasis Arabum is a local disease." I have seen a case of undoubted syphilis in which the face was covered with tubercles, but in which there was no other symptom of leprosy. I may say that I look on the case as one of extreme interest, regarded as one of Elephantiasis Arabum, or a disease practically undistinguishable from it; but I have ventured to take up so much space as I have to prevent its being put *unquestioned* on record as a case of tubercular leprosy. After nearly two centuries of immunity, England is, I believe, although this case has occurred, free, and likely to remain free, from this terrible disease; imported cases and a very few so-called indigenous ones excepted. It may be possible for it to reappear, but I am glad to think such a thing is in the last degree unlikely. I would have written earlier, but waited till I saw that no one (and there are many better qualified than myself to do so) had taken up the matter in the JOURNAL.

I am, etc.,

W. MUNRO, M.D., late Medical Officer St. Kitts, West Indies.

Cupar-Fife, December 17th, 1873.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlise Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail; etc.

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LETTSOMIAN LECTURES
ON
SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

MR. PRESIDENT,—Before entering upon the subject of which I have undertaken to treat in the present Course of Lectures, permit me to offer to yourself and the Council of this Society my thanks for the mark of confidence you have conferred on me in appointing me to the office of Lettsomian Lecturer. Permit me also to express satisfaction that my lectures are to be delivered in this new and commodious room, secured for the society by the exertions of your predecessor in office, and the council by whom he was aided.

The subject which I propose to bring before you in these Lectures is, as you know, syphilitic affections of the nervous system.

There are perhaps other topics on which I might have spoken with greater authority, and there are certainly other physicians more competent than myself to treat of the one I have chosen. My justification before you is that, while numerous interesting and valuable observations have been placed on record in various periodicals and reports, the subject has not yet been treated of as a whole by any English physician, and the profession generally has not yet become duly aware of the frequency of syphilitic affections of the nervous system; and in consequence of this a class of cases, painful and fatal if not recognised, but eminently curable, and which, indeed, furnish us with some of our most striking instances of success, frequently escape notice and treatment. An additional justification to myself is the interest I have long taken in nervous physiology and pathology, and the opportunities which syphilis has afforded me for the investigation of the effects of morbid changes in the nervous centres.

It will be accepted as sufficient evidence of the frequency of syphilitic disease of the nervous system, that I shall in these lectures have little occasion to quote the observations of other physicians; but that I shall be able abundantly to illustrate almost every variety of syphilitic affection from my own experience, obtained entirely at a general hospital or in private practice, and without the special field of observation afforded either by an institution for venereal diseases, or by a hospital for diseases of the nervous system.

Syphilis is a disease which, from the time of its recognition, or of its introduction into Europe, has largely engaged the attention of each successive generation of physicians, and the literature of the subject is of enormous extent. I cannot pretend to give even an outline of the views which have been held as to its effects on the nervous system, but I may briefly indicate the course of opinion.

Early writers on syphilis attributed vaguely to this malady almost all forms of disease for which they could not otherwise account, including many affections of the nervous system. Vertigo, convulsions, epilepsy, apoplexy, paralysis, tremor, hydrocephalus, hypochondriasis, blindness, deafness, and various others are enumerated; indeed, mention is made in their works of nearly all the manifestations now recognised; and probably, in the fierce epidemic of syphilis in the fifteenth century, the Protean forms of the disease succeeded each other more rapidly than they are now seen to do, and the relation between them was thus more readily traceable. But as has been well said, syphilis was made the "scapegoat of pathology," and upon its head were heaped offences not its own. When this was discovered, much that was true was thrown aside, together with what was false, and for a time it was very generally considered that the internal organs and the nervous system were not liable to be affected by syphilis. Hunter appears to have been of this opinion, as does also Sir Astley Cooper; and for some time after these surgeons we look in vain for records of syphilitic disease of brain, lungs, or liver. Little by little, however, within the last thirty years, clinical observation on the one hand, and pathological research on the other, have gradually identified the morbid changes resulting from syphilis in all the abdominal and thoracic viscera, and in the brain and spinal cord, and have traced in great measure the symptoms to which they give rise.

Of the long list of writers on the subject, it will suffice to mention Lallemand, Vidal de Cassis, Ricord, Cullerier, Rayer, Yvaren, Zambaco, Gros and Lancereaux, Hildenbrandt, Esmarch and Sessen, Schutzenberger, Dittrich, Brans, among continental writers; Reade, Budd, Todd, Inman, McDowell, Duncan, Hutchinson, Wilks, Moxon, Hughlings Jackson, Allbutt, and Buzzard.

In considering the diseases of the nervous system, caused by syphilis, the first question which arises is, at what period of syphilis are these affections liable to be induced?

Syphilis is considered to exhibit primary, secondary, and tertiary stages; or we speak of primary, secondary, and tertiary manifestations. These designations have relation not to mere lapse of time, and not always even to order of appearance, but more strictly to character of lesion than to order of succession. We see in one case, many years after the infection, an intractable scaly eruption on the skin, or obstinate superficial ulcerations on the tongue or at the commissure of the lips, recurring again and again, and following, perhaps, two or three distinct sets of symptoms: these are secondary in character, or intermediate, as Mr. Hutchinson would call them, notwithstanding the interval of time and the successive forms of manifestation. In another case, we have a woman impregnated by a syphilitic husband, and infected through the fœtus. In her, the first symptom may be a destructive pharyngeal ulcer or a node; or in another case, a chancre may be followed at once by a pustulo-crustaceous eruption, and this by periostitis, gummata, rupia, and other manifestations of like kind. We call these tertiary, or at least we must treat them as such. Again, we have the perplexing instances of hereditary syphilis. A child aged ten or twelve is brought with an ulcerating gumma of the tongue, or a perforating ulcer of the palate; or we find in a healthy young woman of known character and virtue, cutaneous gummata and tubercles—I quote always from my personal experience—these, though the first symptoms, belong strictly to the class of tertiaries. When, therefore, we are endeavouring to determine the stage of syphilis to which a given case of nervous disease belongs, time is not the main element in the question, but the associated or antecedent symptoms. The distinctions which we shall find it important to bear in mind are those pertaining to the character of the lesions. I reproduce here the tables of secondary and tertiary manifestations, drawn up by Mr. Lane for a recent lecture at St. Mary's Hospital.

TABLE I.—*Morbid Changes observed in Secondary Syphilis.*

Affections of Skin.	Erythematous—Roseola; Papular—Lichen; Tubercular—Tubercles that may desquamate, ulcerate, or encrust; Scaly—Psoriasis, Lepra; Pustular—Ecthyma.
Affections of Mucous and Semi-Mucous Membranes.	Superficial white aphthous-looking Ulcers on the tonsils, soft palate and fauces; Superficial Ulcers on the sides of the tongue and angles of the mouth; Mucous Tubercles, or Condylomata, on semi-mucous surfaces; Deep excavated Ulcers of tonsils.
	Iritis; Muscular Pains; Arthritic Pains; Pains in bones; Periostitis; Nodes.

The above table contains the principal affections of constitutional syphilis, termed secondary, in which the venereal poison still exists, and may therefore be communicated by cohabitation and transmitted to the offspring, and in which mercury is beneficial and iodine of but little or no service.

TABLE II.—*Pathological Conditions in Tertiary Syphilis, Syphilitic Cachexia, or Sequelæ of Syphilis.*

Inflammation of Fibrous Membranes.	Periostitis, resulting in nodes; Caries and necrosis of bone; Affecting fibrous tissues of joints—Arthritis; Fibrous tissues of testicle—Orchitis; Fibrous tissues of globe of eye—Sclerotitis.
Affections of Skin and Mucous Membranes.	Rupia; Cachectic ulcers of skin; Rapid ulceration and sloughing of the soft palate, fauces, pharynx, larynx, rectum, vagina, nymphæ, and labia.
Deposits of Fibro-plastic Lymph, imperfectly organised.	In the areolar tissue (subcutaneous or submucous tubercles); In muscular tissue, more frequently met with in the tongue, and occasionally in other muscles; Also met with as *post mortem* appearances in the liver, spleen, kidneys, lungs, and other viscera.
Lardaceous and Waxy Deposits.	Occasionally found in the *post mortem* examination of the bodies of persons of dissipated habits.

In the above table are classed the pathological changes which occasionally present themselves in patients who have passed through the primary and secondary stages of syphilis, but in whom the venereal poison no longer exists, and cannot therefore be transmitted.

The remedies required in these affections are especially iodine and sarsaparilla, and mercury is injurious.

If we admit into our catalogue of nervous affections all the symptoms arising in the course of syphilis, which are capable of being referred to the nervous system, the wandering rheumatoid pains felt in the muscular structures of the limbs in early syphilis, the osteocopic pains of later stages, the sleeplessness, irritability, change of disposition, the liability is coextensive with the disease. But we all recognise a distinction between the disorders of the nervous centres due to the circulation in them of poisoned blood or of a drug introduced into the blood, and the diseases of these centres produced, perhaps, by the same blood-poisons; as, for instance, between the common delirium of enteric fever occasioned by the heated and impure state of the blood in this disease, and the exceptional meningitis set up by the same state of blood. The same distinction obtains in syphilis between the disorders of nervous function and morbid conditions of nervous structures which it can induce.

With this limitation, which will greatly economise my time and permit me to devote more attention to the important part of my subject, we shall find that nervous affections may arise either in the secondary or in the tertiary stage of the disease, but far more frequently in the latter. The affections of the two periods, moreover, are not identical; and I am disposed to think that the diversity will be found more considerable than has generally been supposed. The difference has been recognised by many observers, and it is what might have been anticipated from the different clinical characters and the different pathological tendencies of syphilis in its various stages. It is even better understood, as it appears to me, by reference to the theory of Mr. Jonathan Hutchinson, which brings syphilis into the class of continued eruptive fevers.

According to this, the secondary stage of syphilis represents the fever, the tertiary stage, so-called, the effects produced upon the solids and liquids of the organism by the febrile process. The tertiary stage thus becomes, not a part of the disease itself, but a consequence of it corresponding to the sequelæ of fevers, such as dropsy following scarlatina, or scrofulous affections after measles.

Whatever view may be taken of tertiary manifestations, whether they are to be considered as a continuation or as a consequence of syphilis, the truth of the analogy between syphilis and the continued fevers appears to me to be undoubted. They have, in common, a period of incubation, a febrile stage which runs a more or less definite course, more regular and more definite in the acute and short fevers, such as scarlatina and measles; less regular and definite in those which have a longer duration, as enteric fever; and correspondingly more irregular and indefinite in syphilis, which is essentially chronic.

In this febrile stage, which is attended with symmetrical cutaneous manifestations and disseminated lesions in internal organs, the poison is reproduced in the system, and the individual who is the subject of the disease becomes a source of contagion. Finally, one attack usually confers future immunity from the disease.

Now, just as in fevers, we may have pneumonia or meningitis not distinguishable by any anatomical characters from pneumonia or meningitis due to other causes, and recognised clinically by the supervention of symptoms of these conditions upon those of the fever, so, in the secondary stage of syphilis, there may occur spinal or cerebral congestions and inflammations which have no peculiarities to indicate the syphilitic character of the affection; and this has to be ascertained almost entirely from previous history or from existing manifestations of syphilis.

In tertiary syphilis, on the other hand, the morbid processes set up are altogether peculiar, as will be described, and the symptoms are often sufficient of themselves to establish the nature of the case in the absence of collateral evidence.

As this will engage our attention later when considering affections of different parts of the nervous system, I shall not dwell longer upon it now, but proceed to the consideration of another question—whether, namely, there is any particular form of primary lesion, or any particular course of the subsequent constitutional manifestations, which is attended with special liability to affection of the nervous system?

An answer to this question is scarcely to be obtained directly. Surgeons who have seen and treated the primary sore and early constitutional symptoms are not often consulted for epilepsy or paralysis, which in the mind of the patient are never for a moment associated with his former affection after an interval of time, perhaps, which has allowed even the occurrence of the disease to be forgotten, or has reduced it in his recollection to an accident of trifling significance. The family medical man or physician, on the other hand, called to deal with the nervous affection, has not watched the course of the disease in its earlier stages; indeed, he may have been expressly kept in ignorance of it, and the time has not arrived when a collation of observations of surgeon and physician can be made on any large scale.

I have not, however, raised a discussion without an object. From cases which have come before me, and from what I have seen of syphilis affecting other organs, confirmed by inquiries which I have made of surgeons who have extensive opportunities of observing this disease in all its stages, I have formed an opinion that it is chiefly in persons in whom the secondary affections have been transient and insignificant, or even absent, or in those in whom tertiaries arrive early or prematurely, that the nervous system is liable to suffer. I am corroborated in this view by statements of Gros, Lancereaux, Braus, Buzzard, Moxon, and other writers, and it is scarcely possible otherwise to explain the entire absence of syphilitic history in many cases obviously of syphilitic character.

But this is exactly what we see in the case of other tertiary manifestations. We are almost daily called upon to make the diagnosis of syphilis in the absence of a history, and, indeed, in the face of positive assertions that the patient has never been subjected to any syphilitic infection, or suffered from any specific manifestation. In the case of women, and especially of wives, this is not to be wondered at. They are often absolutely ignorant that they have contracted the disease, and I have long since come to the conclusion that it is useless and cruel to ask a woman if she has had syphilis. The primary lesion, especially if situated on the internal parts, as on the cervix uteri, may give rise to so little inconvenience, and any discharge from it is so readily confounded with other secretions, that it may pass entirely unperceived. In women, again, the disease is often communicated by a syphilitic fœtus. The father is the subject of syphilis, but has no lesion secreting poison to inoculate directly the mother; the ovum, however, is affected by the father's disease, and through the interchange between the maternal and fœtal blood the mother becomes contaminated. In these cases the secondary stage of the disease is frequently altogether absent, as well as the usual primary or initial lesion; and tertiary manifestations are developed forthwith.

A poor woman was under my care in the years 1863-4 and 5, among the patients of the Western General Dispensary, who, after each of three pregnancies, suffered from extensive ulceration of the pharynx, and on one occasion from a node on the maxilla. She had had no primary lesion, and the only ailment of which she was conscious was that during the pregnancy she had a slight sore throat, which ceased to trouble her at confinement. I first saw her five months after the birth of the second child; the ulceration was most formidable, but soon yielded to iodide of potassium. After the third child, it came on earlier and was still more extensive. It appeared as if in each pregnancy she received an additional dose of the poison, and other cases have favoured this view; or it may have been that her strength was giving way from child-bearing, and that the disease was worse in consequence of the debility. The children were not obviously syphilitic, but they became rickety.

Mr. Henry Lee and Mr. De Méric, and some others, are of opinion that not only may a woman be contaminated through a syphilitic fœtus, but that, without the occurrence of impregnation, the disease may be conveyed by the semen, or by an unhealthy urethral secretion which need not give rise to any initial local lesion.

Both sexes again may be the subject of inherited syphilis, which is often betrayed by traces or history of infantile or early manifestations, or by the teeth, nose, and conformation of the head, for an account of which medicine is for ever indebted to Mr. Jonathan Hutchinson. These valuable signs, however, may be absent; and, as I have already said, we confidently pronounce many affections to be syphilitic simply from the special characters of the manifestation. I will give a few instances.

In 1871, a boy, aged 10, was brought to me. He was rather small for his age, but otherwise apparently healthy, and the teeth, nose, and head were well formed; he had an ulcerating gumma on the margin of the tongue, which I at once recognised as syphilitic. He was the first child and I found on inquiry that the father had contracted syphilis, and that during the pregnancy the mother had suffered from a syphilitic eruption. This boy had subsequently an attack of interstitial keratitis while at Brighton, early in 1873, and later an ulcer on the soft palate, which had nearly perforated before I saw him, an ulcerating gumma on the tongue, and a second attack of keratitis.

In 1872, I was asked to see the servant of a friend, a ruddy, strong, and healthy-looking young girl of unimpeachable antecedents, and who presented no sign of inherited syphilis. She was suffering from painful cutaneous gummata of the legs, such as I have never seen except in syphilis. They rapidly melted away under the influence of iodide of potassium, as they did also on a second occasion when they had again appeared.

In March 1864, a healthy-looking man, aged 27, with no acknowledged venereal antecedents, or any previous ailment, except rheumatic pains, came to the Western General Dispensary with a large ragged ulceration on the dorsum of the tongue, surrounded by extensive induration. It had begun three months previously as a lump, three weeks before had cracked, and for a fortnight had been a spreading ulcer. This could only be a syphilitic gumma, and it yielded to iodide of potassium in a fortnight.

In most of the following cases there are corroborative facts in the history which support the conclusion drawn from the character of the lesion, and facts of this kind are worthy of attention, since we have to rely greatly upon them to establish the character of syphilitic diseases of the nervous system.

Mary Ann L., aged 36, married, seen in February 1869, at St. Mary's Hospital, had a gummatous tumour of the tongue. She had had eight living children, of whom only two were alive, and she had had nine miscarriages.

Ann W., aged 32, a widow, had had eight children, two only of whom survived. She stated that she had had no illness till, five months previously, she had begun to suffer from sore throat. Old cicatrices and a deep ulceration in the soft palate were seen on examination; the uvula was quite gone.

Elizabeth A., aged 30, married, had suffered from sore throat after previous pregnancies and miscarriages, and presented indications of old destructive ulceration in the left half of the soft palate; and again, whilst suckling a four months' child, she had a deep ulcer behind the left fauces.

Emma R., aged 34, married, had had five children and four miscarriages. She had lost a great part of the soft palate, and was suffering from a deep ulceration low down in the pharynx.

But cases of this kind could be multiplied indefinitely; and the bearing of the whole matter is not so much upon the prevention of attacks on the nervous system, as upon the course to be taken in cases in which syphilis, from the nature and course of the symptoms, is suspected but not known to be the cause of the disease. As syphilitic affections are frequently curable, the patient should have the benefit of the doubt. This is so far recognised, that it has become a sort of rule among those who have given attention to the subject, when in doubt, to give iodide of potassium.

[*To be continued.*]

IODIDE OF POTASSIUM AND CARBONATE OF AMMONIA IN THE TREATMENT OF SYPHILIS, INTERNAL ANEURISM, AND CHRONIC RHEUMATISM.

SIR JAMES PAGET was the first to call the attention of the medical profession to the following interesting fact; viz., that carbonate of ammonia greatly increases the therapeutic action of iodide of potassium. I have had extensive experience in the treatment of syphilis, and have tried it with the best results, and find that five grains of iodide of potassium, combined with three grains of carbonate of ammonia, are equal to eight grains of the potassium salt administered in the ordinary way. The following case is a good example.

John ——, aged 50, consulted me about a sore situated on his left arm. There was a profuse discharge from it, and the smell was intolerable. On asking him a few questions, I got the following history. He had been a married man, his wife having died a short time ago; he had no children. Some years ago he contracted syphilis, and was treated by mercury, pushed to excessive salivation. The secondary symptoms had been well marked, and the sore about which he consulted me was of eight months' standing. He consulted several surgeons, and could get no relief. I ordered him five-grain doses of iodide of potassium, combined with three grains of carbonate of ammonia. After taking a few tablespoonfuls of the bottle, the bad smell altogether disappeared, as a man told me who was sleeping in the same room; at first he could not bear the smell, but after taking a few tablespoonfuls of the bottle he could detect no smell. This man remained under my care for about a month, and in that short time was perfectly cured, and in very good health and spirits. I could publish five cases with almost similar results. I have also found it of the greatest service in the treatment of internal aneurism, by relieving the pain and helping to consolidate the tumour. Dr. Frerichs has recommended iodide of potassium in the treatment of the waxy liver occurring in syphilitic patients. I think that the preceding facts are well worth the notice of the profession; but I would caution medical men how they increase the dose of the iodide of potassium, for, if the carbonate of ammonia be good, it will greatly increase the therapeutic action of the iodide. JOSEPH P. M'SWEENY, L.R.C.S.I., Carlow, Ireland.

LECTURES
ON
THE PATHOLOGY AND TREATMENT OF DIABETES MELLITUS.

BY

T. LAUDER BRUNTON, M.D., D.Sc.Edin., M.R.C.P.Lond.,
Lecturer on Materia Medica and Therapeutics, and Casualty Physician to St. Bartholomew's Hospital; etc.

LECTURE II.

THE second great function of the liver is to give out, during fasting, the nutriment which it has stored up during digestion. This is effected by the glycogen, which has been stored up in the organ, becoming gradually transformed into sugar again, and, being washed out of the liver by the blood, is carried with it into the general circulation. The conversion of glycogen into sugar is effected by means of a diastatic ferment, of which a minute quantity only is present in the liver itself, but which is contained to a much larger amount in the blood. When the flow of blood through the liver is slow, the transformation of glycogen goes on gradually, but it is quickened whenever the current becomes more rapid. It seems probable that, although the blood of the portal vein may have something to do with the transformation of glycogen into sugar, this process is more closely connected with the circulation through the hepatic artery; for those lesions of the nervous system which increase the flow of blood through the liver and induce diabetes, have, according to Cyon,* little influence over the calibre of the vein, but cause the artery to dilate widely. As the blood from the artery flows into the portal vein, any increase in the circulation within it also quickens that in the vein to some extent. The circulation in the liver may be increased either by raising the pressure of blood in the arteries generally, so that the blood flows more quickly through the hepatic artery, although its size may remain the same as before, or by causing it to dilate, so that it receives a greater share of blood, while the pressure in the arteries generally remains the same.

The pressure of blood in the arteries generally may be raised by compressing any large artery, by violent muscular efforts, or by interference with respiration. The operation of these causes is followed by a greater production of sugar in the liver, and its increase in the blood of the vena cava, and even its appearance in the urine. Schiff was able to produce diabetes by ligaturing large vessels, and Pavy† found in his experiments that whenever an animal struggled either on account of discomfort or because its respiration was interfered with, the quantity of sugar in the blood of the vena cava and carotids was at once increased. According to Michea and Reynoso,‡ it appears temporarily in the urine after an epileptic or convulsive hysterical fit. This power of muscular action to increase the proportion of sugar in the blood is exceedingly interesting, for sugar is destroyed in the muscles during their contraction, and is in all probability to be looked upon as part at least of the fuel from which they derive their energy.§ The action of muscles, which causes the destruction of sugar within them, at the same time, leads to an additional supply being furnished to them, and thus the balance of waste and supply is properly sustained. The occurrence of sugar in the urine of persons suffering from cholera, or who have died from exposure to cold, is probably also to be attributed, at least in part, to the contraction of the blood-vessels near the surface of the body increasing the circulation in the liver. The intermittent glycosuria which has been observed to be present during or after a fit of ague, and absent during the interval, may also be ascribed to the rise in the general blood-pressure which occurs during the paroxysm.

Dilatation of the hepatic vessels, and increased flow of blood through them, may be produced by paralysing their vaso-motor nerves either directly or reflexly. The vaso-motor centre (*a*), from which those constant stimuli proceed to all the vessels in the body by which their state of moderate contraction, or tone, as it is often termed, is maintained, is situated in the medulla oblongata. The vaso-motor nerves for the hepatic vessels, indicated in the figures by the dotted line which accompanies them, pass from it down the spinal cord for a certain distance, then proceed through some of the communicating branches to the sympathetic cord and through the splanchnic nerves to the liver. The point at which they leave the spinal cord and pass to the sympathetic is not quite certain. According to Cyon and Aladoff* they leave the cord by means of the fibres (*c*), which accompany the vertebral artery, passing in them to the lower cervical ganglia. Thence they proceed in two fibres (*d*), one of which passes on either side of the subclavian artery, forming the annulus of Vieussens, to the first dorsal ganglion (*e*), and thence through the gangliated cord of the sympathetic (*f*), the splanchnics (*h*), to the cœliac ganglion (*i*), and along the hepatic vessels to the liver. (Fig. 1.)

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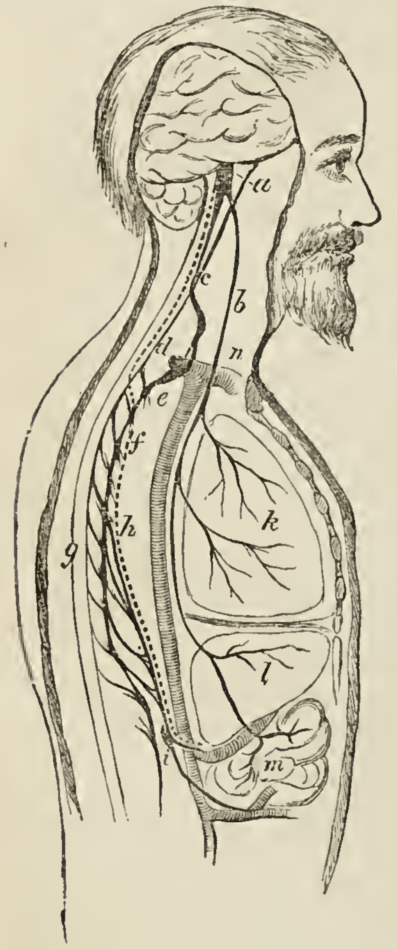
* Cyon and Aladoff. Reprint from the *Mélanges Biologiques* (which Professor Cyon was kind enough to send to me); and *Bulletin de l'Académie Impériale de Petersbourg*, vol. viii, p. 91.

† Pavy, *On Diabetes*, pp. 62, 68, and 145.

‡ Trousseau, *Clinique Médicale*, ed. 2me., tome ii, p. 665,

§ Ludwig and Genersich, *Arbeiten aus dem Physiologischen Anstalt zu Leipzig*, 1871, p. 75.

By dividing these nerves at any point between the medulla and the liver, the influence of the vaso-motor centre will be removed, and the hepatic vessels will dilate. Unless other circumstances should interfere, the flow of blood through the liver will be accelerated, and the production of sugar increased. Diabetes arising from division of the nerves is generally supposed to be permanent. In this it differs from diabetes induced reflexly by irritation of nerves, which ceases shortly after the irritation has passed off. This distinction is applied to that produced by operations; for, of course, permanent diabetes may depend on permanent irritation, and this is probably frequently the case where the disease occurs in man. Schiff† found that diabetes could be produced by divison of the anterior columns of the spinal cord between the medulla and the fourth cervical vertebra. This lasted for days or weeks, in fact, till the animal died. Cyon and Aladoff have also observed diabetes which they attributed to paralysis of the vaso-motor nerves of the liver, after section of the fibres which accompany the vertebral artery, of the last cervical or first dorsal ganglion, or of the fibres forming the annulus of Vieussens. Eckhard has not succeeded in confirming their results;* and it is, therefore, by no means improbable that the vaso-motor nerves of the liver do not always leave the spinal cord to join the sympathetic, by the fibres accompanying the vertebral artery, but sometimes pass further down the spinal cord, and leave it by the communicating branches going to some of the dorsal ganglia. This is all the more probable, as we have an instance of a similar kind in the case of the cardiac nerves.† (Fig. 2.) As the vaso-motor nerves of the liver pass along the gangliated cord and the splanchnics, one would expect that section of these structures would produce diabetes. But this is not the case, for the sympathetic cord may be divided between the tenth and twelfth ribs, or the splanchnics may be cut, without sugar appearing in the urine. On the contrary, when other means, such as puncture of the fourth ventricle, have been employed to induce it, no sugar appears in the urine if these nerves have been previously cut. At first sight, this result is very perplexing; but Cyon has most ingeniously explained it, by reminding us that it is not mere dilatation of the hepatic vessels, but increased circulation through them, which accelerates the formation of sugar; and the width of the vessels is of little consequence if there be not sufficient blood to fill them. Now, the vessels of the intestine, especially when the digestive canal is long as it is in rabbits, are so capacious, that when dilated they can hold as much blood as all the rest of the vascular system put together, and their vaso-motor nerves are also contained in the lower part of the cord and in the splanchnics. Consequently, when these are divided, the vaso-motor nerves of the intestinal vessels become paralysed as well as the hepatic ones, the vessels themselves dilate and retain so much blood that there is not enough left to increase the flow of blood through the liver, even though its vessels may be standing wide open to receive it. But if the vessels of the liver be first dilated, and the cord or splanchnics be then cut, the formation of sugar is not arrested; for the liver, having once a brisk circulation established in it, keeps it up, although the intestinal vessels may become dilated.



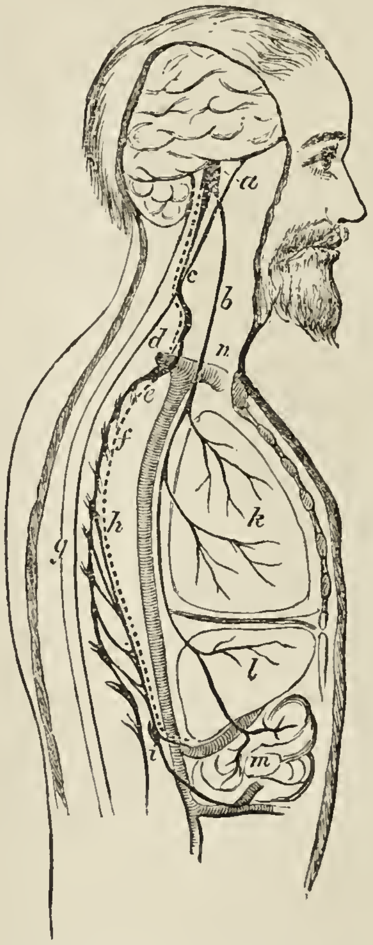


Fig. 1.—Diagram showing the course of the vaso-motor nerves of the liver, according to Cyon and Aladoff. These nerves are indicated by the dotted line which accompanies them: *a*, vaso-motor centre; *b*, trunk of the vagus; *c*, passage of the hepatic vaso-motor nerves from the cord along the vertebral artery; *d*, fibres going on each side of the subclavian artery, and forming the annulus of Vieussens; *e*, first dorsal ganglion: *f*, gangliated cord of the sympathetic; *g*, the spinal cord; *h*, splanchnic nerves; *i*, cœliac ganglion, from which vaso-motor fibres pass to the hepatic and intestinal vessels; *k*, the lungs, to which fibres of the vagus are seen to be distributed; *l*, the liver; *m*, the intestine; *n*, the arch of the aorta.

Fig. 2.—Diagram, showing another course which the vaso-motor nerves of the liver may possibly take. The letters indicate the same parts as in fig. 1. The hepatic vaso-motor nerves are here represented as passing lower down the cord than in fig. 1, and leaving it by the communicating branches to the second dorsal ganglion. It is possible that they may sometimes leave by the branches to the first, and sometimes by those going to a lower ganglion. In such cases any irritation to the third or one of the other cervical ganglia may cause diabetes by being conveyed along the vertebral artery and up the cord, as indicated by the dark line, to the vaso-motor centre, where it may cause reflex inhibition, in the same way as any irritation to the vagus.

A similar explanation may be given of the results obtained by Pavy, in one of his experiments.‡ He isolated the hepatic artery, portal vein, and hepatic duct, and then carefully divided all the remaining structures in the lesser omentum, including therefore the nerves passing to the liver. Notwithstanding that the hepatic nerves had been thus divided, and the splanchnics left uninjured, no sugar appeared in the urine. At first sight, this seems rather extraordinary, but a little reflection will show that the conditions are similar to those in Cyon's experiment. It is almost impossible to divide all the nerves of the liver without irritating the intestines and causing a considerable amount of congestion in them. The dilatation of the vessels produced in this way, will have the same effect as the division of the splanchnics. While watching a distinguished German physiologist dividing some of the nerves in the mesentery, I have seen the intestine become greatly congested, and so much blood has gone to it that there was not sufficient circulation in the brain to sustain its activity, and the dog, which was being operated on, slept soundly, although it had received no narcotic.

The second way in which the hepatic vessels may be dilated is by reflex paralysis or inhibition, as it is generally termed, of their vaso-motor nerves. Every one knows that, when a sensory nerve is irritated, the impression is transmitted to the vaso-motor centre, and arrests its usual action over the vessels of the part to which the sensory nerve is distributed. Thus, when a grain of sand falls into the eye, the irritation which it occasions to the sensory nerves of the conjunctiva, is conveyed by them to the vaso-motor centre, and arrests the action of that part of it which regulates the contraction of the conjunctival vessels. In consequence of this, they become dilated and full of blood, and continue so while the irritation continues; but, so soon as it is removed, the vaso-motor centre again regains its wonted power, and the vessels return to their normal size. The same is the case with the liver; and its sensory nerve is the pneumogastric. If this nerve be cut across, and its lower end irritated, no effect on the liver can be noticed; but, if its upper end be stimulated, the vessels of the liver dilate, the circulation increases, and sugar appears in the urine.§ Irritation of the roots of the pneumogastric, in Bernard's famous experiment of puncture of the fourth ventricle, has the same effect as stimulation of its trunk. This experiment is performed by pushing an instrument like a bradawl through the skull and cerebellum till it reaches the olivary fasciculi in the medulla oblongata. The instrument is prevented from injuring the anterior motor fibres of the medulla by a needle-like point which projects about the eighth of an inch from the middle of its edge. This is too fine to injure them itself, and, by coming in contact with the occipital bone, it prevents the edge of the awl from going too far. The irritation thus occasioned to the vagus roots, inhibits the vaso-motor centre of the liver, and in half an hour or an hour, sugar appears in the urine. It does not remain more than a few hours, but disappears when the irritation has passed off; and in this it differs much from the diabetes produced by dividing the vaso-motor nerves of the liver. When this is done by cutting the anterior columns of the cord in the neck, sugar, as has been already mentioned, will persist for days or weeks.[*]

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* Cyon and Aladoff, *op. cit.*

† Schiff, *Untersuchungen ueber Zuckerbildung in der Leber*, 1859, p. 108.

* Eckhard, *Beiträge*, vol. vii. tome i, 1873, p. 19.

† Schmiedeberg, Ludwig's Arbeiten, vol. vi, p. 34.

‡ Pavy, *op. cit.*, p. 171.

§ Bernard, *Physiologie Expérimentale*, tome i, p. 326.

Irritation of the peripheral terminations of some branches of the pneumogastrics has a similar effect to one applied to their roots or trunks. These nerves are distributed to the liver, lungs, heart, stomach, intestines, etc., but these filaments do not all seem to have the same power of inducing dilatation of the vessels. Diabetes can be produced by irritating the liver by needles[†] or electrodes[‡] placed in it; and irritation in the intestine seems occasionally to have the same effect, for there is a case on record of diabetes caused by the presence of a tapeworm in the intestines, and immediately cured by its removal. The influence of the cardiac, gastric, and other branches, has not been well ascertained. Eckhard has noticed the occurrence of diabetes after operations on the abdominal cavity without any definite lesion of nerves. The pulmonary branches seem to have a most important action, as the air inhaled during respiration appears to supply them with a constant stimulus, and thus continuously inhibits, to a certain extent, the vaso-motor nerves of the liver. When the pneumogastrics are cut across, this influence is, of course, removed, the hepatic vessels contract, and the production of sugar diminishes.

Increased respiration, on the other hand, seems to have the effect of increasing the formation of sugar; for Tieffenbach[§] observed that artificial respiration, performed by blowing air into the lungs by means of bellows, sometimes produced glycosuria. The appearance of sugar in the urine of animals poisoned by woorara is probably due partly to the artificial respiration employed to keep the animal alive, as well as to the action of the poison on the muscles, which will be considered afterwards. This is all the more probable because, when respiration is kept up to allow the animal to recover the effects of woorara, sugar makes its appearance. The fact that it does not do so while the animal is completely paralysed, points to a reflex production of the phenomenon; for Schiff[‖] has found that large doses of woorara paralyse the sensory as well as the motor nerves; and, as this loss of sensibility will destroy reflex inhibition, it is sufficient to explain the non-occurrence of reflex dilatation of the hepatic vessels while much woorara is present in the system. He states also that, when the respiration is effected gently, and the cannula is not tied into the trachea, but only laid loosely in it, so that the lungs are not over-distended by the force of the bellows, diabetes is not produced.[¶] When the nerve-centres are very deeply narcotised, as when an animal is thoroughly under the influence of ether, even puncture of the fourth ventricle will not cause diabetes;[**] and Pavy[††] found no sugar in the urine of animals when he extirpated the superior cervical ganglion under the influence of chloroform, although it appeared when he narcotised the animals with the fumes of puff-ball, which, though it stupefied them, would probably not affect the vaso-motor centre through which the irritation of the operation would influence the hepatic nerves.

The glycosuria which is often observed after inhalation of carbonic oxide,[‡‡] ether, and chloroform, may also be ascribed to irritation of the pulmonary branches of the vagus by these drugs before anæsthesia has become complete. If narcosis be quickly produced, sugar is not unfrequently absent; but it generally appears if narcosis be induced slowly, so that the irritant vapour acts long on the lungs, while the vaso-motor centre is yet unaffected by it. The glycosuria is not due to the struggles of the animal during the administration of the anæsthetic; for Schiff found it in a hedgehog which only succumbed to the influence of the anæsthetic after a long time, but did not make the slightest movement during the whole time.[*] The beneficial effect of opium and codeia in diabetes is probably due in part to their lessening reflex inhibition in the liver, as opium most assuredly does in the case of some other glands, and thus diminishing the production of sugar. It seems probable also that reflex inhibition may follow irritation of other parts of the encephalon, and possibly also of sympathetic ganglia, as well as of the roots, trunks, and branches of cerebro-spinal nerves.

The diabetes which has been observed after injuries of the cerebral lobes in man, of the cerebellum in animals by Eckhard,[†] of the superior cervical ganglion by Pavy, of the optic thalami, cerebral peduncles, pons Varolii, middle peduncles of the cerebellum, and of the cervical sympathetic cord and sciatic nerve by Schiff,[‡] is probably due to this cause, as in all these cases it is only temporary, and not permanent. Irritation of the sciatic nerve in man seems to have the same effect as in animals, for temporary diabetes has been observed during an attack of sciatica. There is another possible cause of increased formation of sugar in the liver; and that is, a greater proportion of diastatic ferment in it or in the blood which flows through it. The quantity of ferment in the liver of animals varies, and it is sometimes absent altogether. The same is probably the case with the blood. We do not know whether this ferment is peculiar to the blood, or whether it is ptyalin or pancreatic ferment absorbed from the intestines. Tiegel,[§] indeed, states that it differs from pancreatic ferment in being insoluble in glycerine; but Von Wittich has obtained a diastatic ferment from the liver by glycerine, and I have done the same. It is possible that there may be two ferments having a similar action. Pepsin seems to be absorbed from the stomach, for it has been found in the muscles and even in the urine by Brücke; and pancreatic ferment seems also to be absorbed, for Hüfner found a ferment possessing like it the properties of converting starch into sugar and of digesting fibrine in the salivary glands and lungs. The increased secretion of a hypertrophied pancreas, which Niemeyer asserts to be common in diabetes, may thus not only act by quickening the conversion of starch into sugar in the intestines, but by increasing the transformation of glycogen after its absorption into the blood. But atrophy of the pancreas is quite as common a lesion in diabetes as hypertrophy; and, if we suppose, as is usually done, that the only function of the pancreas is that of forming ferment, it is difficult to explain the occurrence of diabetes under these conditions, except on the supposition that in both of them the nerves of the organ are irritated, and cause reflex dilatation of the vessels of the liver in the same way that irritation of the liver itself does. But, if we suppose that the pancreas not only forms ferment, but also excretes ferment already circulating in the blood, in much the same way as the liver both forms and excretes bile, we at once see that the diastatic ferment which Hüfner supposes to be found in many parts of the body may accumulate in the blood because the pancreas can no longer excrete it, and thus lead to diabetes; for both bile and pancreatic juice can only be partially absorbed in the normal condition; another part will be evacuated with the fæces. I apprehend, however, that this explanation will seem to many persons to be too hypothetical, and that of irritation of the pancreatic nerves and reflex dilatation of the hepatic vessels will appear more probable. Plosz and Tiegel[‖] have found that the ferment is contained in the blood-corpuscles alone, and not in the serum. When the blood-corpuscles are destroyed, the ferment acts vigorously,[¶] as it is then set free. The diabetes observed by Harley after the injection of ether into the portal vein is probably due to the blood-corpuscles being dissolved by the ether.

I have already mentioned that the muscles contain glycogen, and, during their action, sugar is actually formed in them. The possibility of changes similar to those in the liver occurring in them must be borne in mind as a possible factor in diabetes. Having now considered the effect of increased formation of sugar, we must look at its diminished combustion as a cause of diabetes.

TESTIMONIAL.—On New Year's Day, Dr. Haining, who, on relinquishing for private practice the office of House-Surgeon to the Chester General Infirmary, which he has held for upwards of four years, was presented with a set of gold studs and a handsome claret jug by the visiting surgeon, matron, dispenser, nurses, and servants of the institution, as a token of their regard and esteem for him.

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[*] Schiff, *Untersuchungen über Zuckerbildung in der Leber.* 1859, p. 108.

[†] Schiff, *op. cit.*, p. 106.

[‡] Pavy, *op. cit.*, p. 137.

[§] Tieffenbach, Inaugural Dissertation; Königsberg, 1869. Abstracted in *Centralblatt für die Medicinischen Wissenchaften*, 1869, p. 179.

[‖] I am uncertain where this is published. Schiff himself informed me verbally several months ago of his discovery.

[¶] Schiff, *Journal de l'Anatomie et de la Physiologie*, 1866.

[**] Schiff, *Untersuchungen über Zuckerbildung*, p. 10.

[††] Pavy, *On Diabetes.*

[‡‡] Schiff, *Untersuchungen über Zuckerbildung*, p. 124.

[*] Senff, Inaugural Dissertation, Dorpat, 1869; Henle und Meissner's *Jahrebericht*, 1869, p. 173.

[†] Eckhard, *Pester Medicin-Chirurgische Presse*, No. 7, 1873, p. 98; and Hulz, *Beitrage zur Hydrurie und Mellitnrie*; Marburg, 1872.

[‡] Schiff, *Journal de l'Anatomie et de la Physiologie*, 1866, p. 376; and *Untersuchungen über Zuckerbildung*, p. 114.

[§] Tiegel, Pflüger's *Archiv*, vol. vi, p. 249; Von Wittich, Pflüger's *Archiv*, vol. iii, p. 339; Hüfner, *Journal für Practische Chemie*, vol. v, p. 372.

[‖] Pflüger's *Archiv*, 1873, vol. vii, p. 391.

[¶] Tiegel, Pflüger's *Archiv*, vol. vi, p. 249.

ON TRANSFUSION OF BLOOD.

By HENRY M. MADGE, M.D.,
Vice-President of the Obstetrical Society of London.

THE object of this paper is to give a short *résumé* of the present state of the question of transfusion. The history of the subject is curious and varied. Transfusion has had, as it were, many ups and downs; now, for a time, attracting much attention and exciting great expectations, and then, for a long period, almost sinking into oblivion. To those who would like to dive into its interesting historical details, I would recommend the writings of Martin of Berlin, Oré of Paris, Gesellius of St. Petersburg, and, among our own countrymen, Waller, Routh, and Aveling; also the *Transactions of the Royal Society*, extending as far back as two centuries ago. Even at that remote period, transfusion was a good deal talked about, and the most exaggerated notions were formed of its capabilities. The old were to be made young, and enjoy perpetual youth, and all diseases, including insanity, were to be removed. As the operation came far short of such pretensions, and as one or two deaths followed its performance, it fell into disrepute and disuse. It is due to Dr. Aveling to say that the recent revival of the subject with us has been, in a great measure, brought about by a successful case of immediate transfusion, an account of which he read before the Obstetrical Society of London. The Society at once appointed a committee to collect evidence, and to test, as far as possible, the real claims of transfusion to the confidence of the profession. As honorary secretary to that committee, I am able to state that a great deal of evidence has been collected. Besides a good deal of oral evidence given before the committee by several eminent physicians, and the reception of several papers from British authors, numerous books, pamphlets, and instruments have been received from many parts of the continent. It is with the view of still further increasing this stock of information, that the committee have desired me to bring the subject before this meeting. We hope there may be some here who have had cases of transfusion, and will give us the results of their experience.

In theory, nothing can be more plausible than transfusion. A person is dying from loss of blood; how easy it would appear to be to rescue that person from death by throwing blood back into the system. Again, a patient is gradually sinking from some morbid condition of the blood—pyæmia, chemical poisoning, or any form of blood-poisoning or blood-alteration. It seems feasible enough that to take away the morbid blood, and to replace it with blood taken from a healthy individual, would be sufficient to restore the patient to health. Unfortunately, however, in this matter, as in many others, practice does not run so smoothly as theory. With regard to blood-poisoning, an idea respecting hydrophobia has occurred to me, which I dare say has occurred to others. As all kinds of treatment hitherto devised for that formidable disease have proved useless, I would suggest that transfusion be tried, either by unloading the vessels of the poisoned blood, and injecting healthy blood, or by injecting some chemical solution into the veins, with the view of neutralising the poison. Leisrink, in a paper on transfusion (Volkmann's *Sammlung Klinischer Vorträge*, 1872), says:—"Transfusion is indicated in all those pathological conditions where the blood, in quantity and quality, is so altered that it is unfit to fulfil its physiological duties." It is to obstetricians, however, that transfusion possesses the deepest interest. Although, of course, available in traumatic or any form of bleeding endangering life, it will, if it ever becomes a frequently performed operation, be more in connection with uterine hæmorrhage than with anything else. The immediate effects of injecting blood into the veins seem to have been very varied. Some have started up, as if from a long sleep, moved their limbs, and asked for food; others—even those who eventually recovered—have only slowly shown signs of returning life. In general, the pulse soon becomes stronger, the respirations more regular, and the skin warmer. Some have experienced rigors, and others a feeling of warmth throughout the system. If the favourable symptoms are not maintained, the operation should be repeated, because their appearance shows that the system is capable of responding to the means employed.

The forms of transfusion which are now most in vogue, and which have been attended with the greatest amount of apparent success, are—

1. Transfusion with defibrinated blood.
2. Mediate transfusion with pure blood.
3. Immediate transfusion from "vein to vein."
4. Immediate transfusion from "artery to vein."

1. *Transfusion with Defibrinated Blood.*—In most of the cases recently performed at home and abroad, defibrinated blood has been used. Dr. Playfair of London and Dr. Robert McDonnell of Dublin strongly recommend this plan. Dr. McDonnell has had several successful cases, and one particularly interesting and successful in connection with the late Dr. Beatty (*Dublin Quarterly Journal*, May 1870). The great advantage of using blood deprived of fibrin is, that there is no fear of clotting. This makes the operation easier than with pure blood, as it can be done more leisurely and without much assistance. The advocates of this plan say that fibrin, as it exists in venous blood, is waste material, and useless, and that the real revivifying element is the oxygen contained in the red corpuscles. This may, or may not, be true; the balance of scientific opinion is in its favour; but, perhaps, there would be more candour shown in saying that the real reason for getting rid of the fibrin is, because it interferes with the operation. The opponents of the plan maintain that fibrin is an essential element of the blood, that it favours coagulation, helps to build up the tissues, and that, when its removal is attempted, there will always remain small particles or shreds, which may produce pyæmia or embolism. It is certainly true that, in many cases of recovery from impending death after transfusion with defibrinated blood, patients have died in a few weeks from pyæmia; but, of course, this may have arisen from various other causes. If the defibrinating process be carefully done, there is not much danger of finding shreds of fibrin in the strained fluid. I have proved this by repeated microscopical examinations. The blood should be caught in a basin, and whipped with a fork, a small stick, or—as Dr. De Belina advises, for the sake of cleanliness (this is most important in dealing with transfusion)—one or two twisted glass-rods. After a few minutes, the fibrin will be found adhering to the rods, and the blood, having been strained two or three times through fine linen, is ready for use. Muslin or coarse linen must not be used for straining. Violent whipping must also be avoided, as it is supposed to be possible in this way to burst or damage the blood-corpuscles. There is no doubt that, with ordinary care, defibrinated blood may be safely injected into the veins. Numerous instances are on record where patients have survived its employment, and lived for years.* This form of transfusion does not necessarily require a special apparatus; a common syringe has often been used with success. Indeed, most of the instruments that have been invented are merely modifications of an ordinary syringe.

Dr. De Belina has related a case in which transfusion was successfully employed in resuscitating a new-born child. The blood found with the placenta was defibrinated and injected into the umbilical vein with a common syringe (*De la Transfusion du Sang Défibriné*, Paris, 1873, p. 8). In devising instruments for using defibrinated blood, the great aim seems to have been to prevent air from entering the veins. Some are glass syringes fitted with a canule to enter the vein, and graduated to hold four or six ounces of blood—the quantity usually employed. When used, the piston is withdrawn, and the blood poured into the syringe from above; the piston is then replaced, and the contents of the syringe discharged, with one slow downward stroke, into the vein. The action of the piston, and consequent entrance of air, of the ordinary syringe is thus avoided. Dr. Braxton Hicks's instrument and Dr. Graily Hewitt's are made on this principle. Dr. McDonnell uses a glass cylinder in the form of a syringe, but without a piston, holding about six ounces; to the nozzle is fixed a long India-rubber tube, with a canule at one end to enter the vein. The blood in the cylinder finds its way into the vein partly by gravitation and partly by a small propelling bulb placed in the middle of the tube. If this be insufficient to drive the blood on, the operator blows gently, with the mouth applied to the opening at the top of the instrument. Dr. De Belina's instrument is somewhat similar; but, instead of using the mouth to supply air-pressure, he uses an elastic tube and bulb, worked like an ether-spray apparatus. There is no elastic tube fixed to the nozzle, which is curved and fitted with a canule. Dr. Richardson's instrument is much of the same character. Dr. Playfair uses a modification of Aveling's instrument. The end provided with the canule is placed in the opened vein, and the other in the vessel containing the prepared blood, and it is then worked in a simple and effective way, like a Higginson's syringe. Many other instruments have been invented, but those I have mentioned are, perhaps, the most important, and all are well adapted for the purpose.

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* Dr. Soutouguine, physician to the Cesarewitch, called on me when in London, and gave me an account of some experiments he had made on dogs. They were undertaken to determine the immediate and remote effects of transfusion with defibrinated blood, and had evidently been performed with precision and care. One dog was first weighed, and, calculating in this way the amount of blood in its body, it was bled nearly to death, so that the beats of the heart were scarcely perceptible. Another dog was then served in the same way, and the defibrinated blood of one was injected into the veins of the other. Six dogs were experimented on: one died from erysipelas springing from the wound in the vessel; the remaining five quite recovered, and were observed to be in vigorous health for several months. For some time after the operation, they were weighed every day and their excretions examined, and found to be normal. Dr. Soutouguine also injected the blood of a rabbit into the veins of a dog, with the effect of causing bloody urine, wasting, and death. Experiments were also made with defibrinated blood that had been preserved for some time—the notion being that it might be kept always ready for use. The dogs that were transfused with it did very well. Although possible in Russia, this would hardly be a safe proceeding here. I have found that defibrinated blood has a special tendency to become rapidly stale and fœtid.

2. *Mediate Transfusion with Pure Blood.*—Using pure or non-defibrinated blood would, no doubt, be preferable in all cases, if it could be done with ease and safety; for, after all, defibrinated blood is a disorganised fluid, and is only used because the presence of fibrin is inconvenient. With pure blood, clots are apt to form and block up the instruments, and, what is of more consequence, small clots may enter the vein, and lead, like carelessly prepared defibrinated blood, to pyæmia and embolism. Notwithstanding its drawbacks, the use of pure blood has many advocates both at home and on the continent. Mr. Higginson of Liverpool has had the largest and most successful experience of mediate transfusion in this country. He has had fifteen cases, and ten were successful (*Liverpool Medical and Surgical Reports*, vol. v). He does not seem to have encountered much difficulty from clotting. The instrument which he has invented for the operation is, to some extent, a modification of the syringe which is known by his name. It is bulky in appearance, caused by the rather unnecessary precautions taken to keep the blood and the instrument warm, and to prevent the entrance of air into the vein. Modern views on this subject are very different from what they were. Up to very recently, it was always held to be of great importance that a certain high temperature of the blood should be maintained to prevent coagulation. Dr. Richardson and others have shown that heat favours coagulation, and that cold retards it. There is still a diversity of statements as to the exact time at which fresh-drawn blood begins to coagulate, owing, no doubt, partly to varying conditions of temperature, and the shape of the vessel used to receive the blood. The time is variously given from one minute to five or six minutes. Artificial cold is said to retard coagulation for several hours. A short time ago, in damp weather, the thermometer standing at 60 Fahr., I noticed that bullock's blood, received into a common basin, commenced to coagulate in about five minutes. This would give ample time for injecting the requisite amount of blood into the vein. The great point is to have everything ready, and not to take the blood from the arm of the donor until the arm of the patient is prepared and ready to receive it. The hurry to get through this form of the operation, for fear of clotting, is certainly one of its drawbacks. To prevent coagulation of the blood, Dr. Braxton Hicks has recommended the addition of a small quantity of phosphate of soda (*Guy's Hospital Reports*, 1868, p. 14), and Dr. Richardson minute quantities of ammonia. Even in very small proportions, the ammonia not only prevents or retards coagulation, but, in transfusion, it acts as a stimulant to the system. Great care is required in using it. Injected into the veins of a dog, insufficiently diluted, it produced convulsions (*On the Coagulation of the Blood*, 1856, p. 120). The entrance of air into the veins has always been one of the bugbears of transfusion. There is now reason to think that too much has been made of it. Oré has shown, by experiments on dogs, that a large quantity of air throw into the femoral vein will cause death in a few minutes, but that a small quantity, such as might accidentally get into the veins in ordinary transfusion cases, does no harm (*Etudes sur la Transfusion du Sang*, Paris, 1868). These experiments have been repeated by several German physiologists. With these considerations, one need not be afraid, in a case of emergency, of using an ordinary syringe, although, of course, the less air admitted the better. Many of the instruments used for defibrinated blood are almost equally well adapted for pure blood. The quantity used in Mr. Higginson's cases was from four ounces to twelve ounces—in one case, twenty ounces.

3. *Immediate Transfusion from Vein to Vein.*—The revival and improvement of this method in England is, we all know, due to Dr. Aveling, who has written so much and so hopefully about it, that we must all desire to see his hopes realised. An objection already noticed has been raised to venous blood. It is said to contain all the impure *débris* of the tissues, and must, therefore, be injurious. This perhaps would be met by saying that the veins are the proper receptacles for venous blood; and that, once in the patient's system, it soon becomes arterial. The immediate method has many supporters on the Continent, and instruments have been devised for its performance by MM. Mathieu, Longet, Oré, and others. The current of blood in the veins being without impetus, the difficulty of sending the blood from vein to vein through a small tube has been met in various ways, but by none so successfully as by Dr. Aveling. His simple and ingenious instrument consists of a small India-rubber tube about a foot long, with a bulb in the centre. The ends are provided with cannules for entering the veins respectively of the donor and the receiver of the blood; and, as Dr. Aveling says, it forms a sort of anastomosis between the two individuals. The blood is propelled along the tube by a manipulation of the bulb and of the tube itself, a knowledge of which can only be acquired by practice. I should recommend those who procure the instrument to practise passing water through it transfusion fashion—that is, according to Dr. Aveling's instructions (*Obstetrical Transactions*, 1865, p. 132). It only requires a little practice; but that little is essential, and will make its use much easier when it is really wanted. By the use of this instrument, the dangers of clotting and of the entrance of air are reduced to a minimum. Dr. Aveling's experience has not as yet been large, but the plan seems to carry with it the promise of great future success. Dr. Savage of Birmingham has recently used Aveling's instrument in a successful case of transfusion, and speaks very highly of it. Dr. Aveling does not think it necessary to follow the old plan of dissecting out the vein in the patient's arm and passing ligatures or a probe beneath it. He merely exposes the vessel, and makes an opening in it for the reception of the cannule, which is kept in its place by the finger and thumb of an assistant. Of course this proceeding is applicable to every form of transfusion. Dr. Schliep, of the German Hospital, uses a modification of Aveling's instrument. Instead of the ball in the centre of the tube, he substitutes a syringe, with double action, like that of a stomach-pump or aspirator. This seems to give a greater command over the blood passing through the tube, but the continued action of the syringe would probably lead to clotting. When it is difficult to get any one willing to be anastomosed with the patient, or if, during the operation, the donor of the blood should become faint, recourse must be had to the mediate method.

Immediate Transfusion from Artery to Vein.—This is the oldest form of transfusion; and, as the earlier operations were made on animals, no difficulty was experienced. The carotid artery of one animal was connected by means of a small tube, having small glass or metallic tubules at each extremity, with the jugular vein of another, the blood being driven onwards by the arterial impulse. When, however, arterial transfusion came to be applied to the human subject, opening an artery was considered to be too formidable an undertaking, and recourse was then had to the arterial blood of one of the lower animals—a sheep, lamb, calf, or dog. A great outcry was made against this. It was absurdly supposed that the transfused blood would carry with it something of the nature of the animal from which it was taken, and that patients would bleat like sheep and bark like dogs. The blood-corpuscles in many animals are larger than in man, and, it is supposed, would not easily pass through the human capillaries; but those of the lamb and the dog are smaller, and are, therefore, suitable for transfusion. At the present time, whenever arterial transfusion is attempted, the blood of the lamb is used.* A very interesting case of this kind has lately been published by Dr. Albini, Professor of Experimental Physiology in the University of Naples. The patient had severe menorrhagia, and was sinking from loss of blood and from inability to retain anything on the stomach. Transfusion was performed by connecting the carotid artery of a lamb, by means of an elastic tube, with one of the brachial veins. The good effects were perceptible at once, and the patient improved in a few days so as to be able to eat and drink almost as usual. On the eighth day, a fresh accession of hæmorrhage occurred. Transfusion was again performed on the following day, but this time without benefit. Severe rigors were experienced, and peritonitis from supposed extension of uterine disease set in; and death soon followed. (*Relazione sulla Trasfusione diretta di Sangue d'Agnello*, Naples, 1873, p. 8). Another case of the same kind has recently occurred in America, the details of which I have not yet obtained. The blood of the lamb should only be used when there is difficulty in obtaining human blood. There is something repulsive in the idea of bringing an animal into the sick-chamber, and of mixing animal with human blood. In this suggestion, however, there may be more of sentiment than of science.† Shock to the patient would be avoided by obtaining the blood in an adjoining room, and using it pure or defibrinated, by the mediate method. For the immediate method, the lamb must be firmly secured by straps, the least movement being fatal to the operation. Professor Albini gives a drawing in his pamphlet showing how this is managed. Dr. Guérin of Paris is bold enough to recommend human arterial transfusion. It must, however, be left to surgeons to decide whether, under such circumstances, we should be justified in opening an important artery. There is this to be said for arterial transfusion, that the blood is purer; and the drawbacks to venous blood, defibrinated or otherwise, whatever they may be, would be avoided. Dr. Guérin has repeated an experiment which was performed by Blundell and others long ago—a sort of double transfusion. Two dogs are placed side by side, and the carotid artery of each animal connected by means of a tube with the jugular vein of the other. In this way, they obtain a common circulation, after the fashion of the Siamese twins. Although a most interesting experiment, this can only be regarded as one of the curiosities of transfusion.

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* The *London Medical Record* (Dec. 31st) contains an account of twelve cases of the direct transfusion of lamb's blood by Dr. Oscar Hasse. The patients were suffering from phthisis, chlorosis, dysentery, etc., and all were benefited. The account is taken from the *Allgemeine Wiener Medizinische Zeitung* for December, by Mr. Bellamy.

† As Dr. Barnes said in the discussion on the paper, "It is only taking lamb in another form."

It might happen that it would be impossible to get a supply of blood of any kind just when it was wanted. In such a case, it would be an advantage to have a substitute at hand. Some have recommended milk; others a very weak solution of ammonia. Saline solutions of various kinds have been used, also serum, or an imitation of it, particularly in cases of cholera; only, however, with partial success. The solution should be about the same specific gravity as that of the blood; and, according to Dr. Pavy, the salts of potash should never be used (*Guy's Hospital Reports*, 1868, page 6). Injecting plain water into the veins is dangerous, as it causes the blood-corpuscles to burst, and disorganises the blood. Further experiments are required to establish the safety and utility of saline solutions and other substitutes for blood in transfusion.

If the question be now asked, Which is the best and safest form of transfusion? I think it must be admitted that, in the present state of our knowledge, each of the four principal forms I have mentioned may be employed with an almost equal chance of success.*

For a more minute description of the various steps of the operation in the different modes of transfusion than I have given, and for fuller details of cases and descriptions of instruments, I must refer you to the writings of the authors whose names I have mentioned. It is one of the misfortunes of transfusion that, like a great many other therapeutic measures, its *modus operandi* is not quite understood. To place it on a sound scientific basis, we must know more than we do at present about the physiology and pathology of the blood. It will not do, however, to reject transfusion because we cannot explain the exact way in which it does good and saves life. If this rule were followed, we should have to give up nearly all our best remedies. It has generally been supposed that, when blood is injected into a vein of an almost moribund patient, for the purpose of resuscitation, it goes direct to the heart, which is stimulated to increased action by the presence of its natural stimulus. Hüter, however, states, and seems to have proved by experiment, that by venous transfusion the blood does not go direct to the heart, but becomes lost or diffused in the general venous system. He recommends arterial transfusion, but of a different kind to that already referred to—namely, sending blood to the heart through one of the arteries in the neighbourhood of that organ (*Archiv für Klin. Chir.*, vol. xii; *Centralblatt*, 1869, No. 25). There are many obvious objections to this plan, and the trials and experiments that have been made to illustrate it are not encouraging. I mention it here partly for the boldness and novelty of the suggestion, and partly to show that we are still somewhat in the dark about this part of the subject. If Hüter's theory regarding venous transfusion be correct, we get rid of one of the supposed dangers of transfusion—that is, over-distension of the right side of the heart. The dread of this danger has been pretty generally felt, and to avoid it we are cautioned to inject the blood slowly and in moderate quantities. It has been a matter of surprise with many, that the quantity of blood used in transfusion is so small, compared with the quantity lost; but, when a patient is reduced by loss of blood to the lowest ebb, a few ounces would be sufficient to turn the scale either way—by further abstraction, towards death; by addition, towards a restoration of the equilibrium of the circulation. Whether the latter is brought about by the mechanical effect of adding something to the bulk of the blood in the body, or by stimulating the heart and vessels, are points that can only be settled by experiment.

There are several other points connected with the subject surrounded with difficulties. Indeed, transfusion, although somewhat ancient, may still be said to be in its infancy. By many, it is altogether regarded with scepticism. It is said that those who recover after transfusion would recover just the same without it. One writer says that "transfusion is a sort of Will-o'-the-wisp of science, holding out the most brilliant prospects, which never seem to be realised." There is, no doubt, much in the history of transfusion to justify scepticism as to its real value; but there is also no doubt that it has had its triumphs as well as failures. A large number of well authenticated cases of success are on record—quite enough to encourage us to thoroughly investigate the subject, to endeavour to remove all doubt, and thus, if possible, to secure to the profession an effective means of saving life when all other means fail; for it must always be remembered that transfusion is only to be used as a last resource. In this important work, the Committee on Transfusion invite the co-operation of all those members of the British Medical Association who take an interest in the subject. The points calling for further inquiry appear to the Committee to be as follows.

1. The exact time that human blood takes to coagulate when drawn from a vein. (This is suggested from the different results arrived at by various authors, and from the fact that Mr. Higginson has found but little difficulty in transfusing blood in its natural state.)

2. Does blood, when injected into a vein, go direct to the heart, or does it become lost or diffused in the general venous system?

3. The effects, immediate and remote, of transfusion with blood kept in a state of non-coagulation by means of phosphate of soda, as recommended by Dr. Hicks.

4. The effects, immediate and remote, of transfusion with blood containing ammonia, as recommended by Dr. Richardson.

5. The effects of transfusion with milk.

6. The effects, immediate and remote, of tranfusion with defibrinated blood.

7. The microscopic examination of defibrinated blood.

8. The effects of transfusion on one of the lower animals by the immediate method, on Dr. Aveling's plan, from an animal of the same species.

9. Transfusion with blood in its natural condition, as in Mr. Higginson's cases.

10. Further inquiries to show whether the blood of the lamb or of any other animal might be introduced with impunity into the human system.

11. Transfusion with defibrinated blood, with the addition of ammonia or phosphate of soda, or both combined.

12. Transfusion with saline solutions.

13. Further experiments to show how long an animal deprived of food would live on blood transfused daily.

REMOVAL OF A LOOSE CARTILAGE FROM A KNEE-JOINT UNDER THE ANTISEPTIC TREATMENT.

By GEORGE LICHTENBERG, M.D.,
Surgeon to the German Hospital and Tottenham Training Hospital.

THE removal of loose cartilages in joints by operation has been, and is even now, considered by most surgeons as a procedure connected with more or less risk; and one which, according to their opinion, should only be resorted to when a palliative treatment previously tried has utterly failed. And if we examine minutely the statistics of this operation, we must confess that there is truth in this assertion; and no surgeon is to be blamed if he undertake the operation with a certain feeling of diffidence as to the ultimate result. Cases, however, will occur which imperatively demand the removal of loose cartilage by operation, which operation, great as the risk may be, is not comparable to the suffering and even danger in which the patient is placed by allowing it to remain; and here arises the question, What kind of operation should be performed? Is the loose cartilage to be removed by the direct incision or by the subcutaneous one? We all know that, according to present experience by the direct method, the risk to life is greater than by the subcutaneous one; while the latter operation is more difficult to perform, and therefore has resulted in more failures. But, speaking of the failure of the subcutaneous method, it would be neglect on my part not to mention the very favourable results which Mr. Square, Surgeon to the South Devon and East Cornwall Hospital in Plymouth, has achieved by his subcutaneous incision. Mr. Square refers to no fewer than twenty-four cases operated upon either by himself or by others according to his particular subcutaneous method; not one failure among them has taken place, and all cases, without exception, have made a rapid recovery. Having carefully read the different cases, I certainly should not hesitate to follow Mr. Square's advice, and not attempt to employ any other method than the subcutaneous incision for the removal of loose cartilages in joints, had not Professor Lister produced such a thorough revolution in the treatment of wounds by his antiseptic treatment. Although it lies not in the compass of these short remarks to enlarge upon this really grand achievement (I am not entering into the details), I may be allowed here to mention that several years' experience has thoroughly convinced me that by this treatment conservat surgery has gained a triumph which, though at present I r ive it is not fully appreciated, will in the future bear bountif prove not only a blessing to the profession, but principally to suffering mankind. My past experience, therefore, emboldened me also to use, in the following case, for the removal of a loose cartilage from the knee-joint, the direct incision instead of the subcutaneous one, the account of which I herewith relate.

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* I ought, perhaps, to state that in this paper I am only giving my own opinions. No formal or definite conclusions have as yet been arrived at by the Committee.

Mr. L., of Ilfracombe, the subject of the present paper, aged 21, had four years ago a severe fall on his left knee. An abscess formed outside; this was laid open, and remained so for one month before it entirely healed up. Two years after this accident, the patient felt occasionally severe pain round the joint, particularly in walking downhill, and he fancied he heard now and then a snapping noise in the knee-joint. Last year an attack of synovitis set in, and made it necessary for the patient to lay up for six weeks; after this he sometimes felt suddenly excruciating pain in the joint after over-exertion, and about that time he frequently himself felt a foreign body moving about in the joint, which occasionally he could lay hold of with his own fingers, mostly on the inner, but now and then also on the outer, side of the joint. The symptoms were at times most distressing; and, as every palliative treatment had been of no avail, the patient wished anxiously to submit to a radical cure in order to get rid of this severe suffering, and for this purpose he was admitted on May 2nd into the Sanatorium of the German Hospital. On the following day, the patient, after having himself got hold of the foreign body with great dexterity near the inner condyle, was placed on the bed, and, the limb having been put in semi-flexed position, Dr. Nieden was enabled to hold the foreign body (which, felt through the integument, was seemingly of the size of a plum-stone) firmly between his thumb and index finger). I then made a longitudinal incision about two inches in length over the foreign body, during which time a continual spray of carbolic acid solution, according to Professor Lister's method, was directed on it; and then, gently cutting on and limiting gradually the length of the incision as I cut towards the capsule, I opened this part so far that, by a slight pressure of Dr. Nieden's fingers, the body jumped out of the joint. The wound was immediately united by five carbolised catgut sutures, and dressed likewise according to Professor Lister's method with the carbolised gauze; the whole limb was then placed on a straight splint and rather tightly bandaged, as a little oozing of blood had been going on between the interstice of some sutures, and for this reason also ice was applied to the knee. During the following night, the patient complained of much pain, due, however, merely to the tightness of the bandage, the pain leaving directly the bandage was loosened. Twenty-fours after the operation I looked at the wound, the carbolic acid spray of course being administered during the inspection; the entire wound was glued together, and only between the two lower sutures a small superficial interstice was discernible, due very likely to the slight oozing of blood which still had continued after the operation, and which had prevented a perfect union through the entire thickness of the skin. The neighbourhood of the wound, however, was not in the least reddened; the whole knee had a natural appearance, and was nowhere painful to the touch; the general health of the patient was perfect. On the second day I did not find it necessary to undo the bandage, the temperature being normal and everything going on most favourably; on the third day I removed three sutures; and on the fourth the last ones were taken out, when the wound itself was found to be perfectly united. One circumstance I wish to mention at this point: the carbolised catgut sutures had decidedly irritated the parts more than I had anticipated; and therefore, as in simply incised wounds we shall seldom require to leave the sutures longer in than at the utmost from three to five days, I think the finest Chinese silk will be by far preferable to the carbolised catgut sutures. I have always used this kind of silk in my rhinoplastic operations, and found it answer exceedingly well; the irritation it produces is very limited, and has never interfered with the ultimate object I had in view, viz., union by first intention. Although now on the fourth day the patient could be pronounced to be perfectly well, I did not venture to allow him to get up before the end of the first week, when I considered it safe to do so. The patient remained in the hospital up to May 17th, when he was discharged. I therefore had ample opportunity of watching the result, which proved satisfactory in every way.

Although I am well aware that the direct incision for the removal of loose cartilages in joints has often been successful without having had recourse to Professor Lister's treatment, yet no surgeon can and will deny that the fact of opening a joint by an incision is of itself always a procedure connected with more or less danger; while, on the other side, I firmly believe that we shall soon consider the simple opening of a joint under Lister's method for the removal of a loose cartilage as an operation connected with no more danger than a simple incision into other less important parts of the body.

In concluding these remarks, let me express the hope that the reader may not think this case alone has convinced me of this fact; there are other cases on record treated in a similar way also with a favourable result; and Professor Lister's case (*Glasgow Medical Journal*, November 1868) is particularly instructive. I merely wish to say that this case is for me a new and strong proof of the invaluable help we have at our disposal by the employment of the antiseptic treatment.

THE DEPRESSANTS OF THE CIRCULATION AND THEIR USE.*

By J. MILNER FOTHERGILL, M.D., M.R.C.P.

[*Continued from p. 9 of last number.*]

THE most important matter, however, connected with our subject was the introduction of a vegetable depressant agent into the treatment of pyretic conditions. In 1844, Dr. Fleming published his Inaugural Thesis for graduation at the University of Edinburgh, entitled "An Inquiry into the Medicinal Properties of the Aconitum Napellus," and struck the key note of a new treatment. Certainly aconite had been studied before, so early indeed as by Störck, in 1763; but Fleming made the subject his own. His conclusions were, that aconite is a powerful antiphlogistic, and that it is calculated to be of great service in all cases where there is inordinate activity of the circulation. The data on which these conclusions are founded were, the lowering of the pulse, its alteration of character, the effect upon the fever along with the action upon the cutaneous vessels, produced by the administration of aconite. The reduction in the frequency of the pulse was marked, amounting even to thirty-six or forty beats per minute; a reduction which must exercise a marked influence upon the circulation and the chemical interchanges. The cutaneous exhalation was increased with much itching, and not unfrequently an eruption of vesicles indicated its powerful action upon the skin. Thus we see that aconite acts in a manner very similar indeed to antimony. The immediate dangers in the use of both are much the same, but the after effects of aconite are less objectionable. The use of aconite as an antipyretic agent has maintained its position, and indeed is gaining ground. Its empirical use has been the sheet-anchor of homœopathic practice in pyrexiæ; and though we cannot credit that body of irregular practitioners with a very scientific administration of such an agent, we cannot withhold from them their just claim to have demonstrated on a large scale the practical value of aconite in the treatment of pyretic conditions, especially in inflammatory and simple febrile affections.

In 1872, Ringer, in his well known work on *Therapeutics*, writes in a manner which vindicates the expectations of Fleming. He says, "Aconite is to be most esteemed for its power, little less than marvellous, of controlling inflammation and subduing the accompanying fever. It will sometimes at once cut short an inflammation. It will not remove the products of inflammation, but by controlling the inflammation it prevents their formation, so saving the tissues from further injury. When given in the earliest stages of the commoner and milder pyrexiæ, the skin, dry, hot, and burning, becomes in a few hours comfortably moist; and in a little time longer is bathed in a profuse perspiration, often to such an extent that drops of sweat run down the face and chest. With the sweating comes speedy relief from many of the distressing sensations, as restlessness, chilliness, heat, and dryness of the skin, aching pains and stiffness; and at the same time the quickness of the pulse becomes much reduced in frequency, and in a period varying from twenty-four to forty-eight hours, both pulse and temperature reach their natural state."

Finally, Ringer sums up, "It has been shown that aconite lessens the rapidity of the circulation. It may, therefore, be used in all cases where it is needful to subdue vascular excitement; in fact it may be given in precisely those cases which were formerly treated by bleeding."

Thus we see that after thirty years, and those years too during a most sceptical era, a time almost of eclipse as regards faith in therapeutics, the predictions of Fleming have been endorsed, and the line of treatment inaugurated by him developed into a scheme which includes many of our new remedial agents, and shadows out the practice of the future.

The depression of the heart, and with it the lowering of the circulation and the chemical changes, on the one hand, and the dilatation of the peripheral vascular area on the other, including the consequences of cutaneous exhalation, are the two grand factors in the modern treatment of pyretic conditions, co-equal with the direct use of cold.

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* Read before the Medical Society of London.

Not only so, but they afford efficient aid in the relief and treatment of several other conditions shortly to be alluded to. Indeed, it is not merely the effect produced on an inflamed area by the depressant action of the agent used, though that is a great matter; but the questions of the effect of high temperature, and the induction of sleep are involved in this inquiry as to the action and use of the depressants of the circulation.

As to the inflamed area itself, it may be said that to dilate the blood-vessels generally will affect the vessels of the inflamed area, and so aggravate the mischief. But as a matter of fact, the vessels of this area are already paralysed, and so removed from any effect exercised by the agent administered. The impression produced on the circulation generally reduces the blood-pressure and the supply to the inflamed area, and so moderates the inflammatory action. Then as to the effect of a high temperature upon the system, the action upon the nerve-centres, the tissues, and the excretory actions, the accumulation of waste products in the blood and the production of the typhoid condition or uræmia, often constitute the great danger of a pyretic condition.*

And now, as to the production of sleep. The relation of cerebral anæmia to sleep has attracted much attention of late, since the publication of Mr. Arthur Durham's well-known paper; and, though cerebral anæmia may not be all that is requisite to sleep, it is a most important factor in its production; without it, indeed, sleep is impossible. Thus hydrate of chloral is a good hynotic, because it dilates the blood-vessels. A good dinner near a warm fire after long exercise against the wind, especially in cold weather, is an irresistible hypnotic, because the vessels of the skin and the muscles, as well as the visceral vessels, are now all dilated, and sleep cannot be resisted. The blood is so drawn away from the brain that cerebral activity is no longer possible. The relation of the depressants of the circulation to sleep is very important.† Thus, we find opium, especially in combination with antimony, a good hypnotic, as also hyoscyamus, conium, the secondary effects of alcohol, chloral, etc., probably as much by their effect on the vascular system as by any narcotic action. So in a cold, with a dry skin, chloral loses much of its hypnotic power, even with those in whom, under other circumstances, it produces sleep with certainty.

Very important matters, indeed, are involved in the question of the action of the depressants of the circulation, and form a sufficient apology for my bringing the matter before this venerable Society; and I trust that none of us will be worse practitioners for knowing a little of the means by which these agents, in all probability, exercise their apyretic action, or for having a theory of how they act. There is room for hope, indeed, that a more general recognition of the mode of their action will lead to a more extensive use of them; and that the constituents of fever mixtures will be selected by the light of physiology as well as by the practised groping of empiricism, without detriment to their efficiency.

But, while we can see the additions to our armamentarium in the treatment of conditions where inflammation, a high temperature, and insomnia are leading factors; conditions, as we have seen above, often found together, and alleviated by the same remedial agent; conditions which frequently demand the attention of the profession; we may cast a glance at the effects of the depressants of the circulation over other than the before-mentioned states.

Thus aconite can be used in the relief of non-febrile conditions. A friend of mine is subject to fits of congestive headache with great cotemporary coldness of the hands and feet. Various lines of treatment were tried without effect, when a non-professional person advised him to try aconite. Ere doing so, he asked me about it, and I advised him to try it, as it might do him good. He did so with entire success. The peripheral blood-vessels being dilated, the blood was enabled to return to its wonted channels, and the headache was relieved by the removal of the cerebral hyperæmia. The improvement is permanent. In many cases of local hyperæmia, aconite has been found very useful.

A word, however, *en passant*, as to the dilatability of the blood-vessels. Ludwig, Schiff (*La Nazione*, August 9th, 1872), and others, have been led to the conclusion that the vascular system is normally in a state of semicontraction, and that, in full dilatation, it can hold twice the normal amount; or, in other words, that it took the whole of the bulk of blood of an identical animal to raise the blood-pressure again to the height at which it had stood ere full dilatation was induced. Goltz found that the intestinal veins would hold all the blood of the animal experimented upon.

This dilatability of the blood-vessels permits, then, of most effective bleeding after the manner of Rasori; indeed, an amount of blood may be so withdrawn from the circulation far beyond what could be safely done by withdrawal of it from the system altogether. And the list of agents by which this can be done comprises mercury, antimony, iodide of potassium, hydrate of chloral, nitrite of amyl, Calabar bean, aconite, veratrium, and, to a less extent, opium, acetate of ammonia, alcohol, guiac, ipecacuanha, and a host of others.

Mercury is a direct cardiac depressant; and George Harley (*Proceedings of the Royal Society*, 1864) found that the injection of corrosive sublimate into the femoral vein of a dog produced paralysis of the heart beyond the power of a feeble galvanic current to excite it long before the vermicular action of the intestines had ceased. Such action should not be forgotten in its administration. As to its action on the skin and other emunctories, we are all familiar with it, and utilise it at times. But its use in consecutive doses for such a purpose is now only found in antiquated practice alongside the moxa and the strengthening plaister.

Antimony, especially in the form of tartar emetic, has long been used for its depressant action. Twenty grains of tartar emetic was considered a capital measure to lower the violence of a maniac in past times; and it, indeed, formed an effective measure. Unfortunately, however, acute gastritis and pustular inflammation of the intestines often followed such doses, ending fatally; which led to its abandonment. Such action of tartar emetic is still utilised by the cotton-spinners' wives in Lancashire, in order to control the violence of their drunken spouses on Saturday nights. It is purchased at the druggists under the name of "quietness," and administered in the cup of tea offered to the riotous inebriate. (Bucknill and Tuke's *Psychological Medicine*).

Iodide of potassium is a depressant of the circulation acting powerfully upon some persons (Ringer), and by its action, especially upon the cutaneous vessels, is admirably adapted to the treatment of the early stages of catarrhal fever, or thoracic inflammation. Combined with ipecacuanha and acetate of ammonia, it is most serviceable in the early stage of bronchitis, when the bronchial membrane is turgid and swollen with congested vessels, and the secretion almost totally arrested. Here the turgescence must be relieved, and secretion established as the first step in the treatment. This combination is very useful where mercury or antimony are contraindicated.

Alcohol is often useful for its effects upon pyretic conditions, and is often given to lower the temperature, which it probably does by its effect upon the skin. While acting upon the heart by increasing its contractions, there is such a current established through the skin, the blood being rapidly driven through the dilated vessels, that the temperature is lowered (Binz). Alcohol and opium both act readily upon the vessels of the head, and so are at first excitants; but, as the other peripheral vessels become dilated, the brain becomes anæmic and sleep ensues. When coma comes on, then there is venous congestion (Hammond).

Having briefly disposed of our old therapeutic friends, let us look a little more carefully into the action of our new acquaintances on the list of depressants of the circulation. We may take choral hydrate first.

Hydrate of chloral is a depresser of the temperature, as well as a hypnotic; and, though possibly possessing, like opium, an action on the nerve-centres—some unknown narcotic action—still its effect upon the vascular system probably accounts for much of its action. There is some evidence that chloral depresses the heart, but it acts upon the cutaneous vessels very markedly. Liebreich, B. W. Richardson, Tay, Hammond, and others, found that it is not at all uncommon for the temperature to fall three or four degrees, or even more after a full dose (40-80 grains) of chloral-hydrate.

Hammond found the retina to become pale and exsanguine at the oncome of sleep, its natural colour coming back as sleep wore off. My friend Dr. Lauder Brunton has made some very interesting experiments as to the action of chloral. He finds that, after large doses, the temperature falls till it can no longer be measured by ordinary clinical thermometers. Having found out what dose would kill an animal when exposed to the air, he gave this quantity to two similar animals, wrapping one up in cotton-wool. The one so wrapped up survived, while the other died. Then he found out the dose which was lethal after wrapping up in wool, and gave that to two similar animals, wrapping one up in wool and putting the other in a warm chamber. The one in wool died; the other recovered. A larger dose still was fatal to the one in the warm chamber. These experiments throw much light upon the action of chloral hydrate. After this, we can no longer feel surprise at the concomitance of sleep and a free perspiration with its fall of temperature in the crisis of malarial fever. They are alike the result of dilatation of the cutaneous vessels; and are not uncommonly the combined results of the administration of a single agent.*

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* For further information on this important matter, readers may consult an article by the writer in the *Edinburgh Medical Journal* for September 1873, on "The Typhoid Condition."

† The delirium of opium-poisoning is converted by sleep into a dream; but in belladonna-poisoning the raised blood tension will not permit of sleep, and the delirium is waking, though no memory of it remains after.—JOHN HARLEY.

Dr. Theodore Williams has also found hydrate of chloral useful in spasmodic asthma (British Medical Journal, Oct. 25th, 1873).

[*To be continued.*]

CLINICAL MEMORANDA.

INSUSUSCEPTIBILITY TO VACCINATION.

In reply to the inquiry of Dr. Cowie—"Insusceptibility to the infection of cow-pox, even for a very limited period, is an occurrence of excessive rarity"—"of upwards of 9,000 vaccinations at the Blackfriars Station of the N. V. E., there was but one case in which a second trial was unsuccessful" (Seaton's *Handbook of Vaccination*, London, 1868, pp. 174-5). At my own stations during a period of upwards of ten years, including considerably more than 10,000 vaccinations, I have met with only two instances in which there was failure after three trials in consecutive weeks; and even in these the insusceptibility may have been only temporary. I believe that temporary insusceptibility, more or less complete, is sometimes the result of the incubation of certain of the exanthemata or other diseases; although, curiously enough, the early latent stage of small-pox does not generally prevent the successful inoculation of vaccinia. A. B. Steele, Liverpool.

OBSTETRIC MEMORANDA.

POST PARTUM HÆMORRHAGE.

The discussion on *post partum* hæmorrhage reminds me of an occurrence worth relating. In the month of October, 184— (I cannot remember the year), I was called early in the morning to a labour at some distance. The frost was so great as to impede my journey, and thick ice was on the ground, which caused some malediction on my part. The labour was soon over, but was followed by such fearful flooding that defied all control—so much so, that I called the husband into the room, that he might be present at the death. All at once, I thought of my enemy, the frost. I desired the husband to bring me a handful of ice. It was no sooner said than done, and in a few minutes I thrust a handful of ice into the uterus. Contraction at once took place; my patient was saved; and from that moment I never abused an early frost.

In a pretty large practice of nearly fifty years, I can honestly say I never lost a patient from *post partum* hæmorrhage in my own practice, though I have seen two or three in consultation. My invariable method was to empty the uterus and tickle the inside with my right hand, at the same time grasping and kneading the uterus with the left hand. If time permitted, I placed my hand now and then in a pail of very cold water. This plan never failed to produce contraction (except in the case above mentioned); but it was necessary to continue the grasp for perhaps an hour to prevent the uterus from expanding again, and until the patient was sufficiently recovered as to have a bandage applied. Those who have undergone the fatigue of bending over a patient and grasping the uterus for so long a time, may be glad to hear of a substitute; and I can give one. I was called to a case suddenly; and, having a "Salmon and Ody's" *single* truss in my hand at the time, I put it in my pocket. Having procured contraction, I put on the truss, placing the flat pad on the uterus, and the other on the spine. It answered admirably, the women present being astonished at the *new invention*, the real nature of which I of course concealed. It is really worth a trial. In cases where, from past experience, hæmorrhage may be expected, I quite hold with giving a large dose of ergot before the expulsion of the child. The presence of internal hæmorrhage is sometimes very deceptive, the os uteri being stopped by a clot. The nurse has often assured me there was no bleeding, because the napkin was unsoiled; when, on placing my hand on the uterus, I found it full of blood. The poor Princess Charlotte fell a victim to this mistake. The doctor had gone to bed, and the nurses thought all was right because here was no outward sign of bleeding, while the Princess was dying rom internal hæmorrhage. The doctor was at last called, but too late.

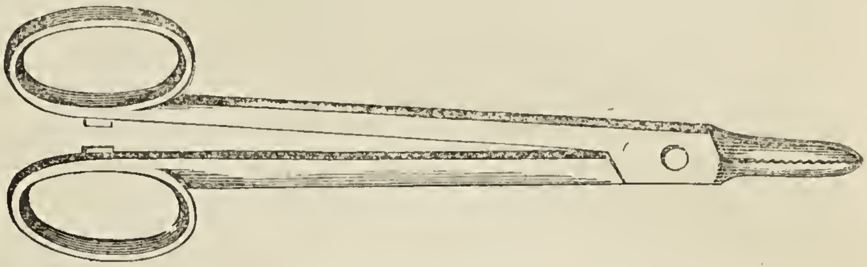
C. M. Thompson, St. John's Hill, Sevenoaks.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORTS FROM THE METROPOLITAN HOSPITALS ON THE USE OF TORSION IN SURGICAL OPERATIONS.

The following additional reports have been forwarded.

Mr. Spencer Wells (Samaritan Hospital) has introduced a kind of artery and torsion forceps, which very conveniently replace the old spring artery forceps of Liston, and the bull-dogs used for the temporary stoppage of bleeding vessels during operations, while they are the most readily applied of any of the varieties of torsion-forceps met with in the shops. They are represented in this sketch, and were first made for Mr. Wells by Krohne and Sesemann. The grasping and holding extremity is roughened by rather deeply cut transverse teeth, so that the bleeding vessel is forcibly compressed, and its coats squeezed or almost crushed together. This is alone often sufficient to stop the bleeding without any torsion, especially if the instrument be left on the vessel for a minute or more. But if the vessel be large, then two or more rotations may be added. Instead of the spring-catch, the fastening is effected by a Mathieu's catch in the handles. This is quite as easily fixed and opened as the spring, and is much less likely to get out of order. The instrument is made of steel, but is coated with nickel, which prevents any rusting after use. Mr. Spencer Wells, as is well known, trusts to the clamp for securing the pedicle in ovariotomy whenever it can be applied without too much pull on the uterus or broad ligament. Where the pedicle is very short or broad, he either uses the cautery, the ligature, or the *écraseur*. He has never trusted to torsion alone, though occasionally securing one or more vessels in this way. With the bleeding vessels in separated omentum, he trusts to torsion when the vessels are distinct; but when oozing surfaces rather than separate vessels are seen, he uses ligatures of fine pure silk, cutting off the ends short and returning them. He prefers this silk to catgut. With bleeding vessels in the abdominal wall, torsion, or simple compression with the torsion-forceps, is sufficient.



Mr. Mac Cormac (St. Thomas's Hospital) writes: I have used torsion, to the exclusion of other methods, for a considerable time. I consider it perhaps the safest mode of occluding a divided blood-vessel. It is easy to apply to the larger vessels, more difficult in the smaller vessels, since they cannot be so readily separated from surrounding parts. For the same reason, it is difficult to twist vessels embedded in tissues altered by chronic inflammation. I have safely used torsion to arteries of all sizes, even the femoral, after disarticulations of the hip. During the war of 1870, I twisted the vessels in a very large number of cases of amputation for gunshot injury. I only remember a single instance of secondary hæmorrhage from a twisted vessel. It was a case of amputation through the knee-joint, in which acute pyæmia supervened, and secondary bleeding would probably have occurred as readily had the ligature been employed. This fact is of importance in respect of a class of injury very generally prone to the occurrence of secondary bleeding. Torsion is more difficult and tedious in its application than the ligature. It is inapplicable when the arteries are diseased. For the smaller arteries I have used unlimited torsion. For large vessels, lying loosely in unaltered sheaths, it is better to limit the length of artery twisted by grasping the vessel with a second forceps, otherwise the artery may be needlessly and dangerously disturbed in its relations to its sheath. I twist until I feel the internal coats giving way. The number of turns required to effect this varies even in arteries of similar size. The sharpness of the motion in making the twist may have some effect on the number of turns required. If difficulty be experienced in stopping the flow of blood from the smaller vessels, ligatures may be employed instead; but after amputations or excision, the time consumed in twisting the vessels is often a positive advantage, since it lessens the chance of intermediary hæmorrhage.

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* The effect of a feverish cold and a dry skin over the action of chloral has been oticed before.

UNIVERSITY COLLEGE HOSPITAL.

INTESTINAL OBSTRUCTION: PROLONGED STERCORACEOUS VOMITING: SUCCUSSION: RECOVERY.

(Under the care of Mr. BERKELEY HILL.)

THE following case, reported from the notes of Mr. L. G. Betty, ward clerk, is interesting, to show how closely the symptoms caused by loaded bowel may simulate obstruction from entangled gut, and is inserted as a contrast to the cases on which Mr. Hutchinson's important paper on intussusception, read to the Royal Medical and Chirurgical Society on November 11th, was founded. The succussion was employed in the hope that, should the obstruction be caused by a thyroid hernia, the knuckle of gut might be disengaged; indeed, this might possibly have been actually the case. The course and termination of the case render the diagnosis of loaded bowel the more likely one.

S. G., male, aged 20, of slight spare build, but of generally good health, was admitted to University College Hospital on November 6th, 1873.

On October 24th, the patient, not having exerted himself in any way (indeed, the only unusual occurrence he could recollect was a large meal of pastry on the preceding day), was seized in the forenoon with sudden pain in the belly, which, about twenty minutes afterwards, was followed by violent vomiting. The pain and vomiting had continued more or less ever since. For the last three days the vomited matter had smelt and tasted like fæces. The patient had frequent desire to pass matter *per anum*, but nothing, not even wind, had escaped since the vomiting began. Before admission to hospital, the patient had had several purgative draughts and turpentine enemata without effect.

On admission, the patient lay on his back, with his thighs extended, and vomited copiously, at short intervals, a liquid resembling the dejections produced by a smart purge, unmistakably fæcal in odour. He answered questions slowly and in a feeble voice; complained little of pain, more of desire to defæcate, but mainly of the nauseous vomiting that continually oppressed him. His countenance was drawn and anxious; his skin cool; pulse 96, soft and very compressible. He had no appetite, but severe thirst; the tongue was small, brownish red, and dry along the middle. The abdomen was flaccid, nowhere tender; and the absence of any considerable tumour in either iliac fossa or across the abdomen at the umbilicus could be easily ascertained; and no tumour or tender spot could be found at the inguinal or femoral apertures, nor by deep pressure near the femoral vessels. The patient denied feeling any pain in the knee. The rectum was empty; no swelling or stricture of the gut projected into the pelvis; and the outlines of the sacro-sciatic ligaments and notches could be easily defined. The finger was clean after examination; there was no blood upon it. The patient was given one grain of opium every four hours, ice to suck, and brandy at short intervals. Hot fomentations with glycerine and extract of belladonna were applied over the abdomen.

November 7th. There was vomiting of stercoraceous matter three times during the night. At about 9.30 A.M. the patient was put under the influence of chloroform, by Mr. Hill's direction, and under Mr. Beck's superintendence, suspended by his legs with his head downwards, while the supporters jumped five times upwards from the ground. When questioned on regaining consciousness the patient complained of pain at the navel. Temperature at 11 A.M., 98.2 degs. Fahr.; pulse 104. There was anxiety and prostration as before; the lips were parched; the tongue dry at the middle. He vomited stercoraceous matter several times in the day.

November 8th. Temperature 97.4 degs. Fahr.; pulse 92, fairly strong. The patient vomited stercoraceous matter once in the night; he slept about four hours. About 4 A.M. he passed a pale semisolid motion, free from mucus or blood, about three ounces in quantity. The abdomen was distended with gas. There was some dulness in the right flank, none in the left, none at the pubes. The pain was less. An enema of gruel and castor-oil brought away fæces of the same sort as those of the natural motion. In the afternoon, obscure tenderness in the region of the left thyroid foramen was detected. There was no pain in the knee. In the evening the patient was more restless; the tympanites and abdominal pain were increasing.

November 9th. He was in the same condition. Temperature 98 degs. Fahr. The abdominal distension was oppressive. He had great thirst. Stercoraceous vomiting occurred once, but less in quantity. At about 8.30 A.M. the patient passed a little flatus *per rectum*, and then a copious stool, darker in colour, more liquid, and with much flatus. The tympanites subsided. In the night he had two more motions of similar character.

November 10. The abdomen was flaccid, hardly tender at all. Th pain was gone; the countenance was not anxious; tongue moist; h demanded food. Temperature 98 degs. F.; pulse 94. He had repeated loose stools during the day.

November 11th. The bowels acted freely.

November 13th. He felt very hungry and sat up in bed. The opium was discontinued to-day.

November 14th. He began to take solid food, and was discharged cured on November 17th.

NOTES ON BOOKS.

On a New Treatment of Cancer by Internal Remedies. By S. DE GROB, M.D. (London: Baillière, Tindall, and Co.)—It is a little surprising that this book should have found a medical publisher willing to put his name on the title-page. It must rather disgust any other authors whose title-pages bear the same *imprimatur*. This pamphlet is of the character that might have been expected from its title. It lauds an internal method of "curing cancer", which the person who writes affirms to be in his possession. The pamphlet includes a list of the publications of the firm. It can hardly be agreeable to medical men of repute to be placed in such company as that of this pamphlet. *Noscitur a sociis* is a maxim of some weight; and we doubt whether a medical publisher is justified in bringing Dr. Letheby, Dr. Prosser James, and Surgeon-General Gordon, into the company of this pamphlet.

THE volume just completed of the *Quarterly Journal of Microscopical Science*, edited by Dr. PAYNE, Mr. LANKESTER, and Mr. THISELTON DYER (vol. xiii, New Series), is a volume of the highest interest, and well worthy of the perusal of all who are interested in the progress of microscopical science and research. The papers of Professor Lister on Bacteria and the Germ-Theory; Pasteur's New Contributions to the Theory of Fermentations; Betz on the Central Nervous System of Man; Balfour's Embryological papers; Cleland's Cell-Theories; Heitzmann's researches on Bone and Cartilage—are a few of many papers of obvious interest to medical readers. The quarterly chronicle is able, but meagre. The volume is splendidly illustrated, and is altogether honourable to its editors and publishers, and creditable to British science.

SELECTIONS FROM JOURNALS.

OBSTETRICS.

INDUCTION OF PREMATURE LABOUR BY BARNES'S DILATOR.—Mr. McMeekin (*Transactions of the Ulster Medical Society*, 1872-73) describes a case of this kind. Mrs. ——, aged 32, had been married eleven years, and she had had seven previous pregnancies, of which the first terminated naturally. During her second pregnancy, she fell down a flight of stone steps, alighting on the sacrum. She was considerably injured by the fall. Gestation, however, went on till full term; but labour had to be terminated by craniotomy. Her third and fourth pregnancies ended in abortion at about the end of three months. Her fifth went on till full term, when craniotomy was again resorted to. Her sixth was a seven months' child; labour in this instance was artificially induced, but the offspring perished in the birth. At the termination of her seventh pregnancy at full term, she came under Mr. McMeekin's care, who, after consultation, performed craniotomy. During his attendance, he examined the pelvis, and found that the promontory of the sacrum protruded across the brim of the pelvis, reducing the antero-posterior diameter. Whether this was the result of the fall, or was an ordinary malformation, was not certain; probably it was the former, as the first labour ended naturally. She again became pregnant; and Mr. McMeekin determined to procure premature labour by Barnes's method. At about the two hundred and fiftieth day (November 1st), at 8 P.M., he inserted an elastic bougie between the membranes and the uterine wall, pushing it up for about six inches, coiling up the lower end; and, the more effectually to keep it *in situ*, he plugged the vagina. Everything remained as left till the next morning. At 11 A.M., slight pains at long intervals set in. At 2 o'clock on the same day, the pains had increased in force and frequency, and the os was slightly dilated. After some difficulty, Mr. McMeekin introduced a No. 2 dilator, and expanded it with tepid water. The os was so high up, that he could barely reach it with the index finger of the left hand; and, when he attempted to introduce the dilator into the uterus on a metallic rod, as directed, the os receded; and it was not until he had introduced the left hand into the vagina, that he effected his object. In an hour, the os was dilated to an extent equal to the diameter of the medium bag, and the latter was expelled by uterine action into the vagina. Having now felt that the presentation was natural, Mr. McMeekin adapted a binder to the abdomen, to keep the head in apposition to the cervix, and prevent the cord from being washed down by the escape of the liquor amnii, ruptured the membranes, and allowed part of the water to escape. He next introduced the largest bag—this time without difficulty. Delivery was completed by the forceps, Dr. Croker being also present. The placenta gave no trouble; the patient was able to leave her bed in a week; and, at the time of the report, the child was strong and healthy. In the discussion on the case, Dr. John Moore said that, in a patient of his own, whom he had twice delivered by craniotomy, the induction of premature labour saved her next child, now a strong healthy boy.

CLINICAL CHARACTERS AND THERAPEUTICS OF HYDATID MOLES.—Dr. Tucker (*Memorabilia*, vol. xviii; *Revue des Sciences Méd.*, vol. i, No. 2) relates six unpublished cases, and collates forty-seven which have been published. These fifty-three cases present certain peculiarities. In nine, there was no indication of age. As to the rest, two cases were aged 20; eighteen cases from 20 to 30, fifteen from 30 to 40, eight from 40 to 50, 1 beyond 50. A table by Bloch gives one case before the age of 20, fifteen from 20 to 30, twenty from 30 to 40, eleven from 40 to 50. In six cases, there was no information as to the existence of prior pregnancies; thirty-two times the hydatid mole occurred before confinement, eight times after one confinement, eight times after two, three times after three, once after five, twice after six, twice after seven, twice after eight, once after nine; three times there had been an abortion; four times an application of the forceps; once detachment of the placenta; once profound anæmia. The existence of an hydatid mole was shown by vomiting, great loss of strength, leucorrhœa, the flow of a semi-purulent liquid of bad odour. Five times there was profound anæmia; seven times œdema of the feet; forty-one times metrorrhagia; once internal metrorrhagia, giving rise to death. Nine times the development of the uterus was in proportion to the period of pregnancy; eight times it was relatively too much advanced; once not enough. Fourteen times the mass was caught in the uterine orifice; in seven cases, a part of the mole was evacuated, four times a little before labour, three times several weeks before. Six times a fœtus coexisted; once double pregnancy; once a placenta; four times multiple pregnancy. The weight of the mole varied from half a pound to six pounds. In twenty-three women, the uterine contractions sufficed to expel the mole; four of these women had taken ergot of rye. In three cases, plugging was employed; in one case, traction; in two cases, catheterism; in one case, prepared sponge; in eighteen cases, manual manœuvres in the uterine cavity. In two cases, transfusion was employed without result. Following the mole, there were observed one case of metroperitonitis; one case of phlebitis; two cases of metritis; one case of ovaritis; one case of dropsy; one of mucous polypus; there were eight cases of death, five by hæmorrhage, one by phlebitis, two by metritis. The diagnosis is only absolute when hydatids are collected. There is a strong presumption when the following general characters are found: 1. General disturbance, as described above; 2. An abnormal relation between the development of the uterus and the term of pregnancy; 3. Absence of movements, of the sounds of the fœtal heart, of *ballottement*, etc.; 4. Metrorrhagia; 6. Presence of a mass in the uterine cervix. The prognosis is not so favourable as certain authors admit. It has been seen how often and how death has supervened, and that it was necessary twenty-three times to have recourse to operative proceedings. Account must be taken also of the accidents which follow hydatid mole—anæmia, hydræmia, uterine catarrh, amenorrhœa, sterility. The treatment must vary according to the conditions. 1. While the diagnosis is doubtful and the uterine losses slight, it will not be necessary to occupy ourselves with maintaining the strength. If the losses be more abundant, repose in bed, elevation of the pelvis, acid drinks, opium in small doses, etc. 2. When the diagnosis is certain, we must aim at freeing the uterus from the mole. Sometimes its issue may be obtained without delay; but most often preliminary proceedings are necessary—ergot of rye, sponge-tents. The continuance of hæmorrhage after extraction of a mole, denotes that part remains in the uterus; this must be removed with fingers or the forceps. Sometimes the hand must be passed into the uterine cavity to extract the mass. In a case of abundant hæmorrhage, ice and plugging are to be employed. If part of the mole remain in the uterine cavity, besides he persistence of hæmorrhage, pyæmia or septicæmia may be developed. In that case, astringent or antiseptic injections are necessary. Consecutive disorders will be treated by the appropriate known means.

TOXICOLOGY.

POISONING BY RED PRECIPITATE.—Mr. Russell (*Irish Hospital Gazette*, October 15, 1873) reports the case of a girl aged 15, who by mistake took half an ounce of red precipitate. She was admitted to the hospital a few minutes afterwards, having no urgent symptoms whatever. An emetic of sulphate of zinc was administered, and abundance of milk was ordered as diet. The following day, her lips, gums, and mouth, were very sore, swollen, and reddened; she had a distinct mercurial fœtor from the breath, with headache and pain in the epigastrium. She was ordered thirty minims of Battley's sedative liquor, an alum gargle for her mouth, and poultices to the epigastrium. She began to improve immediately; her bowels were gently moved by a dose of castor-oil; and she had no further trouble from the effects of the drug, except that in about a week she lost two front teeth, and her mouth remained slightly sore for a few days longer.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AN IMPROVED PLUG FOR EPISTAXIS.

By HENRY COOPER ROSE, M.D.

HAVING lately had a severe case of epistaxis, which was obliged to be restrained by the old-fashioned plug of lint drawn into the posterior nares by means of a string passed through the nostrils, my attention has been directed to the subject. It occurred to me that, if an elastic India-rubber bag could be introduced into the nose, and then either inflated with air or filled with iced water, all hæmorrhage must inevitably be stopped.

I proceeded, therefore, to make an instrument in the following manner. I cut a No. 4 gum-elastic catheter into two equal lengths. At the end of one portion, I made small holes by transfixing it with a needle heated to redness in a spirit-lamp. These holes extended, at intervals of a quarter of an inch, for the length of about two and a half inches. Over this punctured portion I tied firmly in two places, first at the tip, and then again about three and a half inches nearer the handle, a soft India-rubber bag, so as to include between the two tied portions all the perforated part of the catheter. To the open end of this catheter I fixed a short piece of India-rubber tubing furnished with a small stopcock.

Mode of Using.—All the air having been let out of the bag by opening the stopcock and gently compressing the India-rubber, somewhat after the manner of fastening an umbrella, the instrument is passed into the bleeding nostril. When it is coaxed so far that the end projects into the posterior nares, or as far as it can be, the nose of a small ball-syringe is applied to the mouth of the stopcock, and the bag is gently inflated while the air is being propelled into it with the right hand. The short piece of India-rubber tubing attached to the stopcock is compressed with the thumb and finger of the left hand at the right moment to prevent the air from passing out again; and then with the right hand the stopcock is turned. By this means, the inflated bag is made to fill all the inequalities of the nasal cavity, and a painless and perfect plug results. Should it be deemed advisable, iced water may be used instead of air. It may be found in practice necessary to have a thicker tissue for the bag, or even to use two, one over the other, to prevent bursting with the pressure employed, which, however, need not be great. Should it be found necessary to make the instrument stiffer while it is being passed through the nostril, the ordinary wire stilette may be introduced through the open stopcock. Each instrument should be accompanied by several supernumerary bags; and, before using the instrument, it should be dipped into warm water, to increase the elasticity of the India-rubber.

I believe that this contrivance possesses sundry advantages over the ingenious instrument devised by Mr. Godrich; *e. g.*, it is exceedingly inexpensive, quickly made and repaired, very easily introduced because of its small calibre, and the universal pressure over the whole nostril is much less annoying than when exerted over two points only.

I have taken a specimen of the instrument to Messrs. Coxeter, of Grafton Street East, who will have some prepared for inspection and trial. It is well adapted to hospital practice, because the introduction of it for an hour will probably stop hæmorrhage; and the removal is effected very easily by simply turning the tap and letting out the air.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 10TH, 1874.

THE MECHANISM OF COUNTERIRRITATION.

THIS subject has been recently much debated, but it is still so far from being settled, that a summary of opinions and review of the existing status of the question will probably be found interesting and serviceable.

Among the controverted points that from time to time have disturbed the medical world, one of the most warmly discussed has been that of the remote action of counterirritants as employed against inflammations. Whereas we find that in Dr. Risdon Bennett's opinion "we have clinical evidence sufficient to warrant us in believing that a blister on the chest can influence a diseased lung, even if we are totally unable to explain the facts by theory," we find Dr. Dickinson, although admitting that "deep-seated disease may sometimes be influenced by external applications," questioning "whether we have evidence to warrant the belief that, by establishing on the surface a change of an irritative or inflammatory kind, we direct an influence antagonistic to changes of the same sort in organs which lie in a substratum vertically below, though without anatomical connexion." The questions of clinical fact are so complex, that we shall confine ourselves to some general observations as to the possible channels by which a local irritation of the skin may be assumed to be capable of reaching a deeper seated part. It was long supposed that by establishing an inflammation on the surface a similar change was withdrawn from the deeper textures; that the one morbid action took the place of the other. This theory of substitution was really founded on the old doctrine of metastasis. We know how profound are the modifications which this theory has had to undergo, even when applied to gout, cancer, or syphilis. When applied to the mechanism of inflammation proper, it may be regarded as exploded; although we fear that many practitioners still entertain a lingering attachment for it.

While we reject the view that an inflammation can be affected *en bloc*, it will be generally admitted that the possibilities of a vascular, nervous, or functional influence are open to us. Let us then inquire what are the ascertained limits of these modes of action; how far, in the words of Dr. Ross, counterirritants can "deflect the morbid process."

Their depletory action counts a very large number of adherents. Dr. R. Bennett thinks that, by "determining an increased attraction and flow of blood to one part of the body, they thus interfere with its morbid action in some other part." Where we have a continuity of tissue and of capillary communication, this may be readily admitted. For some more deeply seated parts, Mr. Simon and Dr. George Johnson have suggested the existence of an arterial connexion between them and the skin. "Take, for instance," says the latter, "pericarditis. The internal mammary artery supplies the pericardium and the integuments over the heart. By the application of leeches, we abstract blood from the integumentary branches; and in the same proportion we divert blood from the deeper pericardial branches." The warmth of a fomentation relaxes the subcutaneous arteries; "in the same degree blood is diverted from the vessels of the inflamed serous membrane." Referring to the kidneys, he says, "The lumbar arteries arise from the abdominal aorta close by the renal arteries. When leeches or cupping-glasses draw blood through the skin of the back, it is certain that the diminished pressure within the lumbar arteries will divert a certain quantity of blood from the neighbouring renal arteries." That a temporary derivation is thus set up, may be readily granted; but, as a matter of hydrostatics, the general balance must soon be re-established and the loss diffused over the whole circulation. That even this temporary withdrawal may have a marked effect on the arterial tone of the affected organ seems probable, but only if it be employed at an early stage of the inflammation. Often no direct channel of vascular communication can be traced, and the effect must, from the first, fall on the whole circulation. The mechanical effects of general depletion in relieving a distended right heart can scarcely be considered as to the point; the effect even here is strictly a local and direct one. By the conditions of one proposition, the heart is placed between one counterirritant and the inflamed part. The action must be generally diffused, and its local results necessarily quite inappreciable. The converse act of "catching cold" has been imported into this question. The parallel, however, scarcely holds. Rosenthal has shown that blood coursing through the dilated cutaneous vessels may there be rapidly cooled below the normal. Admitting that it may be swiftly transferred to the internal organ, it carries its irritant, the low temperature, along with it. In withdrawing blood, say from an inflamed lung into the systemic vessels, there is no such "irritament" that can be removed; we can only act on hydraulic principles. To overcome these very palpable difficulties, Dr. Ross has suggested that the influence may be transmitted, not only through continuous, but also through merely contiguous parenchyma. He allows that this is not a strictly scientific hypothesis; and he leaves open a supposition that either the nervous, or some other influence, supplements the transmission.

Passing to the nervous influence, we are unfortunately landed in a series of hypotheses, very suggestive, but still requiring further demonstration. As early as 1860, Brown-Séquard laid down the general principle that, in selecting a site for the application of our counterirritant, we should choose the part of the skin or mucous membrane which has the most evident nervous relations with the part to be influenced. "In most cases, the parts acting with the greatest nervous power upon others are those which receive their nerves from the same segment of the cerebro-spinal axis." Dr. Anstie has since shown the value of blisters in neuralgic affections when applied to a collateral branch of the same spinal nerve-trunk. They not only relieve the pain, but the inflammatory affections that are "secondarily produced around the point of greatest pain are remarkably benefited by the application of blisters in such a situation that they can only act in a reflex manner." "It appears that the functional condition of the sensory nerve-centre, which corresponds to pain at the periphery of the sensory nerve, can extend its influence to the associated vaso-motor nerve-centres, and finally issue in paralysis of vaso-motor fibres going to the vessels of the painful part. This state of things, it seems, can be remedied by a stimulant influence falling upon the sensory nerve-centre through the channel of centripetal fibres which have no connexions with the inflamed part except through that centre." According to Simon, parts respectively supplied by different contiguously rising branches of one arterial trunk seem specially able thus to antagonise each other. "It may be a function of the vaso-motor nerves to provide for the adjustment of this antagonism." Whether, as Brown-Séquard seems to suppose, the cutaneous surface can be so mapped out that each tract shall be found to correspond in its nervous relations with some viscus, may be fairly open to question. Whether, for instance, "in cases of diarrhœa, an influence upon the nerves of the bowel originating from nearly the middle of the dorsal region might be obtained by the irritation of the skin of the middle of the chest" has still, we believe, to be settled experimentally. That an intimate nervous relation exists between the skin and the vaso-motor nerves of the intestine has, however, been settled by the recent experiments of Dr. Oswald Naumann. The mesentery of a pithed frog is exposed under the microscope, the vessels of the lower limb having been previously tied and the limb severed, all except the sciatic nerve. If the corresponding foot be now irritated with a faradic point, decided changes in the blood-velocity in the mesenteric arteries will be observed. With a relatively weak stream, the circulation becomes decidedly more rapid; with a relatively strong current, the opposite holds. Sometimes the blood-stream even reverses its direction, as if the heart were for a moment paralysed. A needle introduced into the heart shows decrease in the range of its motions if the electrical shocks are severe, indicating an enfeebling of the heart's contractions, while mild irritations cause the reverse. The conclusions to which Naumann's experiments have led him may be summed up as follows. I. The therapeutic action of epispastics in general is accomplished through reflex paths and by the participation of the central nervous organs. II. These means exert a distinct influence on the heart and vessels in proportion to the irritability of the individual; *a.* Strong irritation *lowering* their activity (weakening the cardiac contractions, dilating the vessels, and retarding the blood-current); *b.* Weak irritation *augmenting* it (strengthening cardiac contractions, contracting the vessels, accelerating the blood-current). III. The part of the skin upon which the irritation is made to act is, for the most part, wholly indifferent. Variations in intensity alone influence therapeutic results. This last axiom goes some way, we suspect, to explain the discrepancies of opinion as to the clinical value of this class of remedies. By increasing the irritation beyond a certain point, we are landed in a totally different kind of action from that with which we started. Dr. Anstie confirms the view that "all experimental evidence goes to show that strong irritation tends to produce, not contraction—or this only momentarily—but paralytic dilatation of the arterioles." He is inclined to divide these actions, according to their intensity, into "stimulant" and "irritant". Dr. Ross also considers that the influences should always be stimulative, and never depressing.

Such being the channels through which counterirritant remedies may primarily act, it remains to state what local effects they are capable of provoking. All seem to act in various degrees in four directions. They increase the cutaneous blood-supply, modify its innervation, excite or depress its physiological functions, and change its structure. The milder forms, such as poultices and fomentations, probably act chiefly by the second and third of these methods; mustard and turpentine add to these a decided and transient congestion; whilst the blister, interfering largely with the vascular and nervous relations, also checks physiological action and deeply alters structure. It would thus appear that in the earlier stages of inflammation the milder methods of skin-excitation appeal most to us, while a blister may be occasionally useful to rouse up the flagging functions of delayed absorption. Where it acts, it will chiefly be by reflex methods. Its hydrostatic value, except for neighbouring parts, is extremely small. On the other hand, we are constantly exposed to the danger that the local inflammatory effects may transgress the limits we proposed, and, by descending, as in pleurisy or peritonitis, to the level of the inflamed membrane, actually aggravate the malady they were intended to relieve. One word more as to the extent of surface to be involved. When we are heightening the physiological action of the skin and producing a local sedative nervous action, it appears reasonable to include an extensive area into the sphere of our remedy. Where, as with the blister, we substitute for skin-function an additional inflammation as the price of our reflex nervous effect, we should use the smallest surface compatible with our object, remembering, especially, that even our reflex blow may be delivered too forcibly, and that we may knock down the heart instead of stimulating absorption.

A SLIP, inserted in the last volume of Ranking's *Half-Yearly Abstract*, signed by Dr. W. Domett Stone, announces that it will cease to appear. It has been, it appears from the notice, superseded in public esteem by the more rapid and digestible weekly records of medicine of these modern days. In their day, these half-yearly and yearly volumes served an useful purpose. There are many who will not see them expire without regret.

A NEW French journal is announced for the 1st January—the *Journal de Thérapeutique*, edited by Dr. Gubler, assisted by Drs. Bordier and Labbé.

THE annual report of the Faculty of Medicine of Montpellier shows that, during the scholastic year 1872-73, it conferred 163 diplomas, of which 81 were to Doctors of Medicine; 2 to *officiers de santé;* 68 to midwives of the first class; 12 to midwives of the second class.

WE are fortunate in having, at the seat of war, a singularly able and well informed correspondent. His letters, of which we publish to-day the latest received, will, we believe, be read with general interest, and will furnish useful historical material.

DR. FERRIER'S Experimental Researches on Cerebral Physiology and Pathology, published in the *West Riding Hospital Reports*, vol. ii, which have attracted much notice in this country, are being published in Fencrh, by Dr. Duret, in *Le Progrès Médical*, with the original engravings.

DR. MEADOWS performed the Cæsarean section on Tuesday morning, at St. Mary's Hospital. The child was born alive, and the mother at first appeared to be doing well, but sank rather rapidly on the following day. We will next week lay further details before our readers.

FEES FOR SURGEONS.

MR. SPENCER WELLS brought forward at the Council of the Royal College of Surgeons, on Thursday evening, a motion on a subject which has already been discussed in our columns—the propriety of establishing a suitable scale of fees for surgeons. It was, however, generally felt to be surrounded by so many difficulties that the motion was withdrawn, and no vote was taken upon it.

PHARMACEUTICAL JURISPRUDENCE.

THE French tribunals are less indulgent towards the "fatal accidents" of pharmaceutists than are those of this country. The *Progrès Médical* reports the case of a druggist who supplied accidentally acetate of baryta in lieu of sulphovinate of soda, the substitution proving fatal to his patient. The Court gave damages to the extent of £800 to the widow and son of the deceased.

THE EMPEROR OF GERMANY.

OUR Berlin correspondent writes:—The Emperor of Germany has now nearly recovered from an attack which has caused his physicians much anxiety. It originated in a severe chill, and the trouble was increased by the supervention of symptoms of suppressed gout. The flying pains were very severe, and the pains in the head were, at one time, most distressing. Since then, the system has been happily relieved, and the attack will now probably quickly pass off. The suppressed gout attacking the trunk, as well as the extremities, is not agreeable either to the patient or his attendants.

TYPHOID FEVER AT CAMBRIDGE.

WE observe that the Cambridge Improvement Board has decided not to recommend the appointment of a medical officer of health at present, as the finances of the Board will not allow it. From the report of the last meeting, we gather that no money can be raised by the urban sanitary authority of Cambridge, namely, the Improvement Board, without the consent of the Town Council and the University. The urban sanitary authority intends to take steps to obtain this consent. We strongly urge upon the Improvement Commissioners the importance of losing no time in this important matter; and especially so as we understand the cause of the outbreak of typhoid fever in Caius College is still undiscovered. During the present vacation, the drains and water-closets connected with the new buildings of Caius College have been carefully examined, and no defect has been detected; the rain-water down-pipes, which were at one time suspected, have all been found to be properly trapped. We are informed that there is no foundation whatever for the statement made by a contemporary that there is a leakage from the town drain near Caius College into the foundations of the new buildings. Although the late epidemic has subsided, it behoves the town authorities of Cambridge to institute a most searching inquiry into the cause of it, as nothing short of the discovery of this, and its removal, will convince parents and guardians that it will be safe in future to allow young men to reside in Cambridge.

THE FELLOWSHIP OF THE COLLEGE OF SURGEONS.

AT a previous meeting of the Council of the Royal College of Surgeons, Professor Humphry proposed, and Mr. Southam seconded, a resolution that the Fellowship examinations should be opened to members of two years' standing. This was not adopted, but a committee was appointed to report upon the whole question. The committee was nominated on Thursday afternoon, and included the President, Mr. Curling, the Vice-President, Mr. Le Gros Clark, and Sir James Paget, Mr. Hilton, Mr. Simon, Dr. Humphry, and Mr. Erichsen. The question is one of no small interest; and we do not doubt that the committee will see fit to materially lessen the restrictive regulations which now obstruct the path of many gentlemen who would otherwise desire to go up for examination for the Fellowship. The present regulations are such as to impede the progress to the Fellowship of many University graduates of high standing. They are especially onerous to provincial men. It would be a gracious and graceful act if the case were considered of many well educated surgeons, whom former restrictions (requiring prolonged residence in London) have prevented in the past from taking the Fellowship. Many of them would be willing and prepared to undergo a severe practical examination, but could not be expected to pass in the school subjects.

DEATH OF A PHYSICIAN IN HIS CARRIAGE.

WE have to record once more the painfully sudden death of a metropolitan physician—Dr. Thompson Dickson, Lecturer on Mental Diseases at Guy's Hospital, and known by various contributions to medical literature bearing upon the diseases of the nervous system. Dr. Dickson was a comparatively young man, little over thirty years of age; but for some years his friends have been aware that he suffered from serious mitral disease. He was, however, apparently in more than usually good health prior to Monday last. He was reading in his carriage, returning from a visit to a patient, when his wife, who was with him, observed that he had bent forward, and remained in that position, as though looking for something on the floor. He returned no answer on being interrogated; and, on being raised, proved to be dead. Dr. Dickson, whose career has been ended with suddenness so impressive and so distressing, was a laborious and anxious worker in the field of psychology. He was a graduate of Cambridge; and his connexion with Guy's Hospital would probably have brought him sooner or later into greater prominence than he held at the time of his death. He was an occasional contributor to our columns, and the author, among other articles, of one which greatly stirred the passions of his brethren; it was entitled "A Social Blot", and has, we believe, frequently been attributed in error to various other pens.

THE BANKS OF THE THAMES.

THE nuisance due to the fumes emanating from cement-works is notorious. The air in the neighbourhood of the kilns is often completely enveloped in dense fumes; and, since these are charged with carbonic and sulphurous acid gases evolved from the carbonate of lime and the coke employed, they are often extremely pungent. Along the banks of the Thames and of the Medway, where both the chalk and the alluvial mud used in the process of manufacture can so easily be obtained, cement-works are gradually becoming very numerous; and in many places it is becoming a serious question, whether the comfort of the inhabitants generally is to be sacrificed to the interests of a special trade. In the last Report of the Inspector appointed under the Alkali Act, it was proposed to have the air examined whenever any increase in the extent or number of manufactories is anywhere proposed; and, if it be ascertained that the air is already injured to a certain extent, to allow no more of the same class of manufactories in the same place. This plan, whilst giving a maximum limit of bad air, would at the same time allow an increase in the number of those factories in which improved methods of dealing with smoke and noxious fumes were employed. Many persons, who are aggrieved by the fumes from cement-works, are anxiously awaiting the result of a cause which is now pending. The litigants are powerful, and the verdict will probably form an important precedent. In July last, the Attorney-General applied, on behalf of the Secretary of State for War, to the Court of Chancery, for an injunction to restrain certain cement-manufacturers from continuing their trade, on the ground of the nuisance which it occasioned to the persons residing in one of the forts which have recently been constructed for the defence of the Thames, situated in the parish of Cliffe, near Rochester. The defendants originally owned two kilns only; but in 1870 they are stated to have increased the number to eleven, thus greatly aggravating what was formerly but a comparatively small evil. The late Vice-Chancellor Sir J. Wickens, after hearing the evidence adduced, made an order directing the motion to stand over until an engineer, whom he would appoint, had inspected and reported on the exact circumstances prevailing at the fort. Recently, the case has again been brought before Vice-Chancellor Sir C. Hall; and it appears that such difficulties have arisen with respect both to the precise nature of the information required and the character of the expert to be employed, that nothing further has as yet been done in the matter, and it has now been determined that the cause is to proceed in the usual way.

NON TALI AUXILIO.

IT will, no doubt, be surprising to our readers to learn that "the history of the medical profession exhibits a distrust, a neglect, even a horror of things new, not exceeded even by the judicial contempt of law reform in the days of Lord Eldon." This is the dictum of a prolix writer in the *Hour*. The modern history of "New Remedies," such as cod-liver oil, chloroform, chloral, guarana, podophyllin, eucalyptus, nitrite of amyl, rather seems to show that they are welcomed with something like rapture, and that, as they were found to answer the description, and to yield some of the results announced by those who introduced them, they have taken very rapidly a permanent place in medicine. That, however, has not, it is stated in this article, been the case with the use of the hypophosphites as the "specific remedy for phthisis," and the actual antidote to its causes. Hence these grave charges, and this long article in a daily paper. Possibly, science may be advanced, and the interests of humanity aided by such articles. We fear the contrary result. If the hypophosphites be of any worth, no articles in daily newspapers can prevent them from being employed; if they be of little worth, they will not help them in professional estimation. The sort of ignorant abuse levelled in this article at members of the medical profession is discreditable and silly, and may be mischievous to ignorant readers of the tirade. How far it may help the worldly success of the physician whom it lauds profusely, is another matter. It may possibly be of some temporary advantage in that respect; in all others, it must by a right-minded physician be considered permanently injurious and degrading. Not by such help does a physician desire to rise who respects himself and his art, and who desires the esteem of his noble profession and its worthy professors. Praise from such a source, so administered, is disgrace indeed; and, by most men, prominence in such an article would be reputed exposure in a pillory. If exaltation of the author of the "specific treatment by hypophosphites," is only to be secured by way of contrast with abusive contempt of Dr. C. J. B. Williams, Dr. Quain, Dr. Cotton, and Dr. Henry Bennet, it can hardly be doubted that the author would have preferred to let his opinions and his writings make their way unaided by such help from the popular press.

BOOKS FOR REVIEW.

THE practice of sending purely medical books to the daily papers, for the purpose of obtaining on them the judgment of lay critics, to be read by a lay audience, is one of very questionable propriety. It is certainly more honoured in the breach than in the observance. We believe medical publishers, as a rule, do avoid it, except when otherwise directed. There are, however, frequent exceptions. A correspondent forwards to us a cutting from a column of literary reviews in the *Globe* newspaper, concluding thus : "We have also received, *Neuralgia and Kindred Diseases of the Nervous System*, by J. Chapman, M.D. (Churchill) ; *Epidemiology, or Remote Cause of Epidemic Disease*, by J. Parkin, M.D. (Churchill) ; *Skin-Diseases*, by J. Hogg (Baillière) ; *Cholera*, by H. Blanc, M.D. (King) ; *Deafness*, by H. Campbell, M.D. (Longman)." This is a matter which is at least as well worthy of the attention of the Colleges as in the excessive advertisement of medical books in the daily papers. Meanwhile, seeing the difficulty which daily papers have in discriminating the real merits of medical books, the scientific worthlessness of their praise of such works when achieved, and the very odd company into which good books must be liable to fall, when so forwarded for review, it might be just as well if all reputable medical authors would henceforth agree not to send their books for review to other than medical journals. This is, we imagine, the general, although not the universal rule. If advertise them they must in the daily papers, it might be as well to establish the rule of doing so only in the regular way, in the lists of the medical publishers, so as to avoid the bad company of the quacks' corner. It is worthy of note that in no other country do reputable medical men, so far as we know, advertise their books in the political papers. In France, for example, that is a mode of notoriety abandoned to the quacks ; and it might be as well that it should be so here, if only to note a difference which is not otherwise always so easily discernible as it ought to be.

ST. ANDREW'S MEDICAL GRADUATES' ASSOCIATION.

THE Annual Meeting and Sixth Anniversary of this Society was held at Willis's Rooms, on Tuesday, December 30th, at 5.30 P.M., and was numerously attended. The President, Dr. Lockhart Robertson, being unavoidably absent, his place was filled by Dr. B. Ward Richardson, who delivered an able and eloquent address on the history and achievements of the Society, dwelling especially on the facts that it had gained for the graduates a voice in the government of their University, and a parliamentary vote as well ; that it had taken a part in all the most important medical, and many of the social questions of the past seven years, and had in its past and forthcoming volume of *Transactions* raised a not unworthy monument to itself. After the usual formal business, the Honorary Secretary read the Report, which will appear *in extenso* in the *Transactions*. Amongst other matters, it was announced that the "Day Fund," for the widow of the late Professor G. E. Day, has nearly reached the sum of £1,000. A great portion of the Report was occupied with the steps taken in reference to the M.D. degree, and the interviews on that subject with the Lord President of the Privy Council. It then went on to state that the General Council of the University, held in the Hall of the United College, at St. Andrews, on March 27th last, had resolved that a Committee of the General Council be formed in London to watch over the interests of the University, in the event of any action, either in Parliament or otherwise. As this Committee, when completed, must of necessity be composed in large part of the same elements as the St. Andrew's Medical Graduates' Association, and being an integral part of the University, will speak and act with greater authority than a voluntary association having no such official status. As, moreover, there were so many other medical societies now in existence, and the greater part of the objects for which the association was instituted had been already achieved, the Council recommended the temporary dissolution of the Society in the following terms. "Seeing that the chief objects for which the St. Andrew's Medical Graduates' Association was founded have been accomplished, and that the University of St. Andrew's has appointed a London Committee of its General Council for the furtherance of the interests of the University, this Council is of opinion that the separate existence of the St. Andrew's Medical Graduates' Association is no longer necessary." The Council also proposed special votes of thanks to Dr. B. W. Richardson, for his valuable and disinterested services as assessor of the General Council of the University, and to Dr. Sedgwick, as editor of the *Transactions*, and for his many years' services as Honorary Secretary. Dr. Richardson proposed, and Drs. Cholmeley and M'Intyre (of Odiham) seconded, the adoption of the report. It was accordingly received and unanimously adopted. Dr. Sedgwick proposed, and Dr. Christie seconded, the following resolution :—"That the St. Andrew's Medical Graduates' Association be hereby dissolved ; that the books and documents of the Association, deposited in the deed-box, be given over to the charge of Dr. Richardson, and that he be empowered by this meeting to re-organise the Association, if the necessity for such re-organisation should hereafter arise." This was carried unanimously. Dr. Moon (of Brighton) proposed, and Dr. Wynn Williams seconded, "That the President (Dr. Lockhart Robertson), Drs. Richardson, Ballard, Paul, Cholmeley, Sedgwick, Christie, Cleveland, Seaton, Wynn Williams, and the Honorary Secretary (Dr. Bathurst Woodman), form a committee to wind up the affairs of the Association." This was carried unanimously. Sir Edward Belcher proposed, and Dr. Davey (of Bristol) seconded votes of thanks to the Chairman, and to the Members of Council and other officers of the Association—also carried unanimously and by acclamation. The Dinner, which followed, was a great success. About fifty members sat down to dinner, under the presidency of Dr. Lockhart Robertson. Sir Lyon Playfair, M.P., Dr. Lush, M.P. ; T. B. Curling, Esq. (President of the Royal College of Surgeons) ; Sir Edward Belcher ; Dr. George Johnson, Dr. G. Harley, and other distinguished guests took part in the proceedings. The intervals of the speeches were agreeably filled by vocal and instrumental music.

KOUMISS.

DR. JAGIELSKI writes to us as follows.—Since the article on "Koumiss," reprinted in the last number of this JOURNAL from the *Irish Hospital Gazette*, has appeared, I have been often asked whether my experience with regard to koumiss agrees with that of the continental physicians related in the aforesaid article, and I have great pleasure in stating that it does coincide entirely. When I first introduced koumiss into this country, four years ago, I had previously found it of the greatest service in treating private patients, having at first been enabled to bring some of my relations through the most dangerous stages of sickness—when they were enfeebled by excessive secretion and excretion—by means of its nourishing and healing properties. It is in such cases, when the failure in digestive and assimilative power seems to threaten existence, that the koumiss treatment has the most beneficial effect, or, as Dr. Schwaighofer of Vienna states, "has created most sensation." Whoever tried koumiss, whether prepared from cow's milk, mare's milk, ass's milk, goat's milk, or any other milk, in cases of gastro-intestinal catarrh, in excessive or copious expectoration, night-sweats, etc., must confess that there is no remedy contained in the materia medica of any country which, while it promotes appetite and nutrition so rapidly, can compare with koumiss in affording sufficient nourishment so easily assimilable in a fluid form. Alone, without the aid of any other aliment, it will improve the patient's appetite and strength until he is able to digest solids. But I will leave these details for a special article in your JOURNAL, when I hope to satisfy the interest created by the former article from Vienna regarding a medicine which Dr. Schwaighofer calls "new," because it has only recently been brought to the notice of clinical German authorities. There can be no doubt that koumiss will one day occupy a position in every materia medica, compared with which that of cod-liver oil, stout, beef-extract, revalenta, etc., will be quite secondary, because none of them shares its prominent digestive properties, though they may still be used and reserved especially for poor practice. Koumiss is not, however, a specific against phthisis, as its great "Steppe" reputation may have implied, although it occupies the first place in possible successful treatment, and consequently is of the greatest service in most cases of hereditary tendency and acquired predisposition. In respect of the article specially, I must beg to correct Dr. Schwaighofer in some small particulars. He states that Dr.

Stahlberg has, last year, been the first to introduce koumiss into general practice, whereas I have continued to recommend it during the last four years, and it has been obtainable from the manufacturers, Messrs. Chapman and Co., in London. The same has been done by Drs. Przystanski and Nowakowski in Warsaw, and by others in Odessa, Cracow, Ottenstein, in Saxony, etc. Again, I must insist that the fermentation continues in the koumiss as long as there is any lactose undecomposed, which, in summer, may only be a few weeks; in winter, several months. Further, mare's or goat's koumiss has a rather peculiar unpleasant smell, which cow's koumiss has not, and the former are, besides, difficult to procure. A fresh or new koumiss is required only for particular cases with constipation, whereas, for a normal state of bowels, koumiss may be administered even when one or two weeks old, according to the temperature at which it has been kept; and there is no such necessary proportion of caseine to sugar as one-fourth—the cow's milk, which is richest in caseine, being thoroughly fermented, so as to be penetrated throughout by carbonic acid to the extent of presenting a foam, which will keep its plasticity for hours. Cow's koumiss is easily modified into different degrees of plasticity or density, so as chemically to replace the koumiss from any other milk; and, if lumps are noticed in cow's koumiss, these can be easily shaken into a homogenous milky fluid with its serous or fluid layers; whereas the mare's koumiss, with its "smaller flakes," has a less proportion of caseine and, consequently, of nutritive properties. It is a mistake to say that cow's koumiss is not easily digested, which can only be the case if it is not properly fermented. Without doubt, the cow's koumiss, if well prepared (a somewhat difficult process, requiring skill and practical experience), will certainly be the means of saving many lives, as it has done for the last four years here and abroad, when they would otherwise have been lost or, at any rate, shortened.

VACCINATION.

It is, says the *Pall Mall Gazette*, probably useless to address either arguments or facts to any antivaccination fanatic, otherwise we might be inclined to ask some of them to explain the remarkable experience of one of the metropolitan asylum district hospitals for small-pox. During the recent epidemic, the medical officer of the institution in question prepared the following table from the facts under his own observation. There is no doubt of the validity of the record, for the table will be found in the last annual report of the Local Government Board.

A Table of the Deaths and the Recoveries per 1,000 *cases of Small-pox.*

	Cases under 15.			Cases above 15.		
Degree of Vaccination.	Total.	Recov.	Died.	Total.	Recov.	Died.
Unvaccinated	208	131	77	122	76	46
One or more bad marks	45	42	3	104	89	15
One or more indifferent marks.	12	12	0	75	66	9
One good vaccination mark	61	61	0	101	93	8
Two good vaccination marks.	29	29	0	104	99	5
Three good vaccination marks.	35	35	0	39	39	0
Four good vaccination marks.	17	17	0	32	32	0
Five good vaccination marks	2	2	0	1	1	0
Six good vaccination marks	2	2	0	11	11	0
	411	331	80	589	506	83

Among the unvaccinated children—namely, those patients under fifteen years of age—no fewer than 37.0 per cent. died; of those who had one or more bad vaccination marks, only 6.5 per cent. died. Among the better vaccinated cases—and they amounted to 158—there were no deaths. With the adults—*i.e.*, those over fifteen—the fatality was greater. The mortality of the unvaccinated was nearly one-half of the number of cases, being 47.7 per cent.; with one or more bad marks, 14.4 per cent. died; with one or more indifferent marks, 12.0 per cent. died; with one good vaccination mark, 7.9 died; and with two good marks, 4.8 per cent. died. Among the adult patients having three or more good marks, there were no deaths from small-pox.

SCOTLAND.

MEDICAL AFFAIRS IN EDINBURGH.

An Edinburgh correspondent writes:—Medical matters are on the whole quiet in the northern metropolis. We have, of course, the chronic source of irritation, lady students; but even this is not likely to disturb the prevailing serenity, as parties have come to a mutual understanding not to make any effort to change their relative proportions on the infirmary board at the next election of managers. The question of the admission of women to the operating theatre will, I believe, come under discussion, but with little hope of permission being granted for any such indecorous proceeding. Should it ever be allowed, it is more than probable that the male students would take matters into their own hands, and that disturbances would arise in the O. P. manner. It would be so much better if the ladies and their surgical teachers could arrange for operations at a more convenient season, say 4 P.M., when a sort of scientific kettledrum could be held, to which invitations could be issued in this wise: "At 4 P.M., at the Royal Infirmary, tea, and excision of the spleen, amputations, etc."—Great inconvenience is being experienced from the crowding of the anatomical department in the University.—It is to be hoped that steps will soon be taken for erecting suitable buildings in the neighbourhood of the new infirmary, not only for the teaching of anatomy, but also of physiology, chemistry, and pathology, ; and it is to be further hoped that Government will assist with no niggard hand. The new infirmary, by-the-bye, is far advanced, most of it being roofed in. Considerable modifications of the original plans have been found necessary, none of which will tend towards greater efficiency. This institution has just received a timeous windfall in the shape of a legacy of £40,000.—It is stated that Professor Bennett's health is much improved. His absence from the University is less felt, in consequence of the able manner in which Dr. Mc Kendrick fulfils the duties. His class-room is crowded with eager students attracted by the brilliant experimental demonstrations by which he illustrates his course. The physiological laboratory is now open to workers and original investigators free of charge, and much good work is being done. In the extra-academical school, Dr. Pettigrew is teaching Physiology; and Dr. Grainger Stewart Practice of Physic, with great acceptance. It may be said that there is greater *verve* and *élan* shown amongst the teachers than have prevailed for some time past. The teaching of clinical surgery and medicine has never been better than it now is; the utmost care and plenty of time being devoted to this most important duty by every member of the infirmary staff.—We are to lose Dr. T. R. Fraser, who has been appointed analyst for Mid Cheshire. The absence of this most distinguished pharmacologist from the school will be a very great loss indeed, as no man, in whatever department, holds a higher reputation amongst men of science than does Dr. Fraser.

THE GLASGOW WESTERN INFIRMARY.

Our Glasgow correspondent writes:—The dispensary or out-door department of this institution was opened on Jan. 2nd. The work of the medical department is carried on by Dr. G. P. Tennent, and that of the surgical by Dr. William Macewen. We understand that the dispensary promises to be a very favourite one with the public, as during the first few days the numbers seeking advice have been very large. The out-door department has been opened before the internal fittings of the hospital are finished, but these are in a considerable state of forwardness, and it is expected that the wards will be opened in the autumn of the present year. It is much to be hoped that no delay will take place, as there seems little doubt that the medical school of Glasgow University is suffering on account of the great distance of the old infirmary from the University buildings. There seems, however, to be no reason to fear any further delay. One question remains to be decided, and it may occasion considerable difficulty; and that is, as to the management. It may be remembered that an attempt was made to place the manag ment of the Western Infirmary and the Royal Infirmary under the same Board. This attempt did not succeed, but it is not at all unlikely that the project will be renewed. Considerable difference of opinion exists as to the advisability of such a scheme. Its chief advantages would be that any appearance of competition for subscriptions would thereby be avoided. It does not seem likely that in Glasgow any serious difficulty will be encountered in meeting the expenses of both hospitals. It may be specially noted in passing that the excellent scheme of a "Hospital Sunday" has never been started in Glasgow; the subscriptions from churches are very much less than might be looked for, were some energetic citizen to set about a scheme of this kind.

GLASGOW ROYAL INFIRMARY: ANNUAL MEETINGS.

DURING last week, the usual annual meetings connected with the infirmary were held. A meeting of the nurses, of whom eighty were present, was held in the hospital on the 1st instant, at which many ladies and gentlemen were present. The annual meeting of subscribers was held on the 5th instant, and a satisfactory condition, both of the financial and medical departments, was reported. Some reference was made to the proposed amalgamation of the management of the two hospitals referred to above; but, so far as one could judge, it did not seem to meet with much favour. The small amount of the contributions from churches was also adverted to, as was also the continuous increase in the subscriptions from the working-classes.

GLASGOW INFIRMARY.

THE reports adopted at the annual meeting of the Contributors to the Glasgow Royal Infirmary, held this week, state that the number of patients treated in the institution during the past year was 5,831, and of out-door patients 14,311; and that there was an ordinary revenue of £20,693 : 15 : 8, leaving a balance of £1,518 : 8 : 10, in addition to £3,694, surplus of extraordinary revenue, to be added to capital.

EDINBURGH INFIRMARY.

THE annual meeting of the Court of Contributors to the Royal Infirmary of Edinburgh was held this week, the Lord-Provost in the chair. The report of the managers for the past year was read. There had been 4,693 patients in the hospital during the year, of whom 2,397 were dismissed cured, 1,085 were relieved, 304 were incapable of further benefit, and 444 died. In the preceding year, the total number of patients treated was 4,798. The income amounted to £18,460 : 7 : 5½, and the expenditure to £21,030 : 17 : 3. Legacies and donations above £100 had been received amounting to £21,332 : 4 : 0, and after paying an excess of expenditure over income on convalescent house of £468 : 2 : 8, there was a surplus on the year of £17,804 : 0 : 11. Since the 1st October, the beginning of the current financial year, legacies amounting to £69,517 : 15 : 3 had been intimated. The arrangement whereby "females already enrolled in the Students' Register for Scotland" should receive clinical instruction, at the hands of Dr. George Balfour, "on three days of the week, in the Medical House," and from "Dr. Watson on one day, viz., Sunday, in the Surgical House," but at "a separate hour from that at which male students are admitted into the hospital," "is to continue for the next year". The report was remitted to a large committee to examine and report at an adjourned meeting to be held on Monday, the 19th instant. Professor Masson, Messrs. Charles Jenner, J. T. Boyd, Edward Blyth, J. Carment, S.S.C., and George Harrison were elected representatives of the Court of Contributors at the Board of Managers.

ADULTERATION OF MILK.

AT the Edinburgh Police Court, before Sheriff Hallard, several persons were prosecuted on charges of having adulterated milk. In the first case, that of a dairyman named Waldie, residing in Pleasance, the charge was that of having adulterated sweet with skimmed milk. On the part of the defence, the admixture itself was denied, and it was further contended that such an act would not be adulteration. The city analyst declared that the milk which had been submitted to him contained one-third of skimmed with two-thirds of sweet milk. Skimmed milk he defined as milk which had been deprived of its fat; and Dr. Littlejohn gave it as his opinion that a mixture such as had been described might be prejudicial to the consumer's health. The Sheriff ruled that the mixing of sweet with skimmed milk amounted to adulteration, and imposed a modified penalty of £10. Several other dairymen were charged with adulteration of the same kind, or with water, but the hearing of their cases was adjourned till Thursday.

IRELAND.

KING AND QUEEN'S COLLEGE OF PHYSICIANS: FEMALE LICENTIATES IN MIDWIFERY.

THIS College has determined to admit females for its licence to practise midwifery. As this is a registrable qualification, it will be tantamount to registering female midwifery practitioners. This affords a partial solution of the question of examining midwives in Ireland.

CLOSING PUBLIC-HOUSES ON SUNDAY.

WE are informed that Sir D. Corrigan, Bart., intends to reintroduce his Bill during the next session of Parliament, and that an Association has been formed to support the movement. A guarantee-fund is being raised, and among its subscribers are many well known members of the profession in Dublin.

COOMBE LYING-IN HOSPITAL, DUBLIN.

WE are sorry to find that an untoward accident is likely to retard the works for the rebuilding of this valuable institution. The contractor for the building has died, and for some reason his business cannot be continued for the present; and the works have come almost to a standstill, although up to the present they have been progressing favourably. This hospital has been singularly unfortunate in its extensions and improvements. Some years since, a new building, when partly up, fell from want of proper foundation. This accident must have been somebody's fault; and we are quite sure it was not the fault of the governors of the hospital, who, we regret to say, had to pay pretty well for the stupidity of some person. We are afraid the present delay will also put the charity to expense, and in the meantime entail no small inconvenience upon the sick poor.

THE ELECTION IN THE ROYAL COLLEGE OF SURGEONS OF IRELAND.

DR. MAPOTHER writes to us:—One of your Dublin correspondents, in writing of the contest for the Vice Presidency, says: "We regret to hear it reported that something of the nature of a politico-religious battle is likely to take place." Allow me, on my part, to disclaim any such consideration; and I feel sure I may say the same for my friend Dr. E. Hamilton, the other candidate. No one would introduce such a topic, except for the purpose of prejudicing my interests. One more point: that gentleman is called my senior. This is true as regards the College lists—not so as regards the roll of the Council.—Our correspondent writes on the same subject: "We regret to hear that our remarks upon the above subject have caused offence to some of the Fellows of the Royal College of Surgeons in Ireland. We should be sorry indeed to offend any member of such a high-minded and illustrious body; but our remarks were made in perfect good faith, upon very substantial information. We believed that we were doing the College of Surgeons a service in pointing out honestly what we had heard and believed to be true; and we have reason to know that our remarks have already done good, and that nothing of the sort is likely to occur again. What we wished to do was, to nip in the bud an indiscretion which might have grown into a practice, which, if it had so grown, we know must have met with the condemnation of all the Fellows of the College. It would be contrary to the etiquette of the Irish College of Surgeons for candidates for Council to canvass for votes. The candidates formerly communicated their names and intention of standing at the next election by sending an ordinary visiting card, with 'Mr. ——, candidate for Council, R.C.S.I.', written across it, to each Fellow, and there the canvass (if it could be called so) ended. We always admired this high and honourable system, and are sorry that it was injudiciously broken through some years ago by the sending round of a sort of printed circular by one, and, we believe, only one, candidate. We know that that document injured instead of benefited its author, and absolutely influenced some Fellows to go to the College to vote against the gentleman who circulated the letter. We again apologise if we have offended, and hope the temple of Irish surgery may long flourish, free from discord and jealousies even at contested elections."

HEALTH OF IRELAND.

DURING the quarter ended September 30th last, there were registered 33,571 births, being equal to an annual birth-rate of 25.2 in every 1,000 of the population; and 19,271 deaths, representing an annual mortality of 14.4 per 1,000. The reports from the various registrars throughout the country show that the public health was good, no epidemic having prevailed to any great extent. The total number of deaths from zymotic or epidemic diseases amounted to 2,425, or 12.6 per cent. of the total deaths; of these, small-pox caused 30 deaths; measles proved fatal in 214 cases; scarlatina, 408; diphtheria, 71; whooping-cough, 433; fever, 512; diarrhœa, 615; and simple cholera, 42.

DUNDRUM CRIMINAL LUNATIC ASYLUM.

THE office of visiting physician to this institution has become vacant by the resignation of Dr. Law. It is generally believed that the Government will attempt to abolish the appointment, but such a move must be undoubtedly unpopular with the profession, and tend to shake the confidence of the public in the management of the institution; as an amount of independence is enjoyed in the exercise of his duties by a visiting physician, which cannot belong to a resident officer. The present Administration should not forget the storm of indignation raised by the abolition of a similar office in Mountjoy convict prison by their predecessors in office.

ROYAL COLLEGE OF SURGEONS.

IN consequence of the uncertainty that has prevailed relative to the regulations for the license of this College, we have thought it advisable to publish them, especially as they have lately been somewhat modified by the Council. Any student who commenced his professional studies on or after October 1872, shall pass the sessional examinations, which shall be three in number, and shall be held three times a year. *Subjects for the First Examination.*—Anatomy: Bones, muscles, articulations, and the topographical anatomy of the viscera of the chest and abdomen. Physiology: Of bone, muscle, and the fibrous tissues. Surgery: Fractures and dislocations. Chemistry: Inorganic. Materia Medica: The *Pharmacopœia*. *Second Examination.*—Anatomy: Descriptive and surgical; physiology and histology; surgery; medicine. *Third or Pass Examination.*—Clinical Examination: Operations on the dead subject; surgical appliances; therapeutics, including prescription writing; medical jurisprudence. The fees for these examinations amount to £26 5s.

HOSPITAL SUNDAY IN DUBLIN.

OUR Dublin correspondent writes: We regret to hear that Cardinal Cullen, while not disapproving of Hospital Sunday, refuses to take any active part in the promotion of the movement. We think the Cardinal is wrong, and we regret his determination; but we believe that he will change his opinion. Could not Archbishop Manning, or even some less dignitary of the English Roman Catholic Church, or the bishop of the diocese—Down, in which Belfast is situated—point out to his eminence the advantage of an united movement in a Christian charity? We believe the Cardinal thinks that the two hospitals (Mater Misericordiæ and St. Vincent's), in which he has a particular interest, are likely to suffer by the movement. We are afraid that, if the Cardinal do not alter his mind, he will lead many to believe that he thinks the charity of his own flock should be dispensed by himself and no one else. We know that here, if the Cardinal's hospitals were excluded from participation in the collection on Hospital Sunday, which we are much afraid they must be if he continue his opposition, the greatest number who will benefit by the institution are his coreligioinists. We believe that those Roman Catholics who have supported the movement will send in their contributions to the committee, although they may be precluded from contributing in their churches. We have heard a report —we trust it is untrue—that the Protestant Archdeacon of Dublin is also likely to offer opposition to the movement. In the present temper of Irish Protestant Episcopalism, we do not think this is likely to make much difference, as, in this matter, laymen are likely to have their own way.

LUMBAR COLOTOMY.

DR. GEORGE H. KIDD, obstetric surgeon to the Coombe Lying-in Hospital, Dublin, has lately published the details of a case on which he operated some months since. The patient was a woman, aged 44, in broken down health, who was suffering from obstinate constipation, caused by cancerous disease of the rectum, which was complicated with medullary carcinoma of the uterus, involving the cervix and posterior part of the body of that organ. The operation was a success, so far as the obstruction of the bowels was cóncerned, but the patient succumbed two months afterwards to the exhaustion caused by the ulceration of the cancerous parts.

A SAD CASE.

THE writer of the subjoined appeal is a registered Licentiate of the Society of Apothecaries, aged 73, and has fulfilled sixteen years of continuous service in the appointment from which he is now ejected. His wife is in a bad state of health. In enclosing the subjoined, Mr. Jackman writes, "I have no friends to fall back on, and my wife's sore necessity for the comforts, of which she is all at once deprived, makes my lot the harder. Will you kindly lay my case before your readers? I trust I may find a few friends in this appeal who will assist according to the means with which Providence has blest them." Any contributions, however small, will be thankfully received by the Editor of this JOURNAL, at the Office, 37, Great Queen Street, or by the Vicar of Swymbridge, Barnstaple, Devon.

Sir,—After nearly sixteen years' service as Medical Officer of the second district of the Barnstaple Union, I was surprised to receive the following letter from the Clerk to the Guardians.

[Copy]

Barnstaple, September 27th, 1873.

Dear Sir,—I am directed by the Guardians of the Barnstaple Union to inform you, that inasmuch as you are not qualified as prescribed by the rules and regulations of the Local Government Board, the Guardians will not consent to your acting as Medical Officer of the second District, beyond the 29th of September. I must remind you that your appointment is an annual one. Yours truly,

W. H. TOLLER, Clerk.

To Mr. Jackman, Swymbridge, North Devon.

I appeal to you, under the circumstances, respectfully to lay my case before my brother practitioners and others, as, by the harsh and uncharitable manner in which I have been treated, I am thrown entirely on the world, without the least means of future support. I have been a medical practitioner for the last thirty-six years; but only holding a country appointment, affords me no opportunity of laying by any thing. The salary I have been receiving for so many years has been so small, that I am now, at the age of seventy-three, with a delicate wife in a weak state of health, left as it were in *formâ pauperis*. I have received a few private anonymous contributions from friends staying on a visit with medical gentlemen and others—one friend from a large banking house, etc.; and I trust they will be blessed by a kind and benevolent Providence for their remittances.

I am, etc., J. H. JACKMAN.

THE ASHANTEE WAR.

[FROM OUR OWN CORRESPONDENT.

Gold Coast, December 9th, 1873.

In my last letter I endeavoured to give your readers an idea of the habits, customs, and peculiarities of the people we have come to fight. These have been often described years since by Bowditch, Hatton, Dupuis, and others. Those authors, however, only saw them during peace; I have pictured them in one of their nineteenth century wars. Your readers can judge that this enemy of ours is not to be despised, and that in all human probability they may be troublesome yet. United in one nation, they are strong—far stronger than the disunited rabble which, under the head of the "Fantee Confederation," are our allies. These last we have armed, attempted to drill, officered with Europeans; yet they are unable to cope with their former masters. At this moment we have in our pay many tribes—Denkoras, Wassaws, Anamaboos, Accras, Akims, Assins, Cape Coast Companies, etc. In their bearing and *morale* they differ little the one from the other. Irregular troops or rather allies, they have not as yet learned that sense of discipline and staying power, without which soldiers are worthless. It is these last attributes which make the men of the West India regiments so much their superiors. However much the value of these last corps may be questioned as fighting men, they are far superior to our allies. In one respect they are their inferiors—viz., in their power of enduring exposure in the field without danger to health. This is a condition of affairs entirely artificial. From his earliest youth, the Gold Coast native is accustomed to move about as nearly as possible in a state of nature; in the process of hardening which follows, many, of course, pay the debt of nature before they have arrived at the years of maturity; yet the vast majority survive, roam about in the sun during the day, sleep packed together round the fires of their native villages at night, exposed, frequently without a particle of clothing, to the dews of heaven. Yet they live, and are capable of prolonged exertion, upon an almost entirely vegetable diet. On the other hand, the West Indian is an alien in Africa; looks forward to a return to his country, as he calls the West Indies, with pleasure; and regards "African niggers", as he terms them, with more or less contempt; but, probably from early excesses and the after military existence, becomes more susceptible of disease, especially constitutional affections and those due to vicissitudes of temperature. Upon arrival in Africa, he suffers much from fever, and, on this portion of the coast, dysentery and diarrhœa. These affections are, however, when not allowed to become chronic, of short duration. Appropriately treated, agues and mild remittents yield in a few days to diaphoretics followed by the exhibition of quinine in solution. Milk diet and large doses of ipecacuanha usually suffice to arrest the onward progress of the other more formidable disease—the griping pain, frequent desire to go to stool, and characteristic alvine discharges, rapidly yielding to the administration of this most valuable medicine. Men of West India regiments are also peculiarly liable to attacks of rheumatism, phthisis, and pneumonia. Since the commencement of hostilities, ague, rheumatism, dysentery, diarrhœa, and bronchitis have been the most prevalent; the first largely outnumbering the others. The percentage of sick to strength at head-quarters appears to have varied from one-and-a-half to seventeen—the average about five. There has been, I am informed, a remarkable exemption from smallpox, only one case of variola having been treated since the arrival of the head-quarters in July last; this is the more observable, as it had committed extensive ravages among the civil population; the disease has also been very prevalent among the Ashantees, ocular demonstration of late proving this. The exemption of the men of the 2nd West India Regiment is no doubt due to the careful manner in which vaccination has been carried out by military medical officers. As yet there have been no admissions for Guinea-worm; it is, however, to be expected that this disease will afterwards prevail, as the men have had to wade through many swamps and muddy pools during their several marches in pursuit of the enemy.

However showy and agreeable to the eye the dress of West India regiments is, it is not suited for the vicissitudes of actual war in a tropical climate. Picturesque it must be acknowledged it is, but far too cumbersome and heavy. In our military costumes we must consult that which appeals to the eye to some extent, but this has only too frequently been done at the expense of efficiency. The Houssa uniform is far more serviceable—a scarlet fez and tassel, loose blue tunic, red sash for the waist, and short Zouave trousers reaching to the knee; in full costume the embroidered waistcoat is only worn (blue serge with scarlet piping and braid). This is their national costume to some extent, for an attempt to substitute a white tunic was recently the cause of some outcry. The accoutrements of this corps are made of black leather. Shoes and stockings have been discarded as encumbrances; very properly so, as a march in Africa means nothing more than the wading in a succession of pools, rivulets, and quagmires.

It is a matter of surprise that any one could have selected such an absurd uniform as that of the irregular regiments—a white canvas shirt and black belts, the composition from which, in a very short space of time, renders the garment anything but pleasing to look upon. These corps, among whom are incorporated the Kossos or Menely men from Sierra Leone, are armed partly with Sniders and swords; they wear across the left shoulder a black leather bag—a receptacle for articles too numerous to mention. Flannel underclothing and light serge are the garments for Africa. Soldiers and civilians should both adhere to what has been proved by experience to be the best protection against the variableness of this damp and noxious climate. Our native allies are not very particular in their articles of clothing. With them nature may be said to revel in her loveliness. All of them wear a piece of scarlet velvet round the neck as a distinguishing mark.

The West Indian soldiers are essentially grumblers, perhaps well-meaning ones; to listen to their grumbling on the march is often amusing. Proverbial for loquacity, nothing will solace them except a shot, showing the near presence of the enemy; then all are silent in an instant. Perhaps it is one of the peculiar attributes of the soldier, that he is so provided with everything; he consequently considers it *infra dig.* or beyond his province to do anything for himself. Certain it is, that in hutting themselves and performing other camp duties they are listless and slow, far slower in getting under cover than our native allies. Always ready for a brush with the enemy, they in this respect are superior to our allies, whose slowness in getting under arms is proverbial. The fact is, the kings have, to a large extent, lost all power over their men. Carrying still the stool, basket, and golden-hilted sword, which denote their rank, they have very little real power. From a reply of the King of Denhara, it is evident that civilisation has had something to do with this. When asked recently why he would not make his men perform at once some duty, he replied—"Before you English came, when one of my men disobeyed my orders, *I cut off his his head*. Now you say we must not cut off men's heads; so now I am almost powerless." This *naïve* answer was certainly to the point. This old king, who, by the way, rejoices in two breasts almost as large as a woman's (a development of the mammæ not uncommon), is one of our greatest bugbears. Most difficult to move and most plausible in argument, very fond of his white rum, he possesses two wives (his hewers of wood and drawers of water). Our fair relatives at home scarcely appreciate the position they hold towards their lords and masters. Admired, petted, and dressed to perfection, they reign supreme; in Africa, on the contrary, the position of females is reversed. Menial work is their constant occupation, their lazy lords basking in the sun, smoking their pipes or enjoying their grog, while their laughing helpmates seem happy and contented while preparing food, washing clothes, or looking after their numerous progeny. Highly prolific and married early, they soon lose those charms which appeal to the susceptibilities of the sterner sex. A wife not unfrequently becomes a mother at eleven, an old woman at five-and-twenty, with hanging breasts and repelling aspect. To an European who first visits the country, this peculiarity is anything but pleasing. In their early youth they are far more prepossessing. Numbers of them are now employed by the Control Department in carrying rifles, ammunition, biscuit, and medical comforts to the front; and so great is the want of transport, that children of almost tender age carry the loads apportioned to their physical capabilities. Always cheery, these girls and women trot along well content. Most of these women are domestic slaves, hired out by their owners. You know domestic slavery is still a recognised constitution on the Gold Coast. It is, however, mere slavery in name, for those to whom the term applies appear to pass a happy existence, living with their owners as part and parcel of the family. The former feed and clothe them; and, when a young lady earns any money, it comes back to her in the form of a bright cotton garment or some article of jewelry. When arrived at the period of puberty, if of the better class of people, the girl, decorated with her mistress's gold ornaments, worth sometimes some hundreds, and attended by a slave, parades the town of Cape Coast, her breasts exposed, and a cotton garment and bustle shading the rest of her plump and not ungraceful figure. On these occasions, the hair is frizzled out and decorated with one or more combs profusely ornamented with virgin gold. The lady is now marriageable, and any venturesome swain who is prepared to pay some ounces of gold, a few cases of rum, and a trunk of cottons printed in gaudy colours, can take her unto wife, deprived of her jewelry, which returns to her former mistress. The dark dame is now brought to her future husband's house by a few select sable female friends, and, after the usual hospitalities, handed over to her lord and master, who may return her to her relatives and receive back his presents if he find her not as virtuous as she might have been. Such is the native marriage on the Gold Coast. Ladies with easy virtue are numerous, but prostitution, as we see it in England, does not exist; and I doubt very much if syphilis proper is a very prevalent disease, except when imported. The military medical returns do not appear to indicate the presence of the disease in any large proportion. Female modesty is not very apparent; on the more solitary stations, the sexes bathe promiscuously in the sea; and in the larger streams "up country" it is not at all uncommon to see the ladies dipping at one extremity, and the native gentlemen at the other. "Where innocence is bliss, 'tis folly to be wise!"

The natives of the Gold Coast live largely on vegetable food. "Kaukie" is their favourite dish; this is prepared by pounding in a mortar Indian corn, adding a little water from time to time with the hand, and afterwards allowing this to ferment. Plaintains are pounded up in a similar manner and boiled into a kind of soup, with the addition of perhaps one or two of the large country whelks. Pawpaws, bananas, and a variety of country peppers and cucurbita, are also in request. Fried fish, a species of herring, caught in large numbers upon the banks some twenty miles seaward, is another dainty much in request. Yams and rice are the two next important articles of food. This last grain has been chiefly imported; and it is a curious circumstance worth relating, as referring to the causation of dysentery, that when used almost exclusively by the natives during the dearth of their ordinary food, when the Ashantees plundered and destroyed the farms almost to the confines of Cape Coast, it led to bowel-complaints and attacks of the first named affection. This was evidently due to the sudden change of diet. The substitution of salt pork for fresh meat in the case of Europeans has been found to have a similar effect in this country. This is even now evident where officers have been obliged to use it at isolated stations. In the Tropics, salt pork might to a large extent be numbered among the relics of the past as an article of diet. Natives here will eat almost anything; up the country, any animal with legs is considered fit for culinary purposes. A species of large snail or whelk is in much request; thousands of shells cover the surface and may be dug up from mother earth and the dark black vegetable loam which surrounds the native "crooms." The shell is three, four, or five inches long, dark brown streaked with black, a lovely pink adorning the reflection of the inner surface. Boiled, this mottled grey and black whelk makes a favourite and palatable soup. Another smaller species of snail, also caught in the woods, when deprived of its shell, is strung upon sticks and thus exposed for sale. It would not be Africa if fowls did not exist. In the Accra and other districts, oxen are bred; but at Cape Coast, the goat or sheep, weighing from 8 to 14 lbs., is the only animal to be obtained. Cur dogs are of course as plentiful as blackberries. One now and then sees a solitary pussy. At Mansue and other stations beyond is found a very pretty little rat, brown with white facings, almost too beautiful to kill, at first sight easily mistaken for a squirrel. We have also the mouse, the sand-fly, and mosquito. Fortunately, these last two are not too numerous, and one only now and then sees a mosquito-net. The strong sea-breeze acts in this respect beneficially, by driving away these pests of the Tropics and disturbers of our sleep. Of beautiful birds there are few in the immediate vicinity of Cape Coast; a few rice-buntings, with their pretty pink breasts; a parrot now and then is seen; and one hears occasionally the screech of the parroquet in the distance. The black and scarlet soldier-bird, white-breasted eagle, and black and white Johnny Crow, almost complete the category. Our forest is soundless. For miles it may be passed through without those sweet warblings so charming elsewhere. The absence of the monkey particularly struck me. I have not seen one since my arrival on the Coast. The wild hog and antelope are sometimes shot by the natives; killed and fried at once, the venison is a delicious change from the monotony of our ordinary diet, especially when a few drops of lime-juice are squeezed over the smoking broil. Prawns abound in the rivers, and are caught in baskets by the natives, much in the same fashion as lobsters and crabs at home. A prawn curry is not at all to be despised. Fish are also caught in the larger rivers. Ants are only too numerous, in every variety of shape and form, from the destructive termites to the innocent little sugar-ant. Not long since, a very fine specimen of the scaly ant-eater was caught in the woods at Mansue. Rolled up when approached, this rarely seen animal permitted himself to be knocked about as a cricket-ball. A great variety of ants' nests are come across in the clearings. Of course, that of the white ant—a misnomer, by the way—is ever characteristic. It has been told us by prisoners that the earth compassing the dwellings of this destructive creature had been used during the war by Ashantee slaves to allay the cravings of hunger, or as an intermixture with their food.

I have already told you that transport is a great difficulty with us. Up to the present, we have had only some two thousand carriers, whereas seven thousand is about the minimum required. For the purpose of sick transport, the principal medical officer has made demands in excess of the former number. Some part of the difficulty is being got over by the employment of women, and later, by a gentle hint to the several kings that a portion of their men were required for that purpose—one of those gentle hints where one says, "You know if you give them we will be grateful; if you refuse we will take them." Oxen, as they go up to the depôt at Mansue, are utilised in this way, and may be occasionally seen dragging guns and tumbrils to the front. You are, of course, aware that the hammock is the means by which journeys are made in this portion of the coast. Very expensive journeying it is: eight hammock-bearers, at 2s. a day, absorb a very considerable amount of one's daily income. Most of the officers have ceased to draw hammock allowance—a munificent sum of 2s. 3d. *per diem*—and are now supplied with one when required. When upon a good road, willing to work, and in humour, bearers can get over twenty miles in a day, going at the rate of three miles the hour. Eight men are usually allowed to a hammock—four employed and four in reserve; these last generally carry light luggage in the rear until required for a change. Fifty pounds is about the ordinary weight carried by natives on the head, but much heavier weights are occasionally supported. The hammock supplied by the War Department is of canvas, joined by light cord at each end to wooden semicircular pieces, which are again fastened by strong rope to a long female bamboo; to this last are attached, at or near each end, wooden cross-pieces, sufficiently wide to admit of two men walking abreast; each extremity of these is supported upon the head of one of the bearers, a circular coil of cotton or some soft substance being superimposed. Over the hammock and above the bamboo is an awning of green, spread upon a square wooden framework; from each side fall green curtains. This mode of travelling is anything but disagreeable. Cots are also in use, but these are disliked by the natives, who think them too heavy and difficult to carry. In a narrow pathway or uncleared road, neither is of much use. It generally ends in the occupant being obliged to walk, and have the hammock tied up and carried in the rear. In such pathways as described, cross-pieces are useless, as the road is not wide enough for two bearers to march side by side. One or two of an inventive turn of mind have designed a species of hammock-chair—an innovation not appreciated by the natives. Upon the whole, the old mode of conveyance is the most comfortable and useful, as at night it may be supported upon two forked sticks, and in this way become converted into a not uncomfortable bed. Native kings are carried in a long hollow basket, by four bearers; secondary chiefs, in chairs, by two: specimens of both have been captured. The General is expected from the front every hour. He has been up upon a tour of inspection with the Adjutant-General Major Baker and the principal medical officer. Sir Garnet reached as far as Faysowa, where, on the 27th ultimo, we had our last brush with our enemies this side of the Prah. The day previous they had been largely reinforced from Coomassie with men, lead, and powder. At 2.30 P.M. on that day, our advanced guard drove in their rear division upon the main body, who were encamped at Faysowa, about three and a half miles beyond Faysoo. Advancing in large numbers, and at the same time performing their usual turning or cutting-off movement, the Ashantees very nearly surrounded the small body of Houssas, Kossos, and West Indian regiment, numbering little more than a hundred men. Our forces were obliged to retreat upon Sutah. That night the Ashantee army crossed the Prah by torchlight. It is rumoured that they have been attacked somewhere upon their northern frontier; if so, the diversion will be of infinite service to Sir Garnet. Another rumour is, that they have been directed by the King to dispute the passage of the river Prah. Nothing could be more conducive to our interests than their getting a good thrashing there, as they most assuredly will; it is not likely that there will be any further trouble *en route*. However, the fact really is, that as to their real intentions we are quite in the dark.

The road is being rapidly pushed on beyond Sutah, ten miles and a half north of Mansue. After leaving Mansue, the track becomes more difficult to manage, as the country is almost a continuous level and marshy, and the clearings more clayey, the forest more dense, and sunlight penetrating little, except at the various deserted crooms.

Sick officers are gradually dropping in from the front and various outposts; Lieutenants Gordon, Townsend, Pulchet, Stoker, and Dr. Moore are among the latest arrivals; the latter officer, who has scarcely been a month on the Coast, goes home invalided by next steamer. Certainly, two-thirds of the officers who came out by the *Ambrig* have had already some affection peculiar to the climate. This climate men, on arrival, will persist in calling "so awfully jolly." This must be rather amusing to those who have had a prolonged experience of its effects upon health.

The *Himalaya* arrived on the evening of the 9th instant, sailing into harbour about 8 P.M. We took her for the mail. She brings out the head-quarters and 650 officers and men of the 2nd Battalion Rifle Brigade, a company of Sappers, and twelve military surgeons, also a military chaplain. Two of these officers are now here—Mr. Patterson and Mr. Corbett. The contingent of medical officers will be welcome, as the arduous duties hitherto performed have begun to tell upon the small present staff, and the rapid movement to the front, and occupation of new stations on the road, necessitate the removal of many from head-quarters. Surgeon-Major Reade left for Mansue on the 8th instant, there to be stationed.

The weather is becoming decidedly warmer; we have had no rain since the 1st, when a heavy shower fell during the night; sea-breezes, setting in from 10 to 10.30 A.M., blew strongly during the day. This breeze is scarcely felt up country, a very faint wind only now and then blowing across the clearings from the north-west or west. Afternoon rains and fogs have not yet ceased in the more distant country; these are varied occasionally by thunder-storms forming in the east and gradually moving towards the west. The play of the forked lightning is really sometimes most beautiful. Shortly afterwards, a heavy downpour drenches everything, saturating the already only too retentive soil. The mean of the meteorological observations at the military observatory last month was as follows, in the shade, in the air:—Dry bulb, 79.8; wet bulb, 78.4—9 A.M. At 3 P.M.—dry bulb, 83.9; wet bulb, 81.4. Maximum in air, 85.8; minimum, 75.2—difference, 10.6. Mean of maximum and minimum thermometers during the month, 80.5. The black bulb in the sun ranges from 142 to 150 degs. Fahr. It rained heavily on the 4th, 8th, 11th, 16th, and 26th. South and south-westerly winds were the prevailing ones. The instruments sent out by the Army Medical Department, in charge of the sanitary officer, are at the military hospital, and to the courtesy of the officer in charge I am indebted for the foregoing information.

December 11th.

The *Adela*, store-ship, arrived last evening from the northward, where she had gone to pick up Kroomen. She brings 180—a seasonable addition, as at this moment 800 of our native allies, congregated at Dunquah, have dispersed to their homes. The *Lilian* and *Thomas Dodds*, store-ships, are also in harbour, the latter loaded with medical comforts considerately despatched by the Army Medical Department in London. Jams and champagne are among the luxuries on board. The *Amethyst* leaves for a five days' cruise to-morrow, and will probably take one or two convalescent officers for a change. The General returned last night from Faysowa. The railway, about which so much has been talked, is not to be. Want of time, labour, and the unsuitability of the country has led to the abandonment of the idea. Three officers and sixty non-commissioned officers and men of the Royal Engineers have been landed from the *Himalaya*; they proceed at once to the front, and will act in superintending the native labourers along the road, and the erection and laying of the field telegraph which has been brought out from England. Thirty men of the Army Hospital Corps and a similar number of the Army Service Corps have been also disembarked. The services of the former are much needed in the hospitals, which are, to a large extent, at present under native management and subordinates. The mail, which arrived from England to-day, brings three Control officers, and Surgeons Parke, Gibson, and another medical officer. The steamer had been detained in the Mersey, awaiting dispatches. Among the passengers in the *Himalaya* was Surgeon-Major Elliott, African Medical Staff. Everything will be pushed on as rapidly as possible on the road and at the several camps, which are as yet in an unfinished state. Of course, those beyond Sutah have not yet been commenced. Fortunately, in this country, it does not take long to raise up houses, native fashion. It is hoped that, by January 1st, all will be ready for an advance.

The *Himalaya* leaves to-morrow morning, with the Rifle Brigade on board, for a fortnight's cruise to St. Helena, as it is thought better to do this than have the men rolling about in the roadstead, which now is quite gay with war and other vessels. The *Himalaya* takes with her some sick and wounded officers for a change. The arrangements are said to be excellent, and, no doubt, the variety and sea-breezes will be invigorating to those who have been trying to recover in this relaxing climate. Officers very naturally do not wish to leave while a chance remains of serving and seeing the expedition out. The last three months have been ones of anxious and arduous service, performed under many difficulties and very short-handed; in fact, one officer has frequently had to carry on the duty usually performed by two or three in ordinary times; this has been especially the case with the few officers of the Army Medical Department, who were present, and all honour is due to those who volunteered their services at a critical juncture, and before the *prestige* of the expedition being carried on under such a distinguished officer as Sir Garnet Wolseley was attached to it. Of Captain Glover's proceedings we hear but little. Like a good general, he keeps his secrets to himself. He has got together a large force, and is probably now *en route* to Coomassie. Winwood Reade left for the front a few days since. Dr. Home returned yesterday from Mansue, and resumed his duties at head-quarters. The sanitary officer, Dr. Gore, has laid before the Quartermaster-General a scheme, embodying a number of sanitary suggestions for field-exercise, entering most minutely into all the precautions proved by experience to be necessary in such a march as that about to be undertaken by European troops for the first time in Western Africa.

Previously to the arrival of the late contingent of medical officers, Surgeon M'Nalty was for some time the only available executive officer at Cape Coast Castle. At present, the medical staff are distributed as follows:—Detachment-Surgeon Moore, Dicks's Cove; Goldsbery, Axim; Atkins, Bula; Thornton, in medical charge, head-quarters 2nd West India Regiment, Mansue; Surgeon-Major Reade, Mansue; Mosse, Netah; Fox, Dunquah; Bennett, Acropel. All detachments, except those along the road, will be shortly withdrawn. The head-quarters of the 2nd West India Regiment are being gradually brought together at Mansue, under the command of Colonel Webber. Major Braso, now in command of the garrison at the Castle, has applied to join his corps at Mansue.

Assistant-Commissary Furze is at present going the round of the ports in the Azores and Canary Islands, in search of live cattle. After leaving Madeira, he will, in case of necessity, proceed to Lisbon, and fill up there. Mules are also being obtained; there is nothing whatever to prevent these animals from being used for transport purposes to the Prah, and perhaps beyond.

December 12th.

The *Himalaya* leaves to-day for a ten days' cruise; she is anchored more than a mile from the shore. Surgeon Parke left in the mail yesterday for Accra, in the *Volta*, as an addition to Captain Glover's medical establishment. Sir Garnet and Major Baker have been, since their arrival from the front, visiting the officers' hospitals on Connor's Hill and Cape Coast, saying a kindly word to each of the inmates, and cheering up those who are temporarily on the sick-list from previous arduous duty in the field. The Major-General has that peculiar taking manner so valuable in the chief of an army or department—a pleasing address, agreeable countenance, and happy temper do more for those in authority than the most distinguished reputation without them. In the latter as well as the former, Sir Garnet has been fortunate enough to excel. He has consequently become endeared to his subordinates. Arrangements are in progress for the opening of canteens at the principal stations *en route* to the Prah. Mr. Cleaver, Mr. Swanzy's agent out here, is, I believe, going to start one at Mansue immediately. A very fair one is already in operation at Dunquah. The want of these canteens has been much felt, as the rations, the only obtainable food in the bush, have to be largely supplemented by those little delicacies and drinks which make preserved meats palatable. It has now been decided to occupy Assinayau, Coomassie, and Decupsamsoo as the next halting places, after leaving Sutah. On referring to the excellent map compiled by the Topographical Department at the War Office, you will find all these stations accurately laid down. Decupsamsoo is three-and-a-half miles from the River Prah. On sanitary grounds, it has been determined not to re-occupy a position upon the banks of the river; this was done in the abortive expedition of 1863 and 1864, with most unfortunate results: a rise in the water, common after one of those tropical showers, flooded the encampment at Proshea (wrongly placed in maps on the northern bank of the river), thus rendering it temporarily uninhabitable.

The latest about our enemies, the Ashantees, is, that they say we do not fight fair, because we do not load our guns at the muzzle. They do not understand the mechanism of our converted Sniders and Enfields. It is quite a mistake to think that they are armed solely with effete muskets. They have managed to obtain several Dutch rifles, the firing of whose bullets is anything but agreeable to the nninitiated ear; their ammunition-pouches are also found to have in them bullets of various shapes and sizes. A description of these must be deferred until the general nature of the gun-shot wounds received out here comes under discussion.

People at home have no idea of the difficulties of this expedition in a climatic, sanitary, engineering, and military point of view. It is quite unlike anything what British officers and soldiers have hitherto undertaken, and, when finished with success—a result looked forward to with certainty—it will redound to the credit of all concerned, and end, it is to be hoped for ever, those constant wars, which are the curse of

Africa and its trade. Mines of wealth lie idle because Kings Tom and Jack cannot settle their palavers in a peaceable manner. So wags this world of ours in benighted parts!

The *Tamar* arrived this morning at 11 A.M. As she steamed into harbour, she saluted the Commodore's flag with seven guns, which was immediately returned by the *Active*. After landing a contingent of medical officers, the *Tamar* will accompany the *Himalaya* for a cruise to the northward. The destination of the *Amethyst* is St. Vincent. She takes Captain Gordon, 92nd Highlanders, Lieutenant Townsend, 1st Battalion 16th Regiment, and Lieutenant Warner, Adjutant, 2nd West India Regiment. The *Coquette* leaves in a few days for St. Helena.—4 P.M. *Himalaya* just steaming slowly to northward in the teeth of a fine sea-breeze; she will return on New Year's eve with the *Tamar*. The 1st of January, 1874, will see marching from our old sixteenth-century castle a gallant regiment in pursuit of fresh laurels, and that honour and glory so dear to the brave.

Commissaries Edridge and Burke have arrived to inaugurate the new hospital system, also a captain and lieutenant of orderlies. The medical staff of the expedition will number over sixty officers.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE next meeting of the Branch will be held at the York House, Bath, on Thursday evening, January 22nd, at 7 o'clock; E. LONG FOX, M.D., President.

R. S. FOWLER, } *Honorary Secretaries.*
E. C. BOARD, }

Bath, January 1874.

REPORTS OF SOCIETIES.

MEDICAL SOCIETY OF LONDON.

DECEMBER 15TH, 1873.

S. O. HABERSHON, M.D., President, in the Chair.

General Paralysis of the Insane: Treatment by Calabar Bean: Recovery. Dr. FOTHERGILL related the history of the following cases, which had occurred in the practice of Dr. Crichton Browne. The first case was that of George S., aged 40, a pushing and successful man, of good physique, with no family history of insanity, who was admitted on October 12th, 1872. He had most exalted ideas; *e.g.*, that he would supply the earth with steam from one boiler. His pupils were somewhat contracted, and the facial muscles were constantly twitching; his tongue was tremulous, and the voice thick and husky. The diagnosis was, general paralysis; and the prognosis, death within two years. Extract of physostigma was given in quarter-grain doses three times a day. On November 9th, he had a paroxysm of paralytic furor. The dose of extract was increased to the third of a grain. On November 11th, he had had several attacks of pallor and vomiting; his head was shaved, and croton oil liniment rubbed in. On November 19th, he was decidely calmer and better. On December 10th, the patient was much better and quieter; he slept well; and the hand was steadier. The zygomatic muscles and the tongue was still shaky. On February 12th, he was quiet and industrious, and repudiated all delusions. The twitching was confined to the lips and eyebrows. On May 2nd, he was quite rational and intelligent; there were no tremors. On July 30th, he was apparently quite well in mind and in body; and was discharged, recovered, on August 31st. The second patient was Annie H., aged 37, a housewife, healthy and free from any history of insanity, who was brought to the Asylum on July 4th, 1870, because she was excited and violent. She was a tall stout woman; her countenance was florid and flushed; the pupils were very dilated and unequal. She talked deliberately, with shaking lips and occasionally lapses of words. The tongue was tremulous; the gait was uncertain. She was mentally confused and bewildered; she expressed herself as very happy, and never better in her life. The diagnosis was general paralysis; the prognosis, death in a year. Liberal diet and oxide of zinc were ordered. On November 25th, she had become worse. Extract of physostigma was given in quarter-grain doses three times daily. On February 18th, 1871, she had improved; was clearer in her mind and steadier in her muscles. On May 2nd, she had vomiting with paralysis of the left arm; she could not masticate or swallow; pulse 110. Next day, the paralysis was increasing; the face was flushed, the skin hot, and bathed in perspiration; sensibility was diminished on the paralysed side. On May 5th, she was quite unconscious; she had retention of urine; and a bed-sore was forming. On May 12th, her power was returning; she had some short convulsive seizures. On the 20th, she was restless and talkative, having exalted ideas of a fragmentary character. The physostigma, which had been stopped on the 2nd, was resumed on June 3rd; she was quite calm but fatuous. On August 11th, the patient had much improved. On August 21st, she again had vomiting. The physostigma was stopped, and on August 29th it was resumed. On September 20th, the patient was gaining ground, and on the 24th was able to sew neatly and walk steadily. There was still nervousness about lips and tongue, and her ideas were exalted. On January 28th, 1872, she continued to improve. She had another attack of faintness and vomiting. Her improvement continued, and on December 14th the disease was undoubtedly arrested. On May 7th, 1873, there were no delusions; she conversed rationally but somewhat childishly. The pupils were still dilated; there was no muscular tremor. She was discharged cured on May 20th. Dr. Fothergill remarked that physostigma not only lowered the activity of the cardiac ganglia, but also rendered them very susceptible to extrinsic impressions. Syncope was not uncommon in patients at Wakefield during their daily walks, while on a course of the bean no unpleasant consequences had followed as yet. Dr. Forbes, at Shoreditch, had found the Calabar bean useful in the treatment of acute mania in its earliest stage.

The Depressants of the Circulation and their Use. At the previous meeting, Dr. J. M. FOTHERGILL had read a paper on this subject. It is partly published in the JOURNAL of this and last week.—Dr. LAUDER BRUNTON said that it was difficult to see how purgation could act as auxiliaries to bloodletting if they only emptied the intestine of its contents by increasing its peristaltic action, as taught by Buckheim, Radziejewski, and other German authorities. Their use at once became evident, if the view of Moreau and Vulpian, that they increased the intestinal secretion, were adopted. By draining away part of the fluid constituents of the blood, they diminished the pressure within the vessels in somewhat the same way as blood-letting, though to a less extent. Dr. Brunton had repeated Moreau's experiments, and found that sulphate of magnesia injected into the intestine of a cat caused about two-thirds of a drachm of fluid to be secreted in four hours by each inch of the bowel operated on, although the proportion of sulphate was only one grain to an inch. The effect of opium in inflammation was due, he thought, to its action upon the vaso-motor centre lessening the determination of blood to the inflamed part. Although congestion usually preceded inflammation, yet the two were quite distinct; congestion without inflammation being noticed in blushing, etc.; while inflammation without congestion has been observed by Hollis in sea-anemones, which had no vascular system, and in newts' tails after their separation from the body. Congestion was shown by Sinitzin's experiments to be adapted for the restoration of injured tissues; but, after inflammation had occurred, it increased the pain, and probably proved injurious in many instances. Congestion was occasioned by an irritation applied to a sensory nerve, causing the vessels of the part to dilate, while those of other parts contracted and raised the blood-pressure. The blood-supply of the injured parts, and the irritation of its nerves thus kept up and increased the congestion in it. Opium weakened or destroyed this effect of a stimulus to sensory nerves, and by thus diminishing supply of blood to a part afforded relief, just as raising the hand lessened the pain of an inflamed finger. He considered the beneficial effect of opium in peritonitis to be due to this action, and not merely to its keeping the bowels quiet. Not only was the vascular system capable of being greatly dilated by weakening or destroying the vaso-motor nerves, so that it could hold more than twice as much as usual, but it could contract so as to keep up the same tension on its contents after they had been reduced by bleeding. Vascular depressants which dilated the vessels thus acted more powerfully and permanently than venesection. Voit and Bauer had also found that bleeding increased the decomposition of the albuminous tissues, which was already too great in fever, and also lessened the combustion of fat. It thus increased the tendency to fatty degeneration. Aconite, on the contrary, lessened tissue-change; for Dr. Meymott Tidy had observed that the tissues of animals poisoned by it retained this irritability for a long time after death, just as in cold-blooded animals, where tissue-change went on slowly. Aconite had thus a double advantage over bleeding, and probably other depressants had a similar effect.—Mr. BRUDENELL CARTER said that the contraction and dilatation of vessels was best demonstrated by the ophthalmoscope. He mentioned the case of a lad under his care, in whom there was spontaneous pulsation of the retinal arteries, and suspected cardiac mischief, but none was found. The sphygmograph showed a high degree of arterial tension, and general narrowing of the blood-vessels; and thus the boy's reina was being starved, and vision was rapidly failing.—Dr. CRISP said that it was assumed by all present that arterioles and some of the larger arteries were muscular, but he had failed to find unstriped muscular fibres in the coats of the vessels, and he did not believe in their contractility. He had carefully examined the death-rate for the three last decennial periods; and, allowing for the increase of population, he found that the death-rate had increased in fever, scarlatina, measles, hooping cough, diarrhœa, rheumatism, puerperal fever, and croup.—Dr. SANSOM said that as, in the investigation of disease, objective were better than subjective signs, so in the investigation of remedies, experimental data were better than opinion. The old therapeutics had rested too heavily on men's opinions; and even now there were probably many agents empirically employed which were destined to share the fate of the pulverised lizards and decoctions of cerebral substance of ancient days. He could not without close scrutiny of the data accept the conclusion that modern medicine was practically less successful than the ancient. Most probably, from the advance in diagnosis, cases described as fever, croup, etc., in one epoch, differed widely from those described in the other. The contractility of arteries and arterioles seemed to be so clear, that he was surprised that any one could reasonably doubt it. In common with hundreds of others, he had observed it over and over again. Lister (*Phil. Trans.*, 1858) showed that by irritation of the vaso-motor centre such complete contraction of the arterioles of the web of the foot of the frog could be produced that it became white and exsanguined, as if benumbed with cold. Dr. Fothergill on one point might have unintentionally produced an erroneous impression. He had spoken of a condition of narcotism as produced by a venous reflex with secondary arterial contraction, whence resulted cerebral anæmia. It might be interpreted that in his opinion this was the explanation of the production of narcosis generally. Dr. Sansom considered that narcotism might be caused by the obstruction of the cerebral arterioles at the periphery, as when blockaded by embola or foreign bodies, or by active contraction of the arterioles, whereby the supply of blood was checked, or by dilatation of the arterioles, whereby the blood-current was showed. He had observed that the early action of anæsthetics was to contract the arteries; this was constant in the case of all anæsthetics discovered. Subsequently, however, and this more especially in the case of chloroform, dilatation occurred, whereby the blood-current was slowed. In narcotism, therefore, the conditions varied; there might be arterial contraction, just as in the case of congestion or dilatation, as in the advanced stages of chloroform-anæsthesia; but there was one dominant circumstance, the imperfect supply of arterialised blood.—Dr. BROADBENT and Dr. THEODORE WILLIAMS joined in the discussion.—Dr. FOTHERGILL replied, and having answered the various questions asked, stated his beiief that the veins themselves possessed contractile powers; more especially the valveless veins of the portal system.

CORRESPONDENCE.

THE TOPICAL USE OF PERCHLORIDE OF IRON IN *POST PARTUM* HÆMORRHAGE.

SIR,—Those of your readers who have taken the trouble to wade through Dr. Snow Beck's acrimonious tirade in your last number, will probably have agreed that it is not unworthy of its author, or of Zoïlus. I do not know what I have done to provoke so much spleen. As I have said before, no amount of similar argumentations will help to a solution of the question under discussion. It must be decided by clinical facts. Now, one thing is conspicuous enough in Dr. Beck's compositions on this matter, and that is an intense desire to save women who are bleeding to death from the dangers of perchloride of iron.

Let me invite attention to the following statement, which has already appeared in the *Obstetrical Journal* for January.

In the report of the discussion at the Obstetrical Society, held on the 5th March, 1873, and published in the *Obstetrical Journal* of April, are the following passages.

"Dr. Snow Beck stated that he had met with several cases where death had followed the injection of perchloride of iron into the gravid uterus to arrest *post partum* hæmorrhage, all the women presenting symptoms quite analogous to those known under the name of puerperal fever."

"Dr. Playfair asked Dr. Snow Beck how many cases of death resulting from the injection of perchloride of iron he had personally seen. It would be interesting to the Society to know, inasmuch as many Fellows had repeatedly injected the iron without ever witnessing any bad results, whilst he, who confessedly had never used the remedy himself, had had the bad fortune to witness several fatal cases."

Thus directly challenged, "Dr. Snow Beck answered that he had seen nine or ten cases. The symptoms were similar to those of puerperal fever, but he felt convinced that death was caused by the injection of iron."

In a paper on "Uterine Hæmorrhage during the Puerperal Period," published in the *Obstetrical Journal* of December last, at page 572, Dr. Snow Beck says:—"Any doubt, moreover, as to the source from which the blood proceeds in *post partum* hæmorrhage has been removed by those sad cases which have followed the injection of a solution of perchloride of iron into the gravid uterus to arrest the flow of blood. I have had an opportunity of examining the uterus and appendages in four such cases, and in all the appearances were identically the same."

In vindication of these statements—first, that he had "seen nine or ten cases;" and, secondly, that he had "examined the uterus and appendages in four cases," Dr. Snow Beck has hitherto published only one, and that is the case brought before the Obstetrical Society by Dr. Heywood Smith.

Until Dr. Beck shall have published his "nine or ten cases," with such detail of circumstances as shall admit of their verification, he must not expect that any serious attention be paid to his arguments.

I am, etc., ROBERT BARNES.

31, Grosvenor Street, January, 1874.

ON THE PROPER METHOD OF TREATING TAPEWORM.

SIR,—Observing in your issue of last week a lecture by Dr. Cobbold of the Middlesex Hospital with the above title, I carefully read it through, in the hope of obtaining some valuable information on the subject. I was, however, doomed to disappointment; for at the end of the two columns, over which the lecture extended, I discovered that, with the exception of an allusion to an extract of male fern, prepared by a well known firm in Oxford Street, and to "certain preliminary rules", which were said to have been given to a patient cured by the method, but are not further explained, there was nothing to help one to learn the proper method of curing tapeworm. Every one, of course, knew before that a tapeworm was not cured until the head had been dislodged. It seems to me that Dr. Cobbold's lecture is therefore rather like a joke without a point, or (he will, I hope, pardon the simile) like a tapeworm without a head. As it would be impossible to impute to him a wish to keep the profession at large from a more accurate knowledge of his "method", one can only imagine that the most important part of Dr. Cobbold's lecture has been by some accident omitted. In the hope that it may turn up at some future time, I am, etc.,

Jan. 5th, 1874, London. EXPECTANS.

SIR,—It having come to my knowledge that several gentlemen who have perused my lecture in your last week's issue are at a loss to understand what I mean by a "proper method" of treating tapeworm, I beg to state, in reply to their inquiries, what I consider to be an "improper" method of treatment. Perhaps this mode of answering questions will be better than the mere recapitulation of printed statements.

It is improper to prescribe certain well known vermifuges, and then to pronounce upon the result of treatment, without taking proper care to ascertain if the head of the worm have or have not come away.

It is improper for the practitioner to flatter himself that he has done his duty by the case, when he merely asks his patient to look and see whether the worm has passed or not.

It is improper for the medical attendant, in the event of the worm's expulsion, to rest satisfied with an examination of such fragments of the parasite as patients are commonly enabled to produce.

It is improper to assert that any case is cured, unless the practitioner have himself seen the head of the worm; and it is still more misleading to record such cases as *cured* in the public journals.

It is improper to leave the searching for the head of the worm either to the patient, or to any friend or nurse of the patient's. Not one in a hundred of such persons would recognise the head, even if they saw it.

It is improper to adopt a merely empirical and unintelligent common-place mode of prescribing; seeing that different patients require different prescriptions, according to age, constitutional habit, and other circumstances.

It is improper to adopt the careless and incomplete druggist-like mode of uniformity exhibited in the choice of drugs and doses; and still more improper to undertake the treatment of any case without having personally examined the proglottides of the alleged tapeworm.

The above virtual re-statement of the duties of the practitioner in this connection is all I am at present prepared to repeat. My lecture was intended to be supplementary to the data already recorded in my little volume on *Worms*, published by Messrs. Churchill. In that book

I believe the profession will find recorded many experiences of the highest practical moment, bearing on the question at issue.

Whether this be so or not, I must leave others to judge. At all events, baffled by repeated failures, several medical gentlemen have not only sent their patients to me for treatment, but a few of them have placed their own children under my care, after previous unsuccessful courses of treatment on their or others' part. Since, also, several practitioners expressed to me their deep regret that no special instruction in helminthology was given to the students at the medical schools "in their day", I have been induced to record my experiences for the benefit of others. I trust no one is offended at my having done so.

I am, etc., T. Spencer Cobbold, M.D., F.R.S.,
Lecturer on Parasitic Diseases at the Middlesex Hospital.
42, Harley Street, Jan. 5th, 1874.

MIDDLE-CLASS ASYLUMS FOR THE INSANE.

Sir,—A leading article appeared in your issue of November 29th, in which the writer, while ably advocating the advantages to be derived from the proposed middle-class asylums, states that "the lowest charge for the private asylum was two guineas per week, to say nothing of extras, a very indefinite quantity;" and as this statement has been publicly promulgated at the recent meeting held in the Leeds Philosophical Hall, I trust you will allow me, in the interest of the proprietors and those interested in such institutions, to give it my most unqualified denial.

In this asylum, as I believe in many similar institutions in the kingdom, middle-class patients are admitted on terms varying from 21s. to 30s. per week, extras in all cases being of *definite quantity*, and never exceeding five guineas *per annum* (*vide* advertisements in all medical journals). Further arrangements are made by which patients of superior education in reduced circumstances, such as bankers, merchants, professional men, etc., are allowed, when their mental capacity admits, to associate with and enjoy many of the privileges and comforts of higher class patients.

As the statement in question tends to convey both to the professional and to the public mind an erroneous impression as to the terms on which such patients are received into private asylums, I trust you will give this letter a corner in your Journal. I am, etc.,

Haydock Lodge Retreat, Ashton, Edward Lister,
Newton-le-Willows, Lancashire, *Medical Proprietor.*
December 1873.

RESIGNATION OF NAVAL MEDICAL OFFICERS.

Sir,—In the British Medical Journal of December 6th, it is stated that a deputation from the Parliamentary Bills Committee of the British Medical Association waited upon Sir Alexander Armstrong, K.C.B., Director-General of the Navy Medical Department, to inquire the reasons of the Admiralty for prohibiting medical officers from retiring from the naval service, and that the principal reason given to the members of the deputation was, that the officers had undergone a special course of training at Netley at great expense to the State immediately after entering the service.

That information, which must be of great value to any medical officer in either of the public services, is gained at Netley, no one for a moment will, I think, doubt. If fairly considered, however, the fact of having gone through the special course at Netley seems a very weak argument why medical officers, whose seniority may be counted by years, months, or even days, should not be "allowed the indulgence" of retiring from the service.

The course at Netley extends over a period of four months, and while attending it the candidate for the service receives the sum of 5s. *per diem*, amounting, at the end of the course, to the munificent sum of about £30 (minus the income-tax, by the bye). For this handsome allowance given by the State to each candidate he has to bear the travelling expenses of going to Netley, receiving no pay whatever during the month which elapses from his passing the examination in London until he goes to Netley. He has also to provide himself with uniform for the course, which costs him about £30, and while at Netley finds it impossible to live on less than 7s. 6d. *per diem* (having to pay mess entrance fee, for servant, etc.), amounting at the end of the fourth month to about £45. By the end of the course, then, he will have spent about £80, taking no cognisance of his expenditure in going to London to attend the competitive examination, and will have received from the State about £30. Besides, while at Netley, the candidates are obliged to do professional work which otherwise should be done by army medical officers receiving at the least 10s. *per diem;* and the only change in the professional staff that existed previously to the time that navy medical officers were sent to Netley for instruction is, that one staff surgeon, R.N., has been appointed professor of naval hygiene.

Without trespassing further on your valuable space, I think it may be fairly concluded that the young naval medical officer has spent the special course at Netley at great expense to himself, and with advantage to the State. I am, etc., X. Y. Z.

CRIMINAL LUNATICS IN COUNTY ASYLUMS.

Sir,—Your remarks on Criminal Lunatics have induced me to call your attention to another branch of the same question.

Besides the criminal lunatics at Broadmoor, there are a number of criminal lunatics and ex-criminal lunatics in the county asylums. These, equally with those at Broadmoor, are divisible into two classes, viz., the habitual criminal or convict class, and that consisting of unfortunate lunatics who, for want of being sufficiently early placed under proper care, have committed some offence. The latter are very properly placed in our county asylums; and it might very well be a question whether some of the same class at Broadmoor should not also be so accommodated. But I wish to draw your attention to the presence in the county asylums of the convict or criminal class proper. The remarks in your article on the general bad conduct of these, and the consequent impropriety of associating them with the other patients at Broadmoor, apply but with greater force to the evil of their presence in county asylums, where they have to be associated with the ordinary insane on whom no stigma has hitherto rested. The matter is so self-evident, that I think it has only to be stated to be admitted; as a matter of experience, the presence of these criminals is frequently found to lead to much trouble and difficulty in the management of county asylums.

The number of so-called criminal lunatics in county asylums is 125; probably the greater proportion of these are not of the convict class. But of the latter, there are a further number who are not called criminal lunatics, on account of their sentences having expired; the number of those there are no statistics to show, but probably it is not more than 100. That these should still be regarded as criminal lunatics, so far as regards the asylum in which they are to be treated, after as well as before the expiry of their sentences, seems a matter of course, from the fact that the expiry of their sentences does not alter the nature of the cases in the slightest; they are as thoroughly criminal minded, as difficult to manage, and as offensive and injurious to those associated with them, after as before they went.

A committee of the Medico-Psychological Association have the question under their consideration, with a view to representing the matter in the proper quarter, but have not yet made their report.

December 1873. I am, etc., T. Algernon Chapman.

OBITUARY.

FRANCIS CORNELIUS WEBB, M.D., F.R.C.P.

We but fulfil a sad duty in furnishing a brief memoir of the late Dr. Francis Cornelius Webb, whose recent death, although painfully sudden, was perhaps not altogether unexpected, at least by his family. His state of health for some years past had been far from satisfactory. Distressing sensations in the chest, recurring from time to time, had made him apprehensive that his career here might be abruptly closed. On the evening preceding his death, after some slight exertion, he complained of uneasiness in the chest and numbness of the left arm; still, according to his custom, he remained up until a late hour engaged in writing. Scarcely retired to rest, he suddenly raised himself in bed, spoke a few hurried words to his wife, and instantly expired.

Dr. Webb was born at Hoxton in 1826. After ordinary school education he was apprenticed to Dr. J. Shepherd, of Stonehouse, Plymouth. At the end of the term he was entered a pupil of University College, London. Here he greatly distinguished himself, carrying off certificates of honour, one gold, and several silver medals. After obtaining the diploma of the Royal College of Surgeons in 1847, he acted for some time as visiting assistant to Mr. C. Bowmar, of Leicester. He then proceeded to Edinburgh, and graduated in 1850. The following year he returned to London, passed the examination of the Society of Apothecaries, and was eventually elected a member of the Court of Examiners.

Dr. Webb commenced his career as a general practitioner. In 1851, he joined the London College of Physicians, and during the past year was admitted to its Fellowship. He held successively the following appointments: Physician to the Islington Dispensary; Physician to the Margaret Street Dispensary for Consumption; and at the time of his death was Physician to the Great Northern Hospital, and to the London Diocesan Home. He was additionally a Fellow of two learned Societies—the Antiquarian and Linnæan.

The published essays of Dr. Webb were not numerous. The intention to continue his researches into the *History of Epidemics* (a task for which he was especially fitted) was frustrated by increasing demands on his time, first as sub-editor, and latterly as editor of the *Medical Times and Gazette*, not to mention the duties of hospital and of private practice.

The essays alluded to appeared in the following order:—"The Study of Medicine: its Dignity and Rewards" formed the Introductory Address at the Grosvenor Place School of Medicine, 1861-62, at which School he held the Chair of Medical Jurisprudence; "The Sweating Sickness in England;" "An Historical Account of Gaol Fever," *Transactions of the Epidemiological Society*, 1857; "Metropolitan Hygiene of the Past," 1858; "Reviews of Papers relative to the Death-rate of England;" "Moquin Tandon's Elements of Medical Zoology;" "On the Teeth in Man and the Anthropoid Apes." To this last was annexed a memoir "On the Teeth in the Varieties of Man."

These papers were all of remarkable merit, both as to form and matter. Their careful perusal disclosed a style as natural and elegant as the historical research was accurate and profound; they will, moreover, retain a permanent value for all who seek trustworthy information upon their particular subject matter.

But these contributions in reality comprise but scattered fragments of long literary labours, and perchance might fail to convey an adequate idea of the real capacity of the man. His general attainments were very considerable; he was a sound classic; well conversant with ancient and modern literature; a more than average metaphysist; and no mean critic of the fine arts.

We may be permitted to pay the final tribute to the worth of our departed friend by turning from his strictly professional and literary to his private life, and recording how irreproachable, in the largest sense of the term, the main tenor of that life had been. He was, beyond question, one of the most truly religious and pure minded men it has been our privilege to know.

He has passed away comparatively early, at an age when many in our profession have scarcely obtained the full recognition and material recompense of sustained and well directed effort. To a large family, his loss, at a time when they needed him most, must be great indeed!

By the many friends his kindly nature had won, the loss will also be most deeply felt, and he will be long remembered by those among them who knew him best, as uniting in unusual excellence the gifts of the understanding and the virtues of the heart.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

Anatomy and Physiology.—Professor Humphry gives notice that the Course of Lectures on Practical Anatomy will be continued on Thursday, January 15th, at 9 A.M., and daily at the same hour. The Course of Lectures on Anatomy and Physiology will be continued on Tuesday, January 27th, at 1 P.M., and on Tuesdays, Thursdays, and Saturdays at the same hour.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Wednesday, December 24th, 1873.

Powell, Harold Macaulay, 333, Wandsworth Road
Pocock, Frederick Ernest, Hill Martin Road, Camden Road

On Thursday, January 1st, 1874.

Jones, William Roberts, Tremadoc, North Wales
Paul, Frank Thomas, Pentney Swaffham, Norfolk
Williams, William, Drim, Fishguard

The following gentleman also on Wednesday, December 24th, 1873, passed his primary professional examination.

Bell, John Duncombe, St. Bartholomew's Hospital

On Thursday, January 1st, 1874.

Crossman, John, St. Thomas's Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

ARDNAMURCHAN, Argyleshire—Medical Officer for the Districts of Sunart, Ardnamurchan, and Moldart: £100 per annum, house, and garden. Applications, 2nd February, to Wm. Ralston, Inspector of Poor, Ardshealach, Strontian.

BIRMINGHAM GENERAL HOSPITAL—Fifth (additional) Physician.

BRECKNOCK GENERAL INFIRMARY—Consulting Physician.

BURTON-ON-TRENT, Lichfield, and Penkridge Rural, and Lichfield and Rugely Urban, Sanitary Districts—Medical Officer of Health: £600 per ann., for three years. Applications, 26th inst., to John Bowr, The Close, Lichfield.

CITY OF LONDON LUNATIC ASYLUM, Stone—Assistant Medical Officer: £120 per annum, board, lodging, etc. Applications, 15th January, to H. F. Youle, Guildhall, London.

COTON HILL INSTITUTION for the INSANE, Stafford—Assistant Medical Officer: £100 per annum, board, lodging, etc. Applications to Dr. Hewson, Coton Hill, Stafford.

CRICKHOWELL DISPENSARY—Physician.

DENTAL HOSPITAL OF LONDON, Soho Square—Dental House-Surgeon: £40 per annum. Applications, 14th instant, to Alfred Coleman, Honorary Secretary.

ENNISCORTHY UNION, co. Wexford—Medical Officer for the Workhouse: £100 per annum. Applications, 15th inst., to John Kennedy, Clerk to Union.

GORTON, Lancashire—Public Analyst: £5 per annum, and fees of 2s. 6d. or 10s. 6d. per analysis.

GUY'S HOSPITAL—Lecturer on Mental Diseases.

HOSPITAL FOR SICK CHILDREN, Pendlebury, Manchester—Resident Medical Officer: £100 per annum, board, etc. Applications, 15th instant, to the Hon. Sec.

INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications to Major-General Pears.

LITCHURCH URBAN SANITARY DISTRICT—Medical Officer of Health: £25 for one year. Applications, 26th instant, to W. H. Whiston, Clerk to the Authority.

NAVAL MEDICAL SERVICE—Surgeons. Applications, 12th February, to A. Armstrong, Director-General.

NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th March, to E. M. Kidd, Sec.

RADCLIFFE INFIRMARY, Oxford—House-Surgeon: £105 per annum, board and lodgings. Applications, 10th instant, to F. J. Hallewell, Secretary.

ROYAL DRAMATIC COLLEGE—Honorary Physician.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN—Resident Medical Officer. Applications, 26th instant, to John Henry, Secretary, 20, St. Andrew Square, Edinburgh.

ROYAL INFIRMARY, Liverpool—Surgeon.

ROYAL SURREY COUNTY HOSPITAL, Guildford—House Surgeon: £75 per annum, board, residence, and washing. Applications, 12th instant, to the Assistant Secretary.

ST. MARYLEBONE GENERAL DISPENSARY—Resident Medical Officer: 100 guineas per annum, with apartments, attendance, coals, and gas.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, Quay Street, Manchester—Honorary Surgeon. Applications, 20th instant.—Medical Officer to attend patients at their homes: £60 per annum, board, and residence. Applications, 16th instant, to J. Barber, Sec.

SEAMEN'S HOSPITAL, Greenwich—House-Physician: £120 per annum, and furnished rooms. Applications, 17th instant, to S. Kemball Cook, House-Governor and Secretary.

TEWKESBURY UNION—Medical Officer and Public Vaccinator for the Forthampton District; £55 per annum, and fees. Applications, 20th inst., to George Badham, Clerk.

TIVERTON RURAL SANITARY DISTRICT—Medical Officer of Health for one year: £2 : 2 for each inspection and report he may be required to make. Applications, 12th instant, to C. M. Hole, Clerk to the Authority.

UNIVERSITY OF DUBLIN—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.

VICTORIA HOSPITAL FOR SICK CHILDREN, Gough House, Chelsea—Second Assistant Surgeon. Applications, 24th instant, to Capt. H. B. Scones, Secretary.

WEST HERTFORDSHIRE INFIRMARY, Hemel Hempstead—House-Surgeon and Assistant Secretary: £100 per annum, furnished rooms, board, etc. Applications, 15th instant, to F. G. Hamilton, Assistant Secretary.

WESTMINSTER HOSPITAL—Assistant-Surgeon. Applications, 10th February, to F. J. Wilson, Sec.

WHITCHURCH (South Hants) UNION—Medical Officer for the Overton District: £40 per annum, and fees. Applications, 19th inst., to S. Clarke, Clerk.

WORCESTER GENERAL INFIRMARY—Dispenser: £50 per annum, board, and washing.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Craven, R. M., M.R.C.S.Eng., appointed Resident Medical Officer to the Convalescent Hospital, Southport, *vice* E. Day McNicoll, L.R.C.P.Ed., resigned.

Wright, F. Wade, Esq., appointed Assistant Medical Officer of the Aberdeen Royal Lunatic Asylum, *vice* D. A. Patterson, M.B., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication,

BIRTH.

Morris.—On January 5th, at 13, Somers Place, Hyde Park Square, the wife of *James Morris, M.D.Lond., Fellow of University College, of a son.

MARRIAGES.

Griffith—Pace.—On January 1st, at St. Mark's, West Hackney, by the Rev. J. G. Pilkington, M.A., G. de Gorrequer Griffith, L.R.C.P., of South Belgravia, son of the late Rev. J. Griffith, Rector and Prebendary of Dysart, Ireland, and nephew of the late Colonel G. de Gorrequer, K.H., etc., 10 Edith Camilla, youngest daughter of Henry Pace, Esq., of Hackney. No cards.

Smith—Taylor.—On December 23rd, at St. Luke's Church, Cheltenham, by the Rev. Canon Bell, assisted by the Rev. J. A. Aston, Frederick Augustus Alfred Smith, M.D., 1, Park Place, Cheltenham, to Helen Elizabeth, eldest daughter of the late H. C. Taylor, Esq., of Cheltenham, and formerly of the Hayes, Staffordshire.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY .St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ....Royal Westminster Ophthalmic, 1.30 P.M. —Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.— Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Clinical night. Mr. Gant, "Excision of Antrum of Upper Jaw for Cure of Cystic Growth": Dr. Lichtenberg will bring forward a patient on whom the Rhinoplastic Operation has been performed; and other communications.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Walter Rivington, "On Dislocation of the first and second pieces of the Sternum"; Mr. Le Gros Clark, "Large Adenocele complicated with Milk Cyst."

THURSDAY.—Harveian Society of London, 8 P.M. Mr. Lennox Browne, "On the Various Causes and Treatment of Loss of Voice."

FRIDAY.—Medical Microscopical Society, 8 P.M. Anniversary Meeting.

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Authors desiring reprints of their articles published in the Journal, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

We cannot undertake to return Manuscripts not used.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

Communications respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

Alpha.—It is certainly "legal for a L.F.P.&S.Glasgow to use the title of Surgeon".

Themis.—We are unable to appreciate the point of the epigram. Perhaps the further promised communication will make it more distinct.

C. J. W. P. and A. J. H. will see that we publish a letter on the same subject in another part of the Journal, and further explanations from Dr. Cobbold.

Dr. Brunton's Lectures.—Dr. Campbell Black (Glasgow) should read the whole of the Lectures of Bernard in the *Revue Scientifique*, as well as those translated in the *London Medical Record*. He is evidently at present not acquainted with the views of Claude Bernard, whom he professes to expound. He will find that it is himself, and not Dr. Brunton, who is in error.

Sir,—I will feel greatly obliged if you, or any reader of the Journal, will kindly inform me where there is an asylum for training poor dumb children. I am anxious to find such a place for a very intelligent child of three, who has been perfectly deaf since an attack of convulsions at ten months of age. It chatters away unintelligibly, but cannot articulate one word. I am, etc.,

Thos. Whiteside Hime, M.B., etc.

217, Glossop Road, Sheffield, January 8th, 1874.

Club Practice.

Sir,—At the autumnal meeting of the West Somerset Branch, the good and evil of clubs were to some extent discussed; but as a member present, I did not understand the resolution, referred to in your report of Saturday last, especially the second part of it, to be what is stated in the Journal—viz., "That with a view to arriving at some practical conclusions on this subject, the Council be requested to take into their consideration the question of club practice, and to frame such rules as they may consider appropriate for preventing abuse of clubs and provident societies, and generally for giving effect to the preceding resolution; and as soon as they can conveniently do so, to report the same to the general meeting of the Branch."

The majority of the meeting appeared to admit that clubs or provident societies were good attempts, or rather bad attempts at good; and in continuation it was argued whether the non-inclusion of wife and children in most medical clubs is a great failure, by still leaving a powerful initiative to pauperism—by leaving, in fact, its seeds broadcast over the country. It was urged that a provident dispensary in every central village throughout the country would be in every aspect a great social gain, and would check that growing medical eleemosynism which is the high road to pauperism, and a disgrace to our country and to the medical profession. To quote the verdict of the first Medical Committee of the Charity Organisation Society, October 30th, 1871, page 5: "They believe that there is no class of charities which is doing so much to pauperise the population, to undermine their independence and self-respect, and to discourage habits of providence as medical charities." At the Branch meeting referred to, a calculation was made showing the probable facility with which a prospering provident dispensary may be established in each central village. The argument, backed by much quoted experience, showed that such institutions were fairly remunerative to medical men, and a desirable means of their concurrence. Experience also shows that each provident dispensary is certain to enlist the good-will and support of its neighbourhood; and it was suggested, as a great additional advantage, that whenever the funds admitted it there should be at each dispensary-house a couple of well equipped wards for the reception of those occasional extreme cases which occur in every locality, and yet the unfortunate patient may not have home accommodation. Fancy a journeyman mason or carpenter suffering compound fracture, and a chief artery perhaps wounded; contrast the humane facility herein suggested, with the rude expedient of jolting the wretched patient over miles of rugged road to the more ample hospital: besides its revolting cruelty and danger to life, it need not be named in a medical journal how much the implicated structures must be further injured by a distance of journey, and how to that extent rendered inapt to repair.

After such arguments and suggestions, it was at length in effect concluded that the Council of the Branch should make inquiry into the machinery and working of provident dispensaries, and report thereon at the next general meeting. I trust that in the interest both of the public and the medical profession this may be done, and completely done. I am, etc.,

Taunton, December 15th, 1873. Geo. Cordwent.

The following letter has also reference to this resolution, and to our request for personal experience on the subject.

Sir,—In answer to your public request, I send you my experience of club practice, feeling it to be a serious one for our profession. I have two clubs, containing 1,100 members, which with their wives and children make about 4,000. For attending these I get £500 *per annum*. I am not allowed private practice. Now I think this is much too little in the abstract, as nearly all the members are making their £100 *per annum*, some much more; still, if they were private patients, I doubt if any doctor would make that sum out of them, for they would rather move elsewhere than pay their bills. I believe if all clubs were raised to an uniform rate, of one guinea for married and half a guinea for single men, with a guinea midwifery fee, that clubs would be a blessing to the poor and a source of profit to medical men. As it is at present, I believe they are injurious to both, as they tend to lower the charges for private attendance, and cause people to think cheaply of doctors when they can be had by paying a few shillings a year.

I am, Sir, yours, etc., P.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion: Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail; The Blackburn Times: The Glasgow News; The Glasgow Herald: The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. W. H. Broadbent, London; Mr. W. MacCormac, London; Mr. T. Spencer Wells, London; Dr. Cockle, London: Mr. De Méric, London; Dr. George Johnson, London; Dr. Rumsey, Cheltenham; Dr. Madge, London; Our Dublin Correspondent; Dr. Lichtenberg, London; Dr. Edis, London; Dr. T. Lauder Brunton, London; Dr. Bradbury, Cambridge; Mr. Holmes, London; Dr. J. Milner Fothergill, London; Dr. Cobbold, London; Dr. T. Snow Beck, London; Our Edinburgh Correspondent; Dr. Mapother, Dublin; Dr. Ferrier, London; The Secretary of the Harveian Society; M.D.Edin.; Mr. J. W. Langmore, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; F.R.C.S.E.; Dr. Farquharson, London; Our Own Correspondent, Cape Coast Castle; Mr. Eastes, London; The Secretary of the Royal Medical and Chirurgical Society; Mr. Jonathan Hutchinson, London; Mr. Erichsen, London; Mr. Pinching, London; Mr. Groves, London; Dr. Marcet, Nice; Dr. Cotting, Roxbury, Boston, U.S.; Dr. Braxton Hicks, London; Dr. Barnes, London; Mr. Bellamy, London; Dr. Markheim, Paris; Dr. Bond, Gloucester; Dr. Moriarty, London; Dr. MacSweeny, Carlow; Mr. Kortright, London; Dr. Aveling, London; Dr. Cayley, London; Mr. Fleetwood, Chester; Mr. Sowerby, London; Dr. Hime, Sheffield; Mr. Fowler, Bath; Dr. Campbell Black, Glasgow; Mr. John Bailey, Crickhowell; Dr. Paget Blake, Torquay; Mr. Thompson, Sevenoaks; Dr. J. R. Stocker, London; Dr. Hollis, London; Mr. A. P. Watkins, Worcester; Mr. Ernest Morgan, London; Mr. Lord, Crewe; Mr. Toole, London; Mr. Karkeek, Torquay; Mr. Craven, Southport; etc.

BOOKS, etc., RECEIVED.

An Introduction to the Study of Practical Histology. By James Tyson, M.D. Philadelphia: Lippincott and Co. 1873.

Diseases of Infancy and Childhood. By Charles West, M.D. London: Longmans, Green, and Co. 1873.

LECTURES
ON
HOSPITALISM: AND THE CAUSES OF DEATH AFTER OPERATIONS.

Delivered at University College Hospital, London.

By JOHN ERIC ERICHSEN, F.R.C.S.,
Holme Professor of Clinical Surgery in University College, and Senior Surgeon to University College Hospital.

LECTURE I.—ON THE RATE OF MORTALITY AFTER AMPUTATIONS.

CONTENTS.—*Rate of Mortality in University College Hospital, in Metropolitan Hospitals, on the Continent and in America.—"Runs of Luck." Examples of.—Causes of "Runs of Good or Bad Luck" in Operations.—Statistics of four Metropolitan Hospitals, giving Causes of Death.—Importance of Large Numbers and of Similarity of Condition in Statistical Inquiries.—Ovariotomy.—History and Progress of Amputation.—Statistics.—Guthrie, Phillips, Lawrie, etc., Early Statistics disbelieved.—No Improvement in Rate of Mortality for nearly Forty Years.*

IN the Introductory Address which I delivered at the College opposite on the 1st of October last, I laid down the following propositions.

1. That surgery, in its mechanical and manipulative processes, in its art, in fact, was approaching, if it had not already attained to, something like finality of perfection.

2. That the so-called science of surgery had not advanced proportionately with the art.

3. That the results of those operations by which life was imperilled were by no means so satisfactory as they should be; that the skill in the performance had far outstripped the success in the results of such operations; that the mortality was excessive after some operations, especially amputations; that it had not diminished of late years; that this mortality was particularly great in hospital practice, and was probably dependent on removable causes, and hence might be materially reduced if these could be determined and their occurrence prevented.

The first two propositions I illustrated at some length in that lecture (*Modern Surgery: its Progress and Tendencies.* Lewis, Gower Street). To the third, my time would not allow me to do more than advert; nor, indeed, had time allowed, would the delivery of an introductory address have been a fitting occasion to discuss so wide and important a question as this. The subject, however, is so interesting and so important, that I gladly take an early opportunity to direct your attention to it, to bring forward some facts in support of the statements I have made, and to give you the impressions that I have formed from a study of the whole question.

There are, in all probability, few subjects in surgery of greater interest, and certainly none of greater importance, than that which relates to the cause of death after an operation; for on its consideration necessarily depends the success, in its ultimate issue, of any operative procedure that we may undertake.

Since July 1st, 1870, up to December 1st, 1873, there have been in this hospital eighty amputations of the limbs, without including the minor and partial ones of the hand and foot. These cases have been taken as they came; they have not been in any way selected. None have been rejected in which it has been supposed that, by operating, the patient's prospects of recovery would, in any way, be improved. Every case has been most faithfully recorded by the surgical registrar, and they have either been published, or are in the course of publication, in the statistical records of the hospital. Of these eighty amputations, twenty-one have died, being in the proportion ot about twenty-six per cent. of the whole. Although eighty cases of amputation is far too small a number upon which to found any general deductions, I may take these as a fair specimen of the general results of amputations that have occurred in this hospital since it was opened thirty-five years ago. [See Table A.]

I have been in the habit of publishing, in the successive editions of the *Science and Art of Surgery*, the results of all the amputations that have been performed in my wards. They amount to a grand total of 307 cases; of these, 79 have died, being a mortality on the whole of as nearly as possible 25 per cent. The rate of mortality in the amputations in my wards in University College Hospital has been very uniform for the last twenty years. Thus, up to 1857 (2nd edition), it was 23.5 per cent.; in 1864 (4th edition) it had risen slightly, being 24.3 per cent.; in 1869 (5th edition) it had fallen to 24 per cent. The present rate again shows a slight increase. If we add the 80 cases in Table A to the 307 just referred to, we obtain a total of 387 major amputations at University College Hospital with exactly 100 deaths, or a mortality of 25.8 per cent. These are continuous unselected cases. They include all that have been done in my wards and by Mr. Liston, or from the foundation of the hospital to the present time (a period of thirty-seven years), and all that have been done in the hospital since July 1870; but they do not include the amputations done by the other surgeons between 1848 and 1870, of which I have no record. As they stand, I believe I am correct in saying that no other series of amputations of equal number, extending over an equal length of time, has ever been published in this country with an equally low rate of mortality. These amputations are primary and secondary—for injury and for disease; but include no partial ones of the hand or foot. As the mortality of the eighty cases that I shall take as my text corresponds, as nearly as possible, with the general mortality of the whole preceding amputations, I think we may consider them, in all respects, to be a fair specimen of these operations; and I prefer using them for our present purpose, on account of the care with which the causes that have led to the death of twenty-one of the patients have been worked out by the surgical registrars, Messrs. Beck and Godlee; for, although the general numbers that I have above given are as nearly as possible, if not absolutely, correct, I have not sufficiently accurate data of the causes that led to the death of the 79 out of the 307 cases for statistical purposes. Now, a general mortality for many years of from 24 to 26 per cent. in all amputations of the limbs for all causes, may be considered as a very satisfactory result, although there can be no ques-

TABLE A.—*Table of* 80 *consecutive Cases of Amputation (excluding all partial amputations of hand and foot) performed in University College Hospital from July* 1, 1870, *to Dec.* 1, 1873.

Amputations.	Total.	Cured.	Died	Cause of Death.
Primary—				
Hip-joint	1	0	1	Shock.
Thigh (above middle).	2	0	2	Shock in both.
Thigh (below middle).	3	2	1	Pyæmia.
Knee	1	0	1	Erysipelas.
Leg (upper half	2	1	1	Exhaustion third day.
Leg (lower half)	5	4	1	Pyæmia.
Foot	2	2	0	
Arm	3	2	1	Died of internal injuries in a few hours.
Forearm	3	3	0	
Multiple amputations	3	2	1	Exhaustion.
Total primary	25	16	9	36 per cent.
Secondary—				
Thigh (below middle).	4	3	1	Exhaustion fifth day.
Knee	1	1	0	
Leg	2	2	0	
Shoulder-joint	1	0	1	Pyæmia.
Forearm	3	1	2	Pyæmia ; tetanus.
Total secondary	11	7	4	36.3 per cent.
For Disease—				
Hip-joint	2	2	0	
Thigh	14	12	2	1 died of Bright's disease, 1 pyæmia & amyloid liver
Knee and condyles	6	4	2	Pyæmia in both.
Leg	7	6	1	Pyæmia.
Foot and ankle	4	4	0	
Shoulder-joint	1	1	0	
Arm	5	4	1	Pyæmia
Forearm	5	3	2	Exhaustion in both cases; old people, with destruction of wrist and cellulitis.
Total for disease	44	36	8	18.1 per cent.
Total of all cases	80	59	21	26.2 per cent.*

* Or, if we omit the case in which death resulted from internal injuries, and not from the operation, 25.2 per cent.

tion that it is one that admits, and that ought to be susceptible, of very great improvement. If we compare it with the results that have been obtained elsewhere, it is one of which we need not be ashamed.

Sir James Simpson, as is well known, has collected an enormous mass of statistics in connexion with the subject of amputation-mortality. These statistics are divisible into two distinct and separate sets of figures: one referring to amputations in town hospitals; the other, to the results of amputations in country and private practice. The accuracy of these latter has been seriously impugned. With that question I have nothing to do at present. The accuracy of those relating to hospital practice has been admitted by all—even by his most determined opponents, for they have been derived from statistical returns furnished to him by the surgeons and registrars of the various hospitals to which they relate. The mortality attendant upon these is 1 in 2.4, or 41.6 per cent. The lowest mortality in any of the metropolitan hospitals referred to by Sir James Simpson is 34.4 per cent.; the highest, 47.3 per cent. These statistics are carried down to the year 1868; they may consequently be looked upon as modern. I have collected, from various sources, others which will show that there has been, with one exception, no material improvement since they were published, and that the same, or indeed a much higher, rate of mortality prevails in some other countries than in this. Thus, for instance, if we take the published records given in the reports of four of the largest London hospitals, containing together nearly 2000 beds (Table B), carried down as late as last year, we find that out of a gross number of 621 amputations, 239 have died, or 36.7 per cent. (*vide* Table B); at the Edinburgh Infirmary, 43.3 per cent.; and at the Glasgow Infirmary, 39.1 (Simpson). The American returns are very good: thus I find that, at the Pennsylvania Hospital, the reports of which have been most accurately published for a long series of years—from 1831 to 1860—the average mortality is very low, being only 24.3 per cent. (Norris); whilst at the Massachusetts General Hospital, Boston, out of 692 amputations, there were only 180 deaths, or a mortality of 26 per cent. (Chadwick). These figures correspond, as nearly as possible, with those of University College Hospital.

The mortality in the Parisian hospitals, on the other hand, is far greater than that in London. As given by Malgaigne and Husson, Holmes and Bristowe, it amounts to about 60 per cent. Billroth, when at Zurich, performed 163 amputations between the years 1860 and 1867. Of these, 75 died, or 46 per cent. Thus it will be seen that a mortality of from 25 to 30 per cent. is considerably below the average of most metropolitan hospitals in this country, and far below that on the Continent.

In the consideration of the various questions connected with hospital mortality, as in all other matters that are alone determinable by vital statistics, it is necessary to attend to certain general conditions. In the first place, it is necessary that the numbers from which deductions are made should be sufficiently large not to be influenced by accidental circumstances, and also that they should extend over a sufficiently long space of time. The fact is well known to all surgeons, that surgical practice is peculiarly liable to what is often incorrectly and possibly irreverently termed "runs of luck", good or bad. Thus it is well known that in lithotomy, or in herniotomy, there may be long runs of successful or unsuccessful cases in the practice of the same surgeon or the same institution. If a surgeon have had a run of good luck, he may think that he has at last mastered the secret of operating with success in any given disease. If, however, he go on long enough, the "Nemesis of numbers" will certainly punish him for his presumption, and the wave of success on which he has been carried will at last break and land him on the barren shore of the usual average. The man who boasts that he never loses a case after this or the other operation, works at last for averages. He thinks more of his own credit than of his patient's good. He rejects, as unfit, those cases that are not likely to be successful, and reminds one of that sportsman who always hit his bird by taking good care never to shoot at one that there was a possibility of missing. These "runs of luck" have been well illustrated by the history of amputations. Lawrie (*Medical Gazette*, 1840) makes the remarkable statement that at the Glasgow Infirmary, between the years 1794 and 1810, there were 30 amputations for disease, of which 29 recovered; but on taking the central numbers from the register, he found that they showed a proportion of 11 deaths to 19 cures; and of the last 30, 22 recovered and 8 died. The general percentage of deaths after amputation in this institution was 39.1 per cent. In the Edinburgh Infirmary, of the first 99 cases, according to Simpson, only 8 died. At the Hospital D (Table B), there was in 1870-71 a run of 18 major amputations without a single death; whilst in 1867, '68, and '69, there had been a total of 25, with a mortality of 12. And Simpson gives the details of two remarkable runs of success at St. Bartholomew's Hospital, during which two periods there were in all 49 amputations, with only 2 deaths; yet, on continuing the record, the average mortality amounted to 1 in 2.9. In the Pennsylvania Hospital, in the years 1838-9, of 24 amputations, out of which 11 were primary, only 1 died. At the Worcester Hospital, there had occurred at one time 30 primary amputations in succession without a single death. Carden, operating with the long flap, had 17 consecutive cases of amputation of the thigh without a single death; but of the next 14, he lost 5. These "runs of luck", then, have not been uncommon in amputations. The reverse will also sometimes happen. I see by the reports of one of the London Hospitals, that in one year all the amputations except two died in that institution, whilst fourteen out of fifteen cases of strangulated hernia recovered after operations. It would be as unfair to deduce any inference with regard to the average mortality in that hospital from such instances, as it is from the runs of success that I have just mentioned.

The causes of these "runs of luck" appear to me not to have been investigated with the care they deserve. The run of success is usually attributed to "chance". This no doubt is operative in many cases; and doubtless in surgical operations, just as in games of chance, we may have a long series of uniform events develope themselves as a consequence of conditions that are in themselves most uncertain. It is, no doubt, quite *possible* that eleven operations out of a series of twelve may succeed or may fail, on the same principle that, if a shilling be tossed a dozen times, it may come down heads or tails for eleven times in succession. But, admitting the possibility of "chance" in determining the result of operations—and I dislike much to use that word in so momentous a question as this—I believe that, in order to explain these "runs of luck", we must, in the majority of cases, go somewhat farther and deeper into the consideration of the causes that determine events.

One great cause in many cases is, I believe, the prevalence or absence of epidemic septic influences at any given period. There are in all hospitals healthy and unhealthy seasons and periods—times in which every operative case, of whatever kind, does badly, from the influence of certain injurious epidemic conditions; others in which epidemics that are adverse to the success of operations are absent. To this I shall advert more fully in a subsequent lecture; I merely state the fact now.

But, besides this, there is another condition that influences materially these "runs of luck"; I mean the personal care and supervision exercised by the surgeon. This is especially the case when new methods of operating or of treatment are introduced, in the success of which the originators take a special personal interest. Thus we commonly find that new methods of amputating—as by long or rectangular flaps, for instance—have been attended by a run of success in the early cases, which have been carefully selected and personally attended to by the surgeons who, having introduced the methods, were peculiarly anxious about their success. We find the same in the early cases of any new treatment, to which great attention is paid by an enthusiastic originator. The cases succeed, not because the method of operating or of treatment is superior to any that have preceded it, but because the surgeon who is personally interested in its success devotes more time and more attention to his cases than those who take less interest in the method. And it is easy to understand how a possible combination of these three causes—chance, absence of epidemics, and personal care—may lead to a long run of that success which is most wrongly ascribed to "luck". In order to neutralise the effect of these runs of success, it is necessary to employ large numbers of cases. But, in consequence of this very necessity of employing large numbers, it becomes imperative, in an inquiry like this, to go beyond the possible experience of any one man, and to draw one's deductions from reliable results that may be obtained from the published records of large hospitals. These will be found in Table B.

Next in importance to large numbers is, undoubtedly, a similarity of the condition either in the patient operated upon or in the operation that is practised. Thus, it is not fair to compare the results of the same operation at different periods of life. This is well illustrated in the history of lithotomy, in which, as is familiarly known to every surgeon, the mortality increases almost proportionately to the age of the patient. So, also, it is impossible, with any degree of accuracy or of utility to compare the results of dissimilar operations with one another; as, for instance, of amputations with lithotomy, herniotomy, or ovariotomy. In all probability, ovariotomy presents more uniformity in respect to the conditions under which it is performed, than any other operation in surgery. Hence, the statistics that we can obtain from it are of greater value in reference to the amount of mortality under the varying conditions in which the patient is placed, or in reference to the causes that lead to death, than can be obtained by an examination of statistical results of any other operation; for in ovariotomy there is a similarity, not only in the seat of operation, but in the nature of the disease, and in the sex of the patient. In amputations, on the contrary, there is in all probability, more variety than in any other operation in surgery. There are not only those varieties that are common to most dependent on age, sex, constitution, and condition of the patient; but there are the varying conditions that are inseparable from dissimilarity of cause for which the operation is practised. Thus, it may be done for injury, and that injury may be of any extent, from the perforation of a joint to the complete smash of a limb. It may be done at any period after the infliction of the injury, within an hour or two or not for months. Then, again, when amputations are practised for disease, that disease may either be simple or malignant, may affect the bones, or the joints, or the soft parts.

TABLE B.—*Summary of Results of Amputations in four Metropolitan Hospitals, in which Deaths from Pyæmia and Shock are recorded.*

Hospital and Years.	Total.	Died.	Pyæmia.	Shock.	Percentage of Deaths.
Primary Amputations.					
A. 1866-70	21	13	4	6	62
B. 1861-72	140	67	24	8	46.4
C. 1869 70	18	8	2	5	44.3
D. 1867-71	8	2	0	2	37.5
Total primary	187	91	30	21	48.6
Secondary Amputations.					
A. 1866-70	20	16	9	2	80
B. 1861-72	53	30	10	1	56.5
C. 1869-70	5	1	1	0	20
D. 1867-71	6	3	2	0	50
Total secondaries	84	50	22	3	59.5
For Disease.					
A. 1866-70	89	31	15	0	34.9
B. 1861-72	215	56	16	0	26
C. 1869-70	17	5	0	0	29.5
D. 1867-71	29	6	3	0	20.6
Total for disease	350	98	34	0	27.4
Total of all amputations.	631	239	86	24	37.8

As it is very far from my wish or intention to institute anything like a comparison between the results of operations in different hospitals, I have omitted the names of the institutions mentioned in Table B, and have designated them by letters. I ought, however, to observe that these four hospitals contain amongst them above 1,800 beds; and that, taken with University College Hospital, they together constitute about one-half of the accommodation in the eleven general London hospitals. They are the only hospitals in the reports of which the *causes* of death after operations have to my knowledge been published, except in the case of St. Bartholomew's Hospital, for the recent statistics of which I would refer to Mr. Callender's very interesting papers, lately published in this JOURNAL, and in the Reports of that hospital. It is but right to observe, that in this great institution the death-rate after amputation has, since the year 1869, been lower than that of any other hospital with the statistics of which I am acquainted, and that the amount of pyæmia appears to be extremely small; but from the way in which the returns have been published, I have not been able to make out with accuracy the exact amount of this and other causes of death.

Thus, although amputations on account of the frequency of their performance, the uniformity of skill with which they are practised, and the readiness with which their results are determinable, have usually been taken as the test operation, from the result of which the salubrity of a hospital is determined and statistical deductions can be most easily made; they are, in point of fact, those operations from which it is most difficult to arrive at accurate conclusions with absolute certainty, unless the numbers employed are so large as to equalise the varying and disturbing conditions under which the operation is performed. In determining, therefore, the results of operations, and more especially of amputations, it becomes necessary, above all, to employ large numbers, and the experience or practice of any one man is scarcely adequate to furnish these. As, however, we have by far a greater mass of statistics in connection with amputations than with any other operation in surgery, it is, notwithstanding the objections just stated, more easy to discuss some of the principal causes of death after operation in connection with amputations than with any other surgical procedure, and this is the more easy, inasmuch as the operation of amputation does not, in itself, interest or implicate any necessarily vital part of the body.

It is a little curious and not uninstructive to trace these accumulations of amputation—statistics which have, during the last thirty years, grown to a gross total of very many thousands; and in doing so we are enabled to form a comparative estimate of the rate of mortality after these operations at the present and in former days.

Statistics of amputations were in this country first furnished to the profession by the army surgeons, who published the results of the experience obtained in the Peninsular war; and Guthrie's statistics of the result of amputations after gun-shot injuries continue to be amongst the most valuable and interesting that we possess. At a later period, Sir Rutherford Alcock, the present minister in Japan, published the results which he obtained when surgeon-in-chief to General Evans's army in the Carlist war of 1835 and following years. The first statistics in civil surgery that were published in this country, were collected by Benjamin Phillips who, in 1837, read a paper on the subject before the Royal Medical and Chirurgical Society.

Amongst other conclusions at which he arrived was this, that the mortality after amputation of the thigh, deduced from a body of statistics collected in England, France, Germany, and America, amounted to about two in five cases; and that the average mortality after all amputations taken collectively was 23.7 per cent. This and similar conclusions, which subsequent experience has proved to be decidedly under the mark, were considered by the Council of the Society to be so untrustworthy that they refused the publication of the paper in the *Transactions*, on the ground that some source of error must have crept into the statistics, which showed so unfavourable a result. Phillips subsequently published extended statistical inquiries, the result of which was that the average mortality after amputations amounted to 35.4 per cent., or 5.6 per cent. less than Simpson's estimate in 1868—viz, 41 per cent. His example was followed by Lawrie of Glasgow, who, in the *Medical Gazette* for 1840, published very extended statistics of amputations in the Glasgow Infirmary, showing a mortality of 36 per cent. The surgeons of the Royal Infirmary at Liverpool, and of the Northern Hospital in the same town, followed his example, which was then taken up and very generally adopted throughout the profession. The largest collection of statistics that have been made on this subject will be found in the first volume of Cooper's *Surgical Dictionary*, published in 1861, and collected by J. Lane; and in Simpson's works, carried down to 1868. The result from these is that, taking all amputations of all the four limbs in eleven of the largest general hospitals of this country, there is an average mortality, as has already been stated, of 41.6 per cent. In the report of Simpson's statistics, you will find that University College Hospital is omitted. The way in which this omission occurred is as follows, and ought to be mentioned, as it is a proof of the care with which Simpson compiled his statistics. When Simpson was constructing his tables, he wrote to me requesting to be furnished with a return of amputations from our hospital. I replied that all the amputations that had been performed in my wards had been published in successive editions of my work *On the Science and Art of Surgery*, and that I was unable to furnish him with any statistics from the practice of my colleague. He very properly declined to publish a partial return from one institution, whilst he was giving full returns from all the others; and consequently omitted all statistics from University College Hospital.

From the preceding observations, then, I think we are fairly justified in concluding:—1. That the rate of mortality after amputations in hospital practice still continues to be very high; 2. That it has not decreased since the publication of the first amputation statistics in civil practice about thirty-five years ago.

The next question that we shall have to consider is, as to the causes of this continued high rate of mortality.

THE GLASGOW MATERNITY OR LYING-IN HOSPITAL.—From the thirty-ninth annual report of this hospital, for the year ending November 1873, it appeared that, in the total number delivered—1265, there were ten deaths; eight of these being among the three hundred and twelve confined within the hospital. Three of them were due to puerperal septicæmia and peritonitis. Isolation of the patients affected, and dismissal of the other patients at the earliest period consistent with safety, were successful in arresting and preventing the further spread of the disease. Cleansing and fumigation of the wards were subsequently resorted to, and no recurrence of the disease took place, though puerperal fever was more than usually prevalent in various quarters of the city.

LETTSOMIAN LECTURES
ON
SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

LECTURE I.—*Concluded.*

THE fact that, in a large proportion of cases in which the nervous system is affected with disease arising out of syphilis, the secondary stage has been brief, or imperfectly represented, or absent, and that very rarely is the history of syphilis prominent, renders it very important to make out, if this be possible, such a distinctive character in syphilitic affections of the nervous system, as will of itself serve to determine the diagnosis as confidently as in the case of a node or gummy tumour. We shall see later how far this is attainable; and an intermediate step towards the elucidation of the problem is the consideration of the pathology of syphilitic changes occurring in the nervous structures.

The symptoms to which any disease of the nervous system gives rise will arise primarily from derangement of function of the parts affected; but the kind and degree of such disturbance will be greatly influenced by the nature of the morbid process and by its rate of progress. It will make a great difference, for example, whether a tumour, at a given situation in the brain or cord, have its starting-point on the surface or in the substance; whether it increase rapidly or slowly; whether it grow at the expense of the nervous structure, causing no actual increase of volume, or add to the contents of the cavities and displace and compress the nervous matter. In considering, therefore, the morbid conditions to which syphilis gives rise, we have to take into account not only the morbid anatomy, but the general habits of the disease.

There are very large materials from which I might draw the account to be placed before you of the morbid changes produced by syphilis in the nervous structures, but I shall avail myself almost exclusively of the labours of Drs. Wilks and Moxon, whose contributions are at once simple, clear, and comprehensive; indeed, I know nothing in pathology more admirable than their descriptions of syphilitic disease in the *Guy's Hospital Reports.*

According to Dr. Wilks (*Guy's Hospital Reports* for 1863), in syphilis, there is a disposition to the effusion of a low form of lymph, or fibroplastic material, in nearly every tissue of the body. When this exudation comes to be examined after death, it has generally had a long existence in the organ in which it is found, and it presents under the microscope fibro-plastic elements, small nuclei, fatty granules, and some amorphous matter. As a rule, the deposits are hard and fibrous, and not soft, as suggested by the term gummy or gummatous usually applied to them; but they may undergo secondary softening. There is nothing specific in the individual elements, and, indeed, the notion of a specific structural element in any disease is now generally abandoned; but characteristic peculiarities exist, which have been more exactly described by Dr. Moxon, who says:—"If one looks over a series of syphilitic changes, and compares these with any other forms of change, one finds that the syphilitic cases have characters by which they are practically easily distinguished. These characters I will attempt to state.

"1. Generally, a small part of the organ is attacked, and the remainder is left quite free. The disease is strictly localised in the spot it affects. 2. Its outer part is composed of fibrous tissue, which can be seen to represent the natural fibrous supporting elements of the part in a state of augmentation, while the functioning elements of the part have dwindled away. It is a local sclerosis. 3. Its central part shows the now celebrated caseous or gummatous faint yellowish matter of more and more elastic consistence, and less and less friability and curdiness, generally rather sharply distinguished from the fibrous outer part, and sometimes softening down or calcifying. 4. There are signs of more acute inflammation in the immediate neighbourhood, showing lymph, etc., or adhesions to the parts around; (3 and 4 may be absent). Such patches, sharply contrasting with more healthy tissue immediately about them, and (5) distributed more or less widely in a variety of organs, but especially in the testes and liver, are not a general thing that could be passed over as a common accident. Their characters attract attention. A syphilitic gumma in muscle or brain is so unlike anything else, that, if seen for the first time by one who knows the rest of the common run of pathological changes, it demands from him some recognition of its peculiarities. In short, it is not common, but specific in the strict sense of the word. I mean, that we are not to suppose that these syphilitic changes are of a kind that are otherwise recognised as non-syphilitic, or in any sense of a 'common' kind. It is not so. They are quite peculiar, and strike the eye and the mind as peculiar. Allow that they have characters like the verbal stock descriptions of 'inflammation generally' (a thing which has no existence; the commonest inflammation has its common peculiarities), these characters of common inflammation are not the characters that we rely on to know them by; the five characters I have above enumerated do not belong to any other change, and amply suffice to distinguish practically the syphilitic from all other changes." (On Syphilitic Disease of the Spinal Cord. By W. Moxon, M.D.—*Guy's Hospital Reports*, vol. xvi, 1871.)

As affecting the nervous system, and quoting first Dr. Moxon, as to "the habits of locality and rates of progress" of the disease, "syphilis attacks the surface of the brain and its membranes; it attacks them in limited spots, and it spreads slowly."

The morbid changes are, on the one hand, adhesions of the membranes to each other and to the surface of the brain by means of an adventitious material of firm consistence and yellow colour, which may be called lymph, but is harder, tougher, and more opaque than lymph as commonly seen. This exudation may be found at any part of the surface; it invades and destroys the surface grey matter, interferes with the supply of blood, and, when it occupies the membranes at the base of the brain, surrounds and involves the nerves in the intracranial part of their course.

On the other hand, the syphilitic deposit may take the form of a distinct tumour of fleshy aspect, very vascular externally, but presenting at its centre the well-known gummatous character; or the deposit may be small and circumscribed, but multiple, firm and hard as to consistence, and yellow in colour. Around the foreign bodies may be more or less inflammation or softening. In the spinal cord, while the general characters are similar, there are differences of detail which will be described later.

But all these deposits of lymph, whether diffused or circumscribed, are met with in the tertiary stage of syphilis. Dr. Wilks, it is true, considers the disease to be characterised throughout by a tendency to effusion of lymph, and makes no distinction in this respect between secondary and tertiary syphilis; explaining the fact that the deposits are found only in the tertiary stage, by saying that it is only in this stage that sufferers die from syphilis, and that the *post mortem* appearances may date from the secondary period. But, if people do not die from secondary syphilis, they die during this stage from accident and other diseases, and there ought to be abundant evidence of the presence of the deposits described. But, as I have already said, the differences in the clinical history of secondary and tertiary syphilis, and in the treatment required by these two stages of the disease, are such that nothing short of the overwhelming evidence we possess would convince us that they are only two periods of the same affection, and we may well look for differences in morbid anatomy. The differences found are, moreover, such as would be explained by considering secondary syphilis as the fever of which the lesions of tertiary syphilis are the sequelæ. Looking upon inflammation as the result of a disturbance of the relations between the blood and tissues; in the one, we have this relation disturbed by a morbid condition of the blood; in the other, by a deteriorated state of the tissue-elements. In secondary syphilis, the pathological conditions noted are chiefly evidences of meningitis, old or recent, or of congestion, and very frequently no appreciable lesions have been discovered—the conditions produced by other blood-poisons; in tertiary syphilis, the localised changes described.

In addition to the morbid changes in the nervous structures proper and the vascular meninges, the brain or cord may be invaded by gummatous tumours springing from the dura mater or bones, or affected by extension of inflammation from carious bone. Or again, the blood-supply may be cut off by obstruction of the artery from syphilitic disease of its walls.

The scheme which I have laid down for myself in these lectures is to describe successively the effects of syphilitic disease on the nerves, spinal cord, and the different parts of the encephalon. I am not aware that this has yet been systematically attempted; but, though it would have been easier and, perhaps, safer for me to have followed the beaten track, and speak of symptoms or groups of symptoms of affections of sensation, motion, or intelligence, of painful, convulsive, and paralytic forms of affection of the nervous system, without referring them to any definite seat and form of lesion, I have preferred to try to make use of our increasing power of localising and defining morbid conditions from the symptoms to which they give rise, and to make the organic changes the basis of my classification. I come first, then, to syphilitic affections of nerves, which will comprise neuralgia and local paralysis. Of the pure neuralgias I have little to say. I do not think they are very common; they do not differ materially from the ordinary forms of neuralgia. The fifth, cervico-occipital, cervico-brachial, sciatic, and some visceral nerves, have been found to be affected much in the same proportion as when no specific influence is in operation, and Dr. Anstie has given a clue to the occurrence of neuralgia in syphilis. It is, that the subjects are constitutionally neurotic, and syphilis is one among the many causes which may bring out the tendency. It is more common in the secondary than in the tertiary stage, and may even precede the first cutaneous eruption. If recognised, the most successful treatment will be that appropriate for the stage of syphilis in which they occur, though sometimes treatment of the neuralgia as such will succeed, as we sometimes see in other cases in which neuralgia is suppressed, in spite of the continued existence of an exciting cause, by operating against the predisposing condition of the system.

A form of nerve-pain differing from ordinary neuralgia—more dull, aching, and continuous—may be caused, in the tertiary stage, by neuromata (extremely rare), by pressure from a node or gummy tumour, or by the conditions giving rise to sensory and motor paralysis, which I shall now proceed to consider.

We may have local paralyses from syphilitic affections of either cranial or spinal nerves. With the exception of transient loss of power, sometimes seen in the ocular muscles, paralysis of individual nerves is almost invariably a tertiary phenomenon. It may be produced in various ways—by a neuroma, by the inclusion of the nerve in a gummy tumour, very rare occurrences, of which I have seen no distinct example; but usually the question of causation lies between periostitis about the orifice of exit of the nerve from the cranium or spinal canal, and meningeal exudation involving the nerve during the intracranial or intraspinal part of its course. The latter is by far the more common cause, as will be seen from a consideration of the cases.

Cranial Nerves.—Any of the cranial nerves may be paralysed from the consequences of syphilitic disease, but some much more commonly than others. I shall not here speak of affections of the special senses—loss of sense of smell, blindness, or deafness. These would alone form a subject large enough for a course of lectures. To speak only of vision, it may be impaired or lost in consequence of syphilitic inflammation of the choroid or retina, or from double optic neuritis, consequent upon a syphilitic tumour in any part of the brain, or from pressure upon the optic tract. Deafness, again, which is common in early syphilis, may be due to affections of the auditory mechanism or auditory nerve. The cranial nerve most frequently affected is the third. Sometimes the only effect is mydriasis, from loss of accommodation and dilatation of the pupil, or ptosis of the eyelid; but more commonly the entire nerve suffers, and, in addition to ptosis and dilatation of the pupil, we have external strabismus and immobility of the globe of the eye. The twofold fact that the third nerve is the nerve most frequently affected, and often the only nerve paralysed, and, again, that portions of the nerve may suffer before the others, is explained by the habit of locality of syphilitic exudation, of which the interpeduncular space at the base of the brain, traversed by the third nerve on its way to the cavernous sinus, is a favourite seat, and is conclusive evidence that the paralysis is not due to periostitis of the orifice of exit. This nerve has also been found compressed by a gummatous tumour of the sella Turcica of the spheroid bone. I shall give as illustration an example in which both third nerves were affected, which is not a frequent event.

Paralysis of the sixth nerve, the evidence of which is internal strabismus, is next in frequency. Paralysis of the fourth nerve, the remaining motor nerve of the eye, is not common. It is shown by double vision without obvious squint, the two images being obliquely placed with respect to each other and receding when the patient looks down (since this brings the superior oblique muscles into action), and approximating each other, and finally coalescing as the eyes are raised, so that vision is single when the patient looks up.

Paralysis of the seventh nerve, unlike oculo-motor paralysis, is more frequently caused by pathological conditions which are not of syphilitic origin; the features it presents are too familiar to need description, as are also those of paralysis of the fifth nerve. Paralysis of the ninth nerve is seen in the tongue and in the sterno-hyoid and thyroid muscles; of the eighth, in difficulty of deglutition.

CASE I. *Paralysis of Left Third Nerve, Slight Right Hemiplegia, and ultimately Paralysis of Right Third Nerve.*—A plasterer, aged 37, came under my care as out-patient at St. Mary's Hospital on September 16th, 1867. He was then complaining simply of weakness and giddiness. He presented well-marked syphilitic cachexia, and he stated that he had contracted syphilis sixteen years before, and had suffered from various manifestations since. He had had two fits within three or four months of his application at the hospital, but he made no mention of these at first. Iodide of potassium was given in small doses—three grains three times a day. A pustular eruption broke out on the lips and again disappeared; and about the same time, November 25th, the first symptoms of paralysis of the left third nerve became apparent in indistinctness of vision, arising, no doubt, from loss or impairment of accommodation and dilatation of the pupil. He seemed to improve for a short time; but, on December 19th, there were not only dilatation of the left pupil and want of parallelism between the two eyes, but also slight paralysis of the right side of the face and weakness in the right leg, while his speech was indistinct, and he felt giddy and drowsy. There was thus apparently mischief about the left crus cerebri, involving the origin of the left third nerve and the motor tract of the right side of the body and face, probably syphilitic exudation in the pia mater of the left side of the interpeduncular space.

The dose of iodide of potassium was doubled; and, on December 30th, he felt better, but still had ptosis of the left eye-lid, impaired mobility of the globe of the eye, and especially inability to carry it inwards beyond the median plane, with dilatation of the pupil. The right half of the face was also weak; in trying to whistle, air escaped at the right side of the mouth, and the left side of the upper lip was drawn up more readily.

January 2nd.—The paralysis of the left third nerve was complete. He had slight pain behind the left eye. A blister was applied to the left temple. The pain extended gradually to the temple and the whole left side of the head, becoming more severe. It usually set in about midnight, and prevented sleep for the rest of the night. The dose of iodide of potassium was increased to eight, twelve, and sixteen grains three times a day. Cod-liver oil and iron were given, and blisters were applied to the temple. On January 23rd, the pain was no longer complained of, but the left third nerve remained paralysed, and the right hemiplegia, which at one time had disappeared, was again to be detected both in face, arm, and leg. Ten days later, the loss of power in the right limbs was no longer evident; but, on February 6th, paralysis of the right third nerve had come on, so that both eyelids had dropped and both eyes were immovable, or nearly so, and squinting divergently; the right pupil, however, was not very large. He complained also of a humming noise in the right ear, and that he could not sleep after 1 A.M., though early in the night he slept well.

Considerable improvement in the condition of the right third nerve took place; but the patient attended very irregularly, and the paralysis recurred to a certain extent. He disappeared about the middle of March, both third nerves being considerably paralysed; so that, to see under the drooping eyelids, he had to make use of the occipito-frontalis to raise them somewhat, and throw back the head greatly. He had taken the iodide for a short time in twenty-four-grain doses.

My interpretation of the simultaneous affection of the two great motor nerves of the eyes is, that a syphilitic inflammation with gummatous deposit had invaded the pia mater of the interpeduncular space, involving the two third nerves, and at one time threatening to invade the left crus cerebri.

CASE II. *Paralysis of the First and Second Divisions of the Right Fifth Nerve, of the Fourth Nerve, and of the Palpebral Branch of the Third Nerve of the Same Side.*—A farrier, aged 41, on May 9th, 1870, when he came under observation, had been complaining of nocturnal pain in the head for eight months, and of loss of sensation in the right half of the face above the mouth and double vision for four months. He denied having suffered at any time from syphilis; but he had a tubercular eruption over the inner end of the right eyebrow, which was clearly of a tertiary character, and a discharge of offensive and bloody matter from the right nostril. His complexion also had the sallow earthy appearance seen in tertiary syphilis, and his wife had had five or six miscarriages and no living children. On testing the sensibility of the right half of the face and scalp, it was found that the forehead on this side and the scalp, as far back as the occipito-parietal suture, the ear, cheek, nose, and upper lip were almost absolutely insensible to all kinds of impressions. A patch of skin over the malar bone was not so insensible as the rest of the cheek, and there was no diminution of sensation in the chin, lower lip, or tongue. The right eye was closed, but the lid could be raised to a certain extent by the action of the occipito-frontalis, the forehead being wrinkled and the eyebrow drawn up. The eye, however, was movable in all directions, and the pupil on this side of the same size as in the other eye, and equally sensitive, so that the branch for the levator palpebræ was the only part of the third nerve affected. When both eyes were open, there were double vision and vertigo, but the double vision was not explained by any obvious want of parallelism between the two eyes, and it was found, on testing, that the eyes moved equally well in every direction; no paralysis, therefore, of the sixth or third nerve existed on either side. It was further found that the two images were not on the same level; one window, he said, was before him, the other—the pseudo-image—on the floor, to the right; he saw two shadows if he walked in the sun with both eyes open; and, with the right only open, and in the absence of the confusion arising from a double image, he staggered, and would have fallen—which I have never seen in so marked a degree in paralysis of the third or sixth nerve only.

The position of the pseudo-image below and to the right of the real visual image, and the facts made out on further examination, namely, that the two images receded one from the other when the eyes were directed downwards, approached and eventually coalesced when they were directed upwards, and changed in their relative position as the patient looked to the right or left, showed that the right superior oblique muscle, and therefore the right fourth nerve, were paralysed.

The nerves affected were thus the two upper divisions of the fifth, the fourth, and the palpebral branch of the third; and it was scarcely open to question that the nature of the disease was syphilitic. Iodide of potassium was given in doses, rapidly increased, from six to twenty grains three times a day. First, the nocturnal pain was removed, the eyelid could next be raised, and, very soon afterwards, sensation gradually returned, and the double vision ceased to be troublesome. The cachexia became less marked, and the discharge, for which a weak carbolic lotion had been ordered, diminished. The patient was under treatment only from May 9th to July 2nd. He had previously been under the care of a medical man for the whole of the eight months during which he had suffered from pain in the head.

No single lesion would account satisfactorily for the paralysis of the different nerves involved. The superior maxillary division of the fifth has but a very short independent course within the cranium from the Casserian ganglion to the foramen rotundum, and it may be concluded that a lesion, involving the two divisions of the fifth, was situated near the apex of the petrous bone. This might embrace the fourth nerve, which runs over this part to enter the cavernous sinus; but it could scarcely include the palpebral branch of the third, leaving every other portion intact, unless the branch were given off unusually early. Of the two suppositions, a double lesion or an abnormal distribution of the third nerve, the former is the more probable, since occasionally the branch to the levator palpebræ is alone affected, and it recovered here independently of the fourth and fifth nerves.

CASE III. *Paralysis of Right Seventh Nerve, with Partial Implication of Ninth in* 1865; *Paralysis of Left Sixth and Eighth in* 1866, *and of the Right Sixth in* 1868: *Recovery.*—An embroideress, aged 47, came as out-patient to St. Mary's Hospital April 27th, 1865. She had for six days been suffering severe pain in the right side of the head and face, with partial paralysis of the right portio dura, attributed to a mental shock. The principal seat of the pain was behind the right ear, but it extended upwards upon the side of the head, and downwards along the back of the neck to the shoulder. It was always worst at night. The facial paralysis presented the usual feature of paralysis of the seventh nerve, as distinguished from facial hemiplegia, but was incomplete. The mouth was drawn to the left, the muscular markings of the right face and forehead were smoothed out, the right eye did not close in the reflex winking movements, though it could still be closed by an effort. The patient thought she did not feel properly on the right side of the face, or see well with the right eye, and the right pupil was smaller than the left, though both acted well. On May 1st, the paralysis of the right portio dura was complete, the eye unclosing, the face expressionless, and looking as if swollen. There was, moreover, some little difficulty in protruding the tongue. The pain was very severe in the right side of the head and down behind the ear to the shoulder, not, however, following distinctly the course of the muscles, or corresponding closely with the distribution of any nerve; it was most severe about the ear and at the mastoid process, where there was also tenderness on pressure. There was not much pain about the cheek or mouth.

I ought to have suspected syphilis as the source of the mischief, although the disease was not acknowledged, from the nocturnal exacerbation of the pain, and from the partial implication of other nerves besides the seventh; but I allowed myself to be diverted from this idea by the comparative rarity of syphilitic affections of the seventh nerve, and by the symptoms of inflammation in the mastoid and petrous portion of the temporal bone, although this local inflammation would not explain the extent of the pain, which was clearly due to a more extended inflammation of the dura mater.

I treated the case by repeated blisters, dressed, after a time, with savin ointment, administering first quinine in rather large doses, and later quinine and iron. Six months were required for the cure.

In August, 1866, this patient came to me, complaining of palpitation of the heart and flatulent dyspepsia, and, while under treatment for this, she began to squint and have double vision. On September 17th, this had lasted a week, and she stated that she had had something of the same kind, for a week, in March, after a peculiar convulsive feeling in the chest, which passed upwards with a hot flush from the chest to the head, when the sight went; but she did not lose consciousness or fall. The squint and double vision were found to be due to paralysis of the left sixth nerve. The right eye followed an object equally well in all directions, but the left could not be carried outwards beyond the median-plane of the orbit. She saw double wherever an object was placed and a curious fact was that, while objects appeared of a natural size to the right eye, she became giddy whenever it was opened, whether alone or together with the left eye, so that she was compelled to keep this eye closed, and to employ, for ordinary vision, the eye which had its external rectus muscle paralysed; and, when told to open the right eye, there was an appearance of ptosis, respecting which it was difficult to be sure whether it arose entirely from an unwillingness, or partly from an inability to raise the lid. It is not improbable that the right fourth nerve was paralysed, giving rise to this giddiness; but the detection of this paralysis was prevented by the paralysis of the opposite sixth. With the left eye, she saw objects of a smaller size than natural; but she used this eye both at her work as an embroideress and in the streets.

On September 23rd, she had one of the attacks mentioned above as having preceded the double vision in March, described as a convulsive feeling in the chest, a hot flush mounting to the head, and temporary loss of sight. On October 4th, she was suffering from severe nocturnal pain in the right side of the head.

October 8th.—She was unable to swallow solids. The only food she was able to take was bread in small quantities, well-softened, and washed down by fluid swallowed very gently. This difficulty of deglutition could only be said to have been removed on November 22nd, having thus lasted six weeks. I had not even now recognised the nature of the disease, and the treatment again consisted in the administration of quinine and iron, and, when the dysphagia came on, strychnine, with occasional aperients. She was under my care on this occasion for five months.

In January, 1868, she again came under my care, this time with paralysis of the *right* sixth nerve. There was obvious syphilitic cachexia; marks were seen in the throat. Iodide of potassium was given in doses of five grains, together with cod-liver oil and steel wine. She was all but well in five weeks, saw quite well near at hand, but a little indistinctly at a distance. A fortnight later, she was quite well.

In another case, which came under my observation in January, 1871, that of a woman aged 39, paralysis of the left portio dura, preceded by pain in the forehead, and accompanied by pain and tenderness in the mastoid process, was recovered from, under the influence of iodide of potassium, in little more than a month, the pain, however, persisting after the paralysis had gone.

Nerves of the Upper Extremity.—Several cases, in which the nerves of the upper extremity have suffered, directly or indirectly, from syphilitic disease, have come under my notice.

CASE I.—In November, 1864, a sempstress, aged 42, who had lived an irregular life, and had a syphilitic look, though she did not acknowledge syphilis, came under my observation. She had begun to suffer a month previously from pain in the nape of the neck, down the right arm to the forefinger; this had continued ever since, but was worse in bed at night, so that she had slept for some time in the sitting posture. The arm was also very weak, and could not be raised. The neck was stiff, and could not be bent or turned in any direction without pain. There was tenderness and fulness along the right side of the cervical spine, from the third to the seventh vertebræ, tenderness also on the cords of the brachial plexus, in the posterior triangle of the neck, and pressure sent a pain down to the fingers. I attributed the pain to syphilitic periostitis or inflammation of the fibrous structures of the cervical spine, involving the nerve-roots in the foramina. Speedy relief and, in no long time, complete cure was obtained by giving iodide of potassium, and applying one or two blisters. I saw her subsequently with a node on the femur.

CASE II.—In another case, almost complete loss of power in the left hand and arm, with great waste of the affected parts, and severe nocturnal pain, with tenderness over the left side of the cervical spine, was relieved in a single week by six grains of the iodide of potassium, the muscular power returning before the pain was entirely removed. The patient (a woman aged 27, who had had one child, which died in infancy) had been ailing for a year, and had a sallow, anæmic, syphilitic look.

CASE III.—In this case, a woman aged 43, there was paralysis of the thumb and first two fingers of the left hand, without loss of sensation.

She had at the time a node on the sternum, and a well-marked syphilitic appearance. Of four children, one daughter only was living, and she, at the age of 23, had been hemiplegic on the right side for four years.

Case IV.—A painter, aged 44, first seen on September 9th, 1867, had had gonorrhœa, but, according to his own account, no sore or cutaneous eruption; he had, moreover, suffered from colic, and presented a well-marked blue line on the gums. The paralysis, therefore, from which he suffered in the right forearm might be attributable to lead-poisoning, but it differed altogether from the usual form of lead-paralysis, and it was accompanied by severe pain and well-marked cutaneous gummata, and signs of ancient nodes on the ulna, in adhesions binding the skin and other structures to this bone. The little and the ring-fingers were alone affected, and the affection consisted in impaired sensation and loss of power, with contraction, the contraction being most marked in the little finger. The fingers could be straightened by me without difficulty, and by the patient with effort. The fingers, however, spread out where this was done, so as to give the hand a claw-like appearance.

Under treatment, the pain was relieved, and the gummata disappeared very speedily; but the condition of the paralysed fingers was not greatly improved. The ulnar nerve had, no doubt, been implicated in one of the nodes, of which traces remained, and become permanently damaged. This case, with perhaps the last, is one of those in which the nerve is affected after leaving the spinal canal.

Nerves of the Lower Extremity. Case I.—*Paralysis of Flexor Muscles of Thigh, and of the Muscles generally of the Leg and Foot; Loss of Sensation over the Front of the Thigh and along the Inner Aspect of the Leg.*—A bricklayer, aged 30, came under my observation, among the out-patients of St. Mary's Hospital, August 20th, 1868. He was complaining of loss of power and sensation in the left lower extremity. He had been twice married, and had one child; had had no previous illness, and denied that he had ever had syphilis. A perfectly characteristic syphilitic eruption was, however, present on both legs, in the form of a gyrate psoriasis, and there were spots of psoriasis on the abdomen and chest; the inguinal glands also were enlarged and matted together. The loss of power in the limb had existed for a month, and had begun with an inability to move the foot. When made to walk, this leg remained straight, and was swung from the hip, the knee was not bent, and there was no movement of the ankle. If the knee became bent, as in going down stairs, it straightened itself out suddenly with a jerk when liberated from contact with the ground or step. On examination, it was found that he was unable to move the foot at all, or to resist motion at the ankle-joint. He could bend and straighten the knee; could resist flexion powerfully, but extension not at all. The flexors at the back of the thigh were thus greatly weakened; the muscles of the leg and foot almost completely paralysed. The motor paralysis, therefore, was in the distribution of the sciatic nerve. Numbness and loss of sensation were also complained of, and it was found that sensation was greatly impaired all down the front of the thigh and leg, and in the foot and toes; not in the gluteal region, or down the back, or along the inner or outer aspect of the thigh; below the knee, the region of impaired sensibility occupied the inner side of the calf. Sensation was also imperfect over the left half of the lower part of the abdomen. The loss of sensation consequently did not correspond anatomically with the loss of motion, *i.e.*, did not affect those parts of the surface moved by the muscles paralysed. The motor paralysis was in the sciatic area of distribution, the sensory mainly, though not exclusively, in the anterior crural area. The paralysed muscles were wasting, and the left limb was decidedly smaller than the right. It was found, on a later visit, that the psoas and iliacus muscles were weak. Iodide of potassium was given in doses of six grains. In four days, sensation was said to be returning. In ten days, it was re-established in every part of the limb, and the foot could be feebly moved.

On September 14th, he could walk well, but still kicked out the foot. The spots were fast disappearing. We saw the last of him on October 22nd, when he was apparently well.

In this case, the only evidence of syphilis was the eruption, which was accepted as conclusive in the face of the patient's statement, that he had never suffered from syphilis.

The paralysis was clearly not spinal, since it (1) affected one leg only, and (2) was both sensory and motor in the same limb, while unilateral mischief in the cord is known to give rise to motor paralysis in one limb (that on the same side as the injury), sensory paralysis in the other, while (3) its distribution was in the areas of different nerves. Finally, the muscular wasting indicated a severance of the nerves from the cord by the morbid change. I take the lesion to have been syphilitic inflammation and deposit in the left side of the cauda equina, involving the nerves given off from the lower end of the cord.

In another case, a fortnight's treatment, by twelve and sixteen-grain doses of iodide of potassium, made a distinct impression upon a motor paralysis of the lower extremity of twelve months' duration; but no results were obtained, in consequence of the patient's ceasing to attend. The case is, however, interesting as an example of an unusual result of syphilis.

Case II.—The patient was a tailor, aged 38, had had syphilis ten years, during which various manifestations had appeared, and, when seen, he represented a syphilitic eruption. Twelve months before he came under observation, he had, in the course of three or four days, gradually lost the use of the right leg, suffering also at the time from a burning pain in the hip, knee, and back. The limb was quite useless; he could not support his weight on it, could not move a toe, or the foot, as a whole, upon the leg. He could not oppose the least resistance to extension or flexion of the knee-joint, or resist flexion of the thigh upon the abdomen; he could, however, when the thigh was drawn up, prevent its extension. The limb was wasted, but still presented a moderate mass of soft, flabby muscle on the thigh and calf. The only muscles acting at all were the psoas and iliacus, and the adductors. Iodide of potassium was given in doses, first of twelve grains, then of sixteen grains; and, although there was not time for any marked effects, there was improvement, as the foot could be raised well from the ground, and the leg was swung when the patient was seated, whereas at first the leg fell by its own weight.

REVIEW OF DR. CUNINGHAM'S REPORT OF THE EPIDEMIC CHOLERA OF 1872.*

By JOHN MURRAY, M.D.,
Inspector-General of Hospitals.

As I have had much experience of cholera during the last forty years, and have devoted especial attention to its study in India, I have been requested to review the Report of the Cholera Epidemic in Northern India of 1872, which has been presented to the Society by the Sanitary Commissioner with the Government of India, Dr. Cuningham. I am glad to see him present this evening, and I trust he will favour us by replying to any objections I may raise to his views. I also hope that the interest of this meeting may be increased by our being favoured with the views of those of our members who have given their attention to this subject.

This Report gives an useful topographical account of the chief military cantonments, with tables showing the previous severe attacks since 1826; also tables showing the daily course of the disease among different classes, during its presence; and very valuable monthly returns of the mortality from cholera during this epidemic, amounting to 165,458 over the whole of our possessions in India and Burmah. This report contributes a valuable addition to the History of Cholera, from a knowledge of which, alone, the true nature of the disease can be established. We look in vain for similar reports from the Governments of those countries in Europe, where the disease appears now to have taken up its abode as firmly as in India. These statistical tables are an important supplement to the series which appear in the Annual Reports of the Sanitary Commissioner, and reflect great credit on the ability and zeal with which they are collected by Dr. Bryden.

Dr. Cuningham gives many valuable opinions and suggestions regarding the sanitary condition of the various stations and the improvements required, especially regarding the water-supply, which in many instances is not only bad in quality, but deficient in quantity. This scarcity of water renders the system of flushing drains, employed in Europe, inapplicable to India, where, in many parts, there are intervals of months without a shower. The report before us is a history of one of the severest epidemics that have attacked India since 1817. In judging of the nature of the disease from this history, Dr. Cuningham appears to have arrived at conclusions on certain points from imperfect and insufficient data. He deviates from the ordinary canons of criticism in considering negative evidence as important as positive; and he attaches no value to the opinions of others who have devoted much attention to the subject.

There is a marked coincidence in the period and progress of all epidemics. The disease progresses chiefly in a north-westerly direction, and appears in the same months. The only exception is in the epidemic of 1845, when the disease attacked Umballa in the months of

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* Read before the Epidemiological Society.

July and August, and progressing eastward reached Meerut in August and September; the disease had raged severely in Lahore in 1844, in Peshawur in 1843, and in Cabool in 1842. The present epidemic bears the closest analogy to the Hurdwar epidemic of 1867, of which we have most minute details. In giving its history, Dr. Cuningham appears to have missed a most important link in reference to the dissemination of the disease in the north-west Provinces and the Punjaub. He asserts that no cases of cholera occurred during the annual fair at Hurdwar in this year; but he states that cases of the disease were reported among the pilgrims on their return from it, at the neighbouring stations of Roorkee, Saharunpore, Juggadra, and Roopur, and in the Sealkote district, and in the native states of Jummoo and Cashmere. Dr. Cuningham does not connect the dissemination of the epidemic of 1872 with these pilgrims, as he was led to do in 1867, the accuracy of which opinion he is now inclined to question.

I beg to state that I was at Meerut, in the vicinity of Hurdwar, in 1867, when the cholera appeared among the pilgrims there, and by an official circular memorandum I called the attention of all the medical officers in the north-west Provinces and the Punjaub to this fact, and requested minute details of the appearance of the disease in their districts, jails, or regiments. The assistance of the civil authorities was also obtained, and by these means the correct dates of the appearance of the disease were secured. I received returns from 597 districts and towns on the lines of the returning pilgrims, the details of which will be found in the report I now submit for your inspection. It contains some of the facts on which I have formed my opinion that cholera is communicable by human intercourse, on the ordinary lines of commerce. I have many others collected from trustworthy reports of the disease in India, Europe, and America; but these alone appear conclusive. It is much to be regretted that a similar plan for collecting accurate information was not pursued in the present instance. Here, as on several other occasions of epidemics originating at Hurdwar, and other sacred fairs in India, the disease was not noticed during the assembly, but showed itself immediately after the pilgrims separated, and accompanied them to their homes, thus spreading over the country. It might be excusable to fail to trace the progress of the disease, in either year, from the records in the military and civil hospitals, as these are under exceptional circumstances of quarantine and conservancy. But the progress of the disease, as shown amongst the civil population, furnishes facts which clearly indicate the connection. The coincidence in the course of the disease in 1867 and in 1872 is too remarkable to be accidental, especially when the course of the disease in the intervening years is considered. This is shown in the accompanying table to apply to nearly all the districts, but I have selected ten of the neighbouring and most marked instances, and illustrated them by diagrams, as more easily seen in a casual inspection, such as you can now afford to give.

There is another coincidence in the two epidemics of 1867 and 1872, of which I can give no satisfactory explanation, viz., the exceptional exemption of the central provinces. This was complete in 1867, and the only exceptions in 1872 were Nimar and two neighbouring districts in the south-west part of the province. In 1868-69 the mortality reached 110,671, but it had almost disappeared in 1870-71. There are no reports of the disease in 1866.

1864	74	1870	107
1868	59,284	1871	19
1869	51,387	1872	1592

The above facts are, in my opinion, of great importance in determining the question of the communicability of the disease by human intercourse, and it indicates the little value of negative evidence to find Dr. Cuningham asserting that there is no proof of communication through human intercourse in this epidemic, on the authority of one hundred out of one hundred and five carefully selected answers from medical officers to his inquiries, who reported that they could trace no evidence of importation. The remaining five who illustrate their opinion by facts are disposed of as the minority. There is a material difference between facts that are not observed and facts that do not exist. If fifty men were to handle a small-pox patient in one of the London hospitals to-morrow, it is not probable that one of them would be attacked by the disease; and yet I believe there is not one here present who does not consider small-pox to be contagious, if I except Dr. Cuningham, who stated in a subsequent part of this report that it is only contagious under certain aërial influences. It may be said that the individual is protected from small-pox by having been vaccinated, or by having had the disease previously; and the same explanation in my opinion applies to those who escape cholera after contact with a cholera patient; they are protected, not certainly by having had the disease, for that does not prevent a second attack; still, they are protected, and it forms one of the most important branches of the study of cholera to find out what constitutes this source of protection. Perhaps Dr. Cuningham means that cholera and small-pox are alike contagious, and that both are influenced by season. This is more in accordance with my views; the spread of both is influenced by season in India, but not the same season. Small-pox increases in the hot, cholera in the rainy season. We can with certainty communicate small pox by inoculation. We can only develope cholera by purgatives, etc. We know various channels through which it may be communicated, but not how to conduct the operation with certainty; and I class small-pox higher in the scale of contagious diseases than cholera.

Besides the individual cases which Dr. Cuningham has mentioned, on which the five medical officers formed their opinion that cholera is contagious, there were others during this epidemic which he has omitted to notice; and in the report of the Officiating Sanitary Commissioner of the Central Provinces there are facts that would have been interesting. There were 158 outbreaks of the disease in Nimar and the surrounding villages, almost all of which he personally inspected, and found that in 41 instances the first case had occurred in a man who had just returned from an infected place. In 29 instances the second case occurred in the family or among the friends who attended on the first case, and in 17 in neighbouring houses.

There are several objections to the inference that cholera is not contagious being drawn from the inability to trace the first case during an epidemic, independent of the possibility of defective inquiry. We know, from the history of the disease, that it reappears in endemic countries at certain seasons of the year, and it is doubtful how long the disease may remain dormant till recalled to life by favourable circumstances. This endemic influence will generally be allowed to prevail in Bengal and on the coasts of India, and in my opinion it also exists in many other parts where the disease has prevailed in previous years. I have noticed this reproduction in the hospitals at Agra, and I have received many reports of a similar reappearance in other localities, where the disease halted during the cold season, and continued its course when the hot and rainy season set in, in the following year. In my opinion, season has a decided influence on the dissemination of the disease in India. The accompanying table gives the facts on which that opinion is founded. It shows the monthly admissions and deaths from cholera in different stations of the Bengal Presidency amongst the European troops from 1817 to 1871, amongst the native troops from 1826, and amongst the native prisoners from 1854. The returns from the European hospitals up to 1856 were compiled by me from the records in the office of the Medical Department in Calcutta. The rest are from Dr. Bryden's valuable returns.

Dr. Cuningham considers, from the evidence of the epidemic of 1872, that the difference in the prevalence of the disease among the European troops and the native troops depends on difference of race and habits. These tables show there are other and more powerful influences in force in so far as the difference between the native troops and native prisoners is as marked as the relative exemption of the native troops and native population. The European troops and native prisoners, who suffer severely, reside in large barracks, and use common latrines; the native troops and civil population reside in separate buildings, and do not use common latrines.*

Dr. Cuningham devotes much care to the subject, and displays sound judgment in proving that water cannot be the only channel of transmission; but I am not aware that above an infinitesimal number of the medical officers of India, or any other part of the world, are of this opinion. That water is one of the channels of communication is a separate question; and here those who have paid most attention to the subject are equally in accord in the opinion that it may be so transmitted. I do not understand Dr. Cuningham's statement that no illustration of this mode of transmission can be found in the Bengal Presidency; perhaps, he means during the present year, as no such illustration appears in his report. He surely cannot have forgotten the illustrations of this channel in the Hurdwar epidemic; or the hundreds of other illustrations to be met with in India.

The instances of patients in hospital for other diseases being attacked with cholera, and also of attendants being affected, are numerous in this, as in former Indian reports, whilst there are, as usual, still more numerous instances of exemption. The reports of the civil hospitals in Paris show that, during the late epidemic there, out of 291 cases treated for cholera, 101 occurred in patients in hospital. These facts coincide with the history of the disease, and will have much more weight in enabling us to form an estimate of the nature of cholera, than the escape of hundreds of attendants of which illustrations are given, who are, in my opinion, protected from the attack of the disease by an influence not now definitely determined.

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* The native troops in Lahore, Peshawur, and Kokal live in large barracks and use common latrines. The mortality from cholera in these stations amounted this year to 100, while that in the other stations in the Punjaub only amounted to eight.

Observations on the subsoil water are now being carried out in the principal stations of the Bengal Presidency, where its distance from the surface of the ground varies, in all the intermediate degrees, from three hundred feet at the edge of the desert at Sirsa and Hissar, to a few feet in Calcutta and Lower Bengal. I have been disappointed not to find in this report the returns on this point which have been made for the last three years, Dr. Cuningham merely says "that the data procured have not been so accurate as to warrant any conclusion being drawn from them." I have only had the opportunity of seeing the returns from the central provinces; those of 1871 tended to show that there was in that part of India no connection between the level of the subsoil water and the progress of cholera. This is more clearly indicated in the report of this year from Nimar, where there was a sharp attack of cholera, commencing at Dhangaou in March, and attaining its maximum in April, and then gradually subsiding; whilst at Kundwa, in the same district, it attained its maximum in July. The subsoil level varied very little during March and April; the great change in it took place in the middle of June. Had there been any connection between the disease and the subsoil water, it should have appeared in this widespread epidemic. There is not any difficulty in comparing two simultaneously recorded returns of the water-level and of the existence of cholera in the same locality, and several years of such returns would add much to the valuable reports of the Sanitary Commissioner, and would furnish a mass of facts on which a sound opinion could be formed as to the value of Professor Pettenkofer's subsoil theories regarding the spread of cholera, fever, and other diseases.

The microscopic reports of Dr. Lewis and Dr. D. Cunningham, which have appeared in former reports, are of the greatest value, and the nature of the changes in atmospheric objects which Dr. D. Cunningham is investigating will be very interesting, and I am informed the result will appear in the complete annual report.

One of the greatest objections to inculcating the doctrine of non-contagion in an official Government publication is, that it may be used as an excuse for neglecting those precautions which are essential to the preservation of life, should the disease really be contagious. These are often irksome and expensive, so much so, that many people would rather incur the danger of attack than submit to the inconvenience. In so far as the individual is concerned, he may be allowed to please himself, if thereby he does not endanger others; but when this proceeding involves danger to the lives of thousands who entrust their protection to Government, individual convenience should be held subordinate to the general safety.

During this severe epidemic, the removal of the troops into camp has, in most instances, been promptly and efficiently conducted, with the most satisfactory results. There has been no increase of other sickness, caused by this measure; on the contrary, the health of the men was, in several instances improved; as it has been on former occasions where the removal was well managed. In some instances the disease clung to the party, but in general it was shaken off. In twenty-eight instances of removal there was not a single fresh case after leaving cantonments. In six removals, cases appeared on the first day, and in two on the second; but out of thirty-six instances of removal given in this report, there were in all only nineteen cases of cholera among the men after they had left cantonments. Out of these thirty-six instances, in fourteen the distance moved did not exceed one mile; in thirteen it was from one to five miles; in five, from five to eleven miles; more extended moves were only made in four cases. Dr. Cuningham states that in his opinion the chances are against any such slight change being successful. This opinion is not supported by these facts: and it is also opposed by numerous instances given in this report, where simply moving the inmates to another barrack, when a first case appeared, arrested the spread of the disease. Removal of troops from an infected locality is one of the most important measures adopted by any government, in the treatment of cholera. It was instituted on the principle that the disease is contagious, and communicable from the place which has been vitiated by the presence of the disease. The result, for years, has been most successful in saving life, and I regret to see the correctness of the views, on which this measure is founded, now called in question. So doing, must influence those who have to carry out measures that are disagreeable, and to which they themselves object. Promptitude is essential to the success of removal, and inability to detect the early presence of the disease must lead to dangerous delay. The reports of medical officers ought to be above suspicion, but, in some instances here noted, every case reported proved fatal; in others, cases of congee-vomiting and purging, with collapse, were not recognised as cholera. It was to obviate local influences, or ignorance like this, that he responsibility of determining the period of removal was placed on the Deputy Inspector-General, or the senior medical officer at the station. A delay of two or three days may allow a whole regiment to become impregnated with the disease, which might be avoided by promptly evacuating the infected locality. In one of the stations, it is noticed in this report that there were fifty cases and forty-eight deaths, of which only two took place after the troops left cantonments; and, in another instance, there had been twenty-nine cases in cantonments, and with the removal the disease entirely disappeared. Again, at Meerut, there were sixty cases in the artillery, of which only four occurred out of cantonments. Doubtless, these cases of neglect to obey the orders of Government have been brought prominently to the notice of the authorities. In severe epidemics, Dr. Cuningham recommends extended movements to places less under, what he calls, "the prevailing influence." I may be mistaken in supposing that by this prevailing influence he means Dr. Bryden's aerial theory, but I cannot be wrong in thinking that the result of slight changes, in this, as in former epidemics, has been very successful; for it is shown by the facts given in this report. In my opinion, the vitiated building, which the men occupy, is the greatest source of immediate danger, and Dr. Bryden's aerial prevailing influence is a chimera, with no more solid foundation than the "baseless fabric of a vision." In four instances here mentioned, the troops were moved from thirty to a hundred and sixty miles by rail with equal advantage as in the shorter moves. There were only three subsequent cases; one on the first day; one on the second, and the third some days later. Where available, this mode of removal was strongly recommended in my earlier reports, as it is attended with little fatigue to the men, and they can be conveyed, without danger, to any eligible site within a hundred miles. This is a special advantage during the rainy season, in several of the stations in the Doab and the Punjaub, where the surrounding country is much under water. Removal of troops is a delicate operation, troublesome at all times, and dangerous when ignorantly conducted; but, nevertheless, a powerful precautionary measure in India; and it may, with equal advantage, be adopted for troops affected by the disease either in Europe or America.

There is much truth in many of the observations of Dr. Cuningham, on the great inconvenience of the quarantine regulations which have lately been introduced into India. They are strongly objected to by the people, and very generally evaded. They create a desire for the concealment of the disease, and this feeling will probably account for the omission to report its existence, and the absence of any notice of the deaths of Hurdwar pilgrims from cholera in 1872, except in three or four towns on the line towards the Punjaub, though the disease subsequently appeared over the whole country, in the same manner as in 1867, when it was strictly connected with their advent. Such omissions are beyond control, but they are much to be regretted. It is true the present quarantine regulations have proved inefficient, but that does not prove that in all circumstances they have been useless, or that they may not be improved so as to render their benefit more than commensurate with the trouble and expense they entail, though they may not always ensure a perfect protection.

Quarantine is essentially a medical question, dependent on our knowledge of the nature of cholera, its method of diffusion over the world, and dissemination in the vicinity of the affected, and the nature of the surrounding objects which promote or impede its multiplication. But it has an important mercantile influence, as its measures cause delay in transmission of goods, and it costs much money. It has also a political aspect, as it affects the intercourse between different countries. It likewise involves a social element of which we hear very much, viz., the personal inconvenience of travellers, and the domestic misery which it may entail on families. Here is a powerful array of opponents; and our only defence is philanthropy and the desire to save life, and sometimes lives, where it would be economy to provide coffins. The inconveniences of quarantine regulations are palpable, and naturally render them distasteful to the unthinking public, who have much influence in directing the measures of their government. I fully concur with Dr. Milroy that those now in force, in all countries, require revision, based on a true knowledge of the nature of the disease. If the disease be not contagious (I revert to the old term as implying both direct and indirect transmission), all quarantine restrictions would be not only expensive and vexatious, as they undoubtedly are, but also useless, as is the opinion of some high continental authorities, and which appears to be sanctioned by the two eminent British authorities, now present, whose views I have the honour of criticising. The basis of my argument in favour of quarantine is, that cholera is contagious (under the meaning I have defined), and I feel a difficulty in understanding the constitution of a mind that can resist the overwhelming evidence which the observation of the course of the disease all over the world, since 1817, has produced. With such a mind, facts can have no value; but as there are some of this opinion still, I would wish to convince them by referring them to the practical results that have arisen from the imperfect measures adopted, under the impression that the disease is contagious. I shall chiefly direct your attention to the results in India, where my experience extends, leaving out the facts accumulated in Europe, and at Staten Island in America, as you have had better means of judging of them than I have.

The medical returns in the present report of 1872 amply confirm the returns of former years, since quarantine was introduced into India in 1862. I would repeat that the system is confessedly imperfect, and supposed to be frequently evaded, but it never claimed to give perfect protection, and its action may be improved. The accompanying table shows the effect of quarantine on the dissemination of the disease amongst three classes who were subject to its control, compared with its prevalence among the civil population, to whom its regulations could not be extended. This table only gives the returns of 1872, which may be called an epidemic year, and of 1871, which was a non-epidemic year. If I find time I shall add the five previous years. Each class is subdivided under four heads, showing, first, where no death occurred from cholera; second, where one death occurred; third, where two deaths occurred; fourth, where more than two deaths occurred in protected localities. It thus appears that in these, 78.49 per cent. escaped entirely; 6.89 per cent. had one death; 3.94 per cent. two deaths, and only 10.57 per cent. had more than two; whilst, in the unprotected class, there were only 7.55 per cent., with less than fifty deaths; 3.77 per cent. with from fifty to one hundred deaths; 5.66 per cent. with from one hundred to two hundred deaths, and 83.03 per cent. with over two hundred deaths.

When I was in India, I received reports in numerous instances from the Deputy Inspectors-General of Hospitals that the disease was raging severely in the district, whilst there were no cases in cantonments. In all the protected localities, the sanitary arrangements were as perfect as practicable—certainly much better than in the towns and villages of the district; and I consider that it was owing to these most valuable arrangements that the dissemination of the disease was limited in those instances where it found access, and was followed by only one or two cases. At the same time, it must be remarked that the relative mortality in these protected places was much higher, especially among the European troops and native prisoners, than in the unprotected places; and also that it varied materially between the native troops and native prisoners, with whom the sanitary arrangements were in full and equal force. This proves that sanitary laws alone will not regulate the mortality of cholera, and furnishes one of the facts on which my opinion is formed of the contagious nature of the disease. The relative number of the inhabitants in the unprotected and protected classes differs very materially; but this would not account for the difference in the ratio of attacks in the localities—*i. e.*, 78.49 per cent. exempted in the one case, and only 11.51 per cent. in the other. The importance of exclusion cannot be over-estimated, when it is considered that the presence of one case may originate a wide-spread attack.

There would be little difficulty in selecting a large number of cases from the present epidemic, where there was a very high mortality in the district, whilst there was total exemption in the jails. In twenty of the jails, in twenty of the districts most severely affected, there was not a single death from cholera, while the mortality in the districts amounted to 56,914. This is positive evidence, which is incompatible with the aërial theory, and forms but a fraction of similar instances to be found in Bryden's tables of the present and former years. The returns in this report clearly indicate that the present quarantine regulations are inefficient in protecting open towns in a commercial country, and that they ought to be abandoned there; but they also show that these regulations are valuable as far as they can be efficiently applied; the exemption being most complete in the jails, where, among the native prisoners, it amounts to 84.38 per cent., whilst that of the European troops is only 68.12 per cent., and that of the native troops is intermediate, viz., 73.46 per cent.; clearly proving that quarantine, under certain circumstances, may be employed with advantage. An island is under favourable circumstances for an efficient quarantine, as the only entrance of the disease from a foreign country must be by ships at a port. When the disease is already raging in the interior, external quarantine can be of little value; but cases suffering from the disease should not be allowed to land in any healthy port, and, in all cases, floating accommodation should be provided for them.

I most fully concur with Dr. Milroy in the necessity of a revision of the present quarantine regulations, and agree that it would lead to more definite results if conducted by a small body of well-selected men, than by a numerous and foreign congress. But it must be instituted by Government to give its opinion weight, and also to give it the means to render that opinion valuable.

SOME REMARKS ON *POST PARTUM* HÆMORRHAGE.

By J. BRAXTON HICKS, M.D., F.R.S.,

Lecturer on Midwifery and Diseases of Women, and Physician-Accoucheur at Guy's Hospital.

THE importance of this subject to everyone who practises midwifery, and the intense anxiety always connected with the management of these cases, render me anxious to give my quota of experience for the readers of the JOURNAL. Having for many years superintended one of the largest midwifery charities of London, I hope it will not be thought that my opinion has been intruded without some justification, especially as the patients attended by these charities are the most exposed to the dangers of *post partum* flooding.

Two questions have been brought forward in late numbers for discussion. One is, what are we to do for *post partum* hæmorrhage in general? the other, by what means can we guard against the recurrence of this calamity in those who have in former confinements suffered from it?

First, then, let me consider how can we arrest *post partum* hæmorrhage.

Before we do so, let us clearly understand what is the clinical condition with which we have to contend.

The most common, doubtless, is an uterus more or less uncontracted. The causes of this condition are many, but they may be resolved into two major classes: one, in which the uterus, from a long labour, or from a readily exhausted nerve-power on the part of the patient, is tired out and has used up its contractility, a state of things very frequently seen after craniotomy, etc.; the other, where the uterus has not been sufficiently excited, either the child has been withdrawn too quickly, or it has been expelled with too great ease. Any how, there has not been irritation or pressure sufficient to keep up the proper amount of reflex action after the placenta is delivered.

But, how much contraction is needed to prevent hæmorrhage? Certainly, the most secure condition is the little hard uterus likened to a cricket-ball. But it has not so very rarely happened to me, and from conversation I find the same has also to others, that an uterus may be anything but hard and firm, and yet no hæmorrhage may result. I presume that there is a degree of contraction sufficient to arrest blood-loss, short of the hard and most desirable state. I think also much depends on the size of the sinuses patent on the inside of the uterus, a variable condition, as variable, indeed, as varicose states are. Probably, something may be owing to the state of the vascular system, both on the left side and the right side of the heart; and, again, something may be found to explain in the power of the abdomen called by Dr. M. Duncan "retentive," which, although much neutralised by the flaccidity of the walls, yet in some might neutralise the outflowing from the uterus, and this action certainly might be increased if the abdomen were bulky and pendulous, hanging over to the side. However any one, or some of them combined, may be the cause, it is certain that in some cases the uterus is considerably relaxed without the occurrence of flooding.

But, if an uterus be contracted and in an active condition, this does not necessarily ensure immunity from flooding; for, if it be distended by a piece of placenta, or a clot, or anything, or if it be prevented from well closing, as by a distended bladder, as was pointed out by the late Dr. Lumley Earle, or from adhesions, as remarked by Dr. Graily Hewitt, in any case, hæmorrhage is pretty sure to arise, unless the uterus be in powerful action.

What a common case is this. A small clot, formed, perhaps, before the extrusion of the after-birth, is not expelled; the uterus, notwithstanding it is firm and hard, increases in bulk; a slight gush takes place on firm pressure, and some watery blood, or nearly clear serum, flows in small quantities from the vagina. Notwithstanding the firm and even painful contraction of the uterus, it slowly enlarges, and, upon a considerable quantity of blood escaping, the hand is introduced, and a hard firm clot is found. As soon as this is removed, the oozing ceases, and the case is safe; or should the practitioner, ignorant of the import of an increasing though hard uterus, leave the patient, he may be recalled to witness the worst terrors of flooding; for, the uterus having relaxed, all check over the oozing ceases, and the blood pours forth from every stretched out opening.

Another cause occurs at times, and gives much trouble; namely, a partial relaxation of the uterus, an irregular contraction; I mean an uterus contracting on one side only at first, then that part relaxing, and the opposite side contracting, and so on. This state permits a certain amount of bleeding, which, coagulating within the uterus and gradually added to, tends to the dangers common to the presence of clots above-mentioned.

These cases cannot, I suppose, be very common: I have seen about three well-marked instances.

Another condition one finds by no means rarely, namely, the alternate relaxation and contraction of the uterus. Of course, this is the natural state of the uterus after labour, but in these the intermissions of the contractions extend to more complete relaxation. A great deal of blood may be lost this way; indeed, I have seen some fatal cases, and very many women who have been in great jeopardy by it. It is, of course, a less anxious state than that of absolute relaxation; but it is, perhaps, more deceptive.

Again, where placenta has been prævia, or near to the uterine opening, we have sometimes a very troublesome loss. For the lower zone of the uterus after labour does not contract well, indeed it is generally more or less relaxed; if on this part the placenta have been inserted, it can readily be perceived how hæmorrhage can arise. But sometimes it arises after placenta prævia, though in a different way. If the bleeding from the vessels be slow, and clots become adherent to the lower uterine opening, the hæmorrhage from the upper part is retained, and danger from flooding thus arises; and I may remark, incidentally, that this blocking up of the uterus, although it may not produce hæmorrhage, yet retains decomposing secretions, and thus adds to the *post partum* dangers of placenta prævia.

Hæmorrhage after delivery occasionally occurs from lesions of the uterine walls. The more frequent of these rarer cases is the lateral laceration of the vaginal portion of the cervix. In these the blood is generally bright, particularly in the latter variety.

Lastly, hæmorrhage after delivery may occur from inversion of the uterus, partial or complete. If incomplete, the cause may be overlooked. I was a year or two since asked to see a case of flooding, and to bring my transfusion apparatus. The patient was dead before I arrived; I, however, passed my hand to ascertain the cause, and found the upper half of the uterus inverted, feeling like a polypus just within the os. I had no trouble in reducing it.

If these causes be duly borne in mind, the principle of treatment is clear enough. If the uterus be inert, we must induce it to contract by the various plans well known to all; if we cannot do this, we must do what we can to coagulate the blood and to cause a contraction of the inner surface of the uterus by styptics locally applied. If a clot of blood, or fragment of placenta, be the cause, then its removal, either by external pressure or introduction of the hand, or by these two plans together, is the clear indication. If irregular action be present, then our attempts must be directed to ensure a more perfect action.

If lesion be present in the body of the uterus, it is clear it would be highly dangerous to use any styptics if the laceration extended to the peritoneum; but, if the hæmorrhage came from the vaginal portion of the cervix, if cold and pressure failed to stop it, a sponge dipped in styptic and firmly pressed on the rent would be the most sure way of arresting it.

But the categorical account in many text-books of the various modes of checking *post partum* hæmorrhage fails to convey the clinical assistance required in the case; because, in most cases, either from the suddenness of the attack or from carelessness of observation, the practitioner is brought face to face with serious loss, and action must be prompt. But is everyone prepared to meet this possibility? How do many go to a case of midwifery. Of course, if, in one's rounds, one be called to a case, complete provision is not to be expected; but, when called straight from home, how few take anything with them. Thus, if the bladder be full, there is no catheter; if a languid uterus suggest the possibility of subsequent inertia, there is no secale; and if hæmorrhage actually occur, then the practitioner has to meet it only with cold water and his hands. But, if we thus undertake a case, are we much better than the simple woman-midwife, who is not allowed to use secale, and has nothing besides? No one should go to a case without a catheter, secale, opium, ammonia, a good syringe, and (as far as my present experience has shown me its value) the perchloride (or a kindred preparation) of iron.

When, then, the placenta is delivered, a careful practitioner, instead of leaving the bedside, will take charge of the uterus, either by his own hand or by closely watching his assistant; and also will either keep the vulva in view, which can be done without exposure to any extent, or will frequently examine the napkins; and, if he find the uterus relaxed in part or wholly so, if it be still enlarging, notwithstanding its firmness, or if he see hæmorrhage arise, he is instantly ready to act. He will, however, have already unobservedly prepared measures in anticipation—cold water in plenty, some already poured out in a basin; and broken ice, if obtainable; with the syringe charged ready for instant service. He will have some fluid preparation of secale at hand. If he possess only powder, then he will have already made a decoction. It may be that in ninety-nine per cent. of cases these arrangements will not be wanted, So much the better for the ninety-nine, but so much the safer for the remaining one to have them ready.

But, besides these precautions in ordinary cases, there are some which should be adopted in cases where we suspect, as the case approaches termination, that hæmorrhage may arise. I mean after very long labour, much exhaustion, a languid action of uterus, where the interval between the pains is long, the pain short, but the progress during it rapid. In these cases, it is always better to give secale just before the head comes on the perinæum; and, where the child glides out rapidly with slight pains, it is better to carefully check the descent of the head, so as to rouse the uterus by an impediment. It is also better in these cases not to hurry away the placenta. Its presence acts as a stimulus to the contracting power of the uterus; and, if the uterus be not expanding, nor hæmorrhage occurring, no reason exists for its removal. But of course the medical attendant must not leave the uterus to any one; it must be under his grasp the whole time; and specially he must not drag on the funis, but be ready, as soon as hæmorrhage appears and external grasping fails to extrude the placenta, to pass the hand boldly in and remove it. I think that, among the causes of after-relaxation of the uterus, is the removal of the placenta from the hesitating uterus. Of course, if the hand in removal be passed rather roughly, and the internal surface excited by the free touching, it compensates somewhat for the removal; otherwise it, like a premature removal of the fœtus, is apt to leave a flaccid uterus.

Supposing, then, that after the placenta has been delivered, and we have left the uterus in charge of the nurse's hands, or after the application of the binder (which latter has the great fault of concealing rather than revealing) we find the patient pale, and the uterus largely distended, we should instantly pass the hand on to the uterus firmly and quickly, and press it till, the blood having escaped, it is sufficiently small enough to be grasped, which should be done firmly, accompanied by friction of its surface. I always pass the hand into the vagina, and remove the clots; and, if the flooding have ceased, I merely keep up the grasping and friction on the uterus; but, if any hesitation to contraction be present, I apply cold, externally, by the hand or napkin dipped in cold water; at the same time I inject cold water into the vagina. Should, however, these plans fail, or the hæmorrhage be profuse, I pass at once the hand within the uterus, and remove every clot, examining the whole inner surface to see if any portion of placenta or membrane have been left attached. It seldom occurs but that the uterus contracts and remains so, but, should it relax, I repeat the clearing out (for clots are almost sure to be there), and carry the syringe jet to the fundus and throw in cold water; or, if ice be at command, I carry in a lump and rub the inside of the uterus all over with it; this is generally a most efficient remedy. If the uterus fail to contract or to remain contracted, the condition of the case is very urgent. The hand should be carried in again, and the uterus well titillated; of course, during the whole of this action the exterior is to be firmly grasped. Unfortunately, the blood-loss has lessened the chance of contraction; but, fortunately in very many cases at this crisis, syncope steps in, time is given for coagulation in the uterine vessels, and the patient is saved. It is generally those patients who never faint that die, if we cannot stop the flooding. Only two measures in this desperate state of things, remain to us; the first of which is pressure upon the aorta and vena cava. A diaper can be folded hastily into a firm pad, and pressed on the centre of the abdomen, about the navel; the patient, if not already on her back, should be so placed. I would recommend that the legs be not elevated, because, when the return current of the vena cava to the heart is stopped, if the legs were lifted, the blood would regurgitate to the uterus, and still more be lost. I think this plan should be more frequently adopted than it is. Like fainting, it permits coagulation.

Hitherto, I have been considering the more severe kinds of flooding, where we have no time to temporise, no time for secale, galvanism, and emetics. But in all cases of flooding, where grasping and friction externally, coupled with cold injections into the vagina of cold water, and secale, fail to produce cessation of the flooding, the best and most secure plan is to pass the hand into the uterus, and remove anything that there may be found distending or tending so to do; cold can then be carried within the uterus by syringe or ice, when in most cases the bleeding ceases. If, however, we find a clot with an active uterus, we may spare the patient the passing the hand within the uterus, if we break up the clot as far as two fingers can reach, and employ pressure from without. If, however, the bleeding continue, it is shortest to pass the hand inside the uterus, and remove anything which may keep up the bleeding; and if we find no fragment of placenta or adherent clot, we should examine for a lesion. If there be none, and the bleeding still continue, after the application of cold, particularly if there be partial or intermittent relaxation, then we must try aortic pressure; and this failing, our only resource is to apply a styptic to the interior of the uterus. But I see that a writer in the Journal, in antagonising the use of perchloride of iron, says that, with one or the other plan, we can secure contraction, and therefore have no need of a styptic. I must say this remark fills me with astonishment; and I think it must also others, quite as alive as I am, and as he is, to the importance of establishing reflex action; and using all the remedies as sedulously as he recommends. Like Dr. Barnes, whose area of work embraced much of the same classes as my own, I hailed with a feeling of, I may say, extreme satisfaction, a plan which would give some hope of help, when every other attempt to establish uterine contraction had failed. To feel so powerless, when the patient was rapidly sinking before one's face; to feel at the mercy of reflex function, and yet the last plan had failed to establish it, was an incubus in practice which I, with Dr. Barnes, and doubtless many others, once felt to be very disheartening. Of course, I do not mean to say that a great number of cases of hæmorrhage could not be arrested by the means already indicated; but, I need scarcely argue for a moment, that some could not be checked, because I am sure everyone in large midwifery practice has seen such cases. And this is why I say that I hailed with great pleasure one more remedy in these desperate cases. Indeed, as soon as I had heard that Dr. Barnes was employing this remedy, which was shortly after he had begun to use it, I tried it; and I merely give my own experience, when I say I have never seen an unfortunate result from its use; but I have seen most marked effects in all cases in which it was employed in arresting hæmorrhage after other measures had failed. I may add to this, the confirmation of others with whom I have conversed, and I have not from them heard of a case fatal in consequence of it. It is true I have seen a woman already dying of hæmorrhage, not rally; but it would be absurd to attribute death to the remedy last used. But the writer referred to mentions all kinds of evils as having arisen from its use, and everything which occurs after is placed to its account. Puerperal fever, pyæmia, etc., are attributed to it. I can only say I know nothing of this in my practice. But surely it is not unusual for women after severe flooding (and this remedy is only used in the severest) to have septicæmia; is it not well known, on the contrary, that they are very liable to it? Why, then, is the treatment to be credited with evils to which the condition for which the remedy was used gives rise?

If, after all the controversy, one can only find record of some four or five deaths after, out of the great number of cases in which it has been used, one can only say that it is rather a proof that it prevented septicæmia than caused it.

It was a misfortune that the discussion on the subject at the Obstetrical Society last year was an indirect one. The paper which drew it forth was a description of a case of abortion in which solution of iron had been used, and in which it most probably was the cause of death. But, upon inquiry, the solution proved to be the strongest of the *British Pharmacopœia*. I think this was very much too strong; for the vagina cannot bear it without risk of damage, much less the uterus, more or less denuded as it is after abortion. It was at the least four times too strong, probably eight times, for any tissue like that of the uterus to bear, unless in a quantity so small that it could only cover it with a film. The discussion after this case was read turned, however, upon the iron treatment in *post partum* hæmorrhage; but, being aside the direct issue of the paper, it was not completely discussed, but nearly every one present spoke strongly in favour of the advantages of the iron treatment. At any rate, the case read was only a proof that the very strongest solution was fatal, which was the most probable result, and no proof of the danger of the weaker solutions, such as the tincture or weaker liquor of the *British Pharmacopœia*. In my own practice, I employ a rather weak solution at first—one of the weaker liquor ferri perchloridi to six or eight of water. If that fail, then I make it stronger; but, if the flooding be rapid, I use the full strength of the weaker solution or the tincture, because much of it is lost in the blood, or is prevented from coming easily into contact with the walls. The tube of the syringe should be carried to the fundus, and the fluid gently injected; or it may be conveyed with a sponge, which should be passed over all the internal surface. Perhaps this is the safest mode; but it must be removed promptly, or the uterus may retain it, as occurred in one case I know. I have tried it in all kinds of *post partum* hæmorrhage, after removal of clots, which is important, or they become coagulated and firm, and cannot be removed afterwards without trouble. I have found it particularly satisfactory in cases of irregular and intermittent relaxation, causing the uterus to assume its proper form at once.

I do not enter into the discussion as to how it acts. It stops blood in hæmorrhage from a wound on the outside; I presume it acts similarly on the inner side of the uterus—of course not requiring general uterine contraction. I have no doubt, in the less inert conditions, it rouses the remnants of contraction, and acts as cold and the presence of the hand. In conclusion, I will add that, till any one can show a better remedy, or till I find it of greater disadvantage than extreme loss or death, I shall continue to use it in the fullest confidence, or till it has been clearly pointed out that it is dangerous to use. For the proof of this, I have failed to find sufficient at present. In the only case given by the writer in the Journal, where death seemed to be due to the injection, there was no *post mortem* examination, and therefore only presumptive evidence. The others have not been published. It would have been much more satisfactory to me, and I think to the profession generally, had Dr. Snow Beck given the other cases he says he had seen, without occupying so much space in personal remarks, which hinder much our arriving at the solution of the question, Is the iron treatment in *post partum* hæmorrhage dangerous? and, if so, is it more so than the condition for which it is used? If this treatment be safe, thanks, not abuse, should be given to the promoter. If not, let us scientifically discuss whether the danger can be eliminated. If it cannot, then let us put it aside, with regret that flooding is still a fatal condition, but nevertheless thanking the promoter for the effort to save human life, even though unsuccessful. I can only reiterate that I have freely used it up to the strength of the tincture without an untoward result. I have known cases where it has been used without calamity; and I have made numerous enquiries among medical gentlemen, and have failed to find a fatal case following its use.

With regard to the second subject—namely, what can be done to prevent hæmorrhage in "flooders"—of course the answer is, be always as prepared as one should be in an ordinary case; but I think it would be well to give secale very early in labour, in small doses, such as ten grains every two or three hours for four or six doses; or to rupture the membranes as early as possible in labour, or even before labour sets in.

I may add one more remark; that, although I do not despise the assistance, when single-handed, of spring-pads, etc., yet I consider that nothing equals the hand, which should never leave the uterus from the actual expulsion of the fœtus till the uterus has continued firm for an hour after labour, or after cessation of hæmorrhage, or even longer after very dangerous flooding.

THE ANTICIPATION OF *POST PARTUM* HÆMORRHAGE.

By G. T. GREAM, M.D., F.R.C.P., etc.

In alluding to the remarks on the "Anticipation and Treatment of *post partum* Hæmorrhage," contained in the very interesting communications on the subject which have appeared in the Journal, and which are deserving of great consideration, as showing much practical experience and a full appreciation of the difficulties which have to be overcome, it is not my intention, in any one particular, to differ from the views of others as to the extreme danger attending uterine hæmorrhage; for is there any responsibility so great in any department of the medical profession as attending cases of the kind? and yet how lightly do some people estimate the responsibilities of the practice of midwifery. There are those who say that midwifery can be attended by any one; and the Obstetrical Society itself goes so far as to solicit Government aid in enforcing the education of midwifes, and proposes to undertake an examination of such women, and to grant them diplomas.

I know that arguments are used to explain away some of the objectionable parts of these proceedings, but the very contemplation of them is derogatory alike to the profession, to science, and to the Obstetrical Society. Without, therefore, calling in question the views of the writers in the Journal, as to the great importance of the subject, I yet cannot help thinking that the treatment proposed by some of them is a little more extended than is wanted; and, without pointing to any one correspondent in particular, a feeling arises that most of them urge local measures too much, instead of more general remedies, and they run somewhat in the groove too apparent in the writings of recent authors on uterine diseases, who ignore very nearly all medicinal remedies, and resort to local, and, in my idea, inefficient and often hurtful agents. No fewer than three, if not more, uterine "stems" as they are called, were exhibited at the last meeting of the Obstetrical Society by their respective inventors. Are such things ever necessary? and are they not productive of immediate or of deferred disease? Two fatal cases of local interference purporting to remove sterility in healthy women came before me in the same week, and the extent of the injury inflicted on women by locally treating them, can only be known to those who have the opportunity of personally witnessing it.

Without imagining that my opinions will be preferred to those of other writers, I yet think that a rather extensive experience may be my apology for suggesting that, instead of injecting iron, iced water, or chloralum, placing the child to the breasts, compressing the aorta, using galvanism, special "binders," or transfusion (to prepare or employ either of which mode of treatment involves necessarily more than the few minutes required for the death of the patient in such cases), the use of remedies sure to be at hand should be preferred, of which brandy, in my view, is the chief.

It was taught by an eminent physician many years ago in his lectures, that, if death resulted from hæmorrhage, while a supply of brandy was at hand, the fault was attributable to the medical attendant: a bold assertion to make, no doubt, but nevertheless a true one. In such cases all the remedies wanted are brandy and ergot, and in addition, if possible, ice. The administration of brandy is too lightly thought of—it is mentioned by some recent writers in the JOURNAL, but not as the chief remedy. It may be given to any extent required, the pulse alone being the indicator as to quantity, mixed with equal parts of water, and poured down at short intervals, should the flagging heart require it. The stomach will reject it, almost as a rule, the moment vitality is restored; and if it be retained, which it sometimes but very rarely is, no harm will come of it. If the left hand grasp the uterus through the abdomen so firmly that it cannot dilate, while the right removes the placenta, as well as all coagula that may form in the uterus, and, if there be ice, carries portions of it within the cavity, no other remedies will be wanted. As vitality is restored, the uterus contracts, and all danger is over: then is the time to give nourishment. Free air should be admitted by open windows, and from the moment uterine contraction is established, the warmth of the body should be promoted.

It has always seemed to me that the use of abdominal bandages is but little understood as a remedy; no bandage can be so firmly placed as to prevent the dilatation of the uterus, while the hand firmly fixed on it can grasp it with such power that dilatation and relaxation are impossible; and, until contraction has been complete for at least half-an-hour, the hand should not be removed. By the hand is learnt the condition of the uterus also; and the occurrence of what is called secondary hæmorrhage is entirely due to too much faith being placed in bandages, under which the uterus will be filling with blood unobserved, until the occurrence of alarming syncope.

The injection of perchloride of iron is not likely to become a popular remedy. It is known to produce mischief, which I myself have witnessed, and even death; and besides, it is never required. I have also witnessed the fatal effects of injection of iced water, as well as its inefficiency in checking uterine hæmorrhage. It was injected by a very able medical man before my arrival, in a case to which I was called; the patient complained of intense coldness over the whole abdomen, accompanied by pain. She was not faint, but she died as those die who have received peritoneal injury. It was the opinion of both the medical attendant and myself, that solid ice introduced into the uterus was preferable to iced water injection, for we were both impressed with the conviction that the iced water had here reached the peritoneum through the Fallopian tubes.

To prevent *post partum* hæmorrhage, does not require quite the same energy as to control it when it occurs. Time is not so pressing. When women have once flooded, they are liable to do so again; the general health of such women should be attended to during pregnancy; tone should be given to the abdominal muscles especially; the remedies, however, must be adapted to the patient's condition. When labour begins, the pulse should be well sustained by nourishment and stimulants, brandy in fair quantities being given. The use of ergot as a preventative is most important; the writers in the JOURNAL allude to its use, but they differ as to the dose, and as to the time of giving it. The effect of ergot is certainly not apparent under twenty minutes; hence I am not disposed to think it useful when given at the moment of the expulsion of the fœtus. As nearly as possible, it should be given twenty minutes, therefore, before the birth, and I have never found the effect produced by any less dose than sixty minims. It never injures the child when administered judiciously; but the dose should be, under any circumstances, not less than sixty minims of the fluid extract of the *Pharmacopœia.*

The labour should not be hurried, and it is as well to avoid giving ergot during its progress, except the single dose mentioned. As the fœtus is expelled, the left hand, as suggested by more than one of the recent writers, should firmly press the uterus downwards, following it so that it still receives the pressure, not only after the birth is accomplished, but until after the placenta has also been expelled. No doubt the presence of the placenta, whether wholly or partially detached, excites bleeding; hence there should be no great delay in its being removed, but no forcible extraction should be adopted. My own experience goes to prove that this mode of treatment will always be successful, and that there will be no need, if it is adopted, of the anticipation of the necessity for transfusion as suggested by one of the correspondents of the JOURNAL.

The is still another form of hæmorrhage not noticed in these communications. I allude to bleeding during pregnancy, and especially after the seventh month, or at the full term of gestation, before labour has commenced. There is no condition requiring more judicious management than this contingency at the latter months, and none so likely to be fatal unless properly treated. Perhaps others, who have not written, will record their views on this subject on some future occasion; and, if this be done with the same ability with which they have written upon the other forms of hæmorrhage, their suggestions will be productive of the greatest good.

THE DEPRESSANTS OF THE CIRCULATION AND THEIR USE.*

By J. MILNER FOTHERGILL, M.D., M.R.C.P.,

[*Concluded from p.* 47 *of last number.*]

NITRITE of amyl is an agent which produces, when inhaled, a distinct and remarkable blushing, obviously from its dilating the minute peripheral vessels. Some years ago, Dr. Lauder Brunton found that, in a case of angina pectoris which came under his notice, there was a decided increase of arterial tension in the attack; and this he attributed to peripheral spasm. He reasoned, and rightly too, that nitrite of amyl ought to relieve this condition, and the practical outcome of this application of physiological knowledge was the relief of the patient. A more perfect demonstration of the power of physiological research to aid practical medicine is not necessary to disprove a charge often pressed. More recently, Dr. Crichton Browne used amyl as a test of the vasomotor mobility of epileptics, and has found them extremely susceptible to its action. He tried it in the treatment of the fit, however, without success. Observing that there is a rise in the arterial tension at the instant of the oncome of the fit, he tried inhalations of the amyl just before the oncome of rhythmically recurring fits with the following result.

E. W., aged 27, had, from January 1st to March 26th (eighty-five days), no less than eighty fits, usually daily, and during March, one each day. On March 27th, amyl inhalations were commenced. The fits were immediately and abruptly discontinued; and there was no recurrence of them till April 15th. The fits have returned, but unfrequently, though the inhalations had been almost abandoned (*West Riding Lunatic Asylum Reports*, vol. iii).

In Dr. Ferrier's experiments as to the localisation of the functions of the brain, commenced at Wakefield Asylum last Easter, it was very pretty, as well as instructive, to see how the inhalation of amyl previously to the application of the electrodes to the entire cerebral hemisphere on one side, arrested the unilateral fit which would have been, and was otherwise, produced.

Further experience of nitrite of amyl at Wakefield is accumulating testimony as to its power over recurrent epilepsy, and in averting that miserable condition which is the consequence of recurrent fits, called the *status epilepticus.*

There seems every reason to believe, though as yet it is not possible to be more certain, that in inhalations of nitrite of amyl will be found the most efficient, as well as agreeable method of treating attacks of hysteria, where there is spasm of the arterioles.

Nitrite of amyl will probably also be found useful in the treatment of chronic Bright's disease when the tension is high, the pulse corded, the action of the heart violent, often amounting to palpitation, the flow of limpid urine profuse, and the sleeplessness and mental irritability pronounced. Dr. Balthazar Foster is kindly testing the amyl in these conditions for me; but his results have not yet come to hand. One interesting case, illustrating well the action of amyl, he has already furnished to me. He says: "I used it in some heart-cases. In one especially it did well—a case of aortic insufficiency—with great hypertrophic compensation. In this case, there were great frontal headache and very violent heart-action, associated with high arterial tension. The nitrite of amyl relieved these conditions like magic."

Dr. Brunton has kindly placed at my disposal three sphygmographic tracings of the pulse in angina before and after the inhalation of amyl. The first figure gives the pulse in its normal condition, as seen before the attack came on, and after the attack had entirely passed off. (Fig.

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* Read before the Medical Society of London.

1.) He says: "During the attack of angina, the capillaries became contracted, and the arterial tension rose, as seen in Fig. 2. When the nitrite was inhaled, the pulse in most cases quickly regained its normal character; but, when the pain remained in the region of the nipple after the inhalation, the arterial tension fell as usual, indicating dilatation of the systemic capillaries; but the volume of the pulse remained small, as shown in Fig. 3." (On the Employment of Nitrite of Amyl in the Collapse of Cholera, BRIT. MED. JOUR., Jan. 13, 1872.)

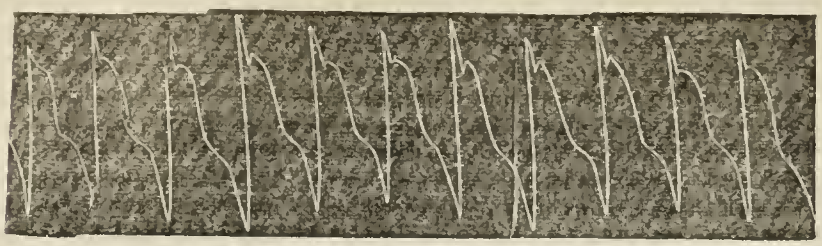

Fig. 1.

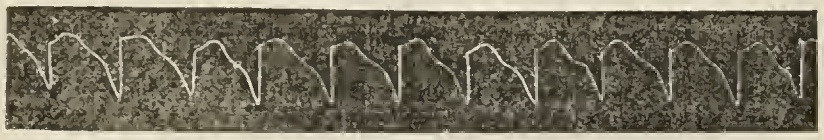

Fig. 2.

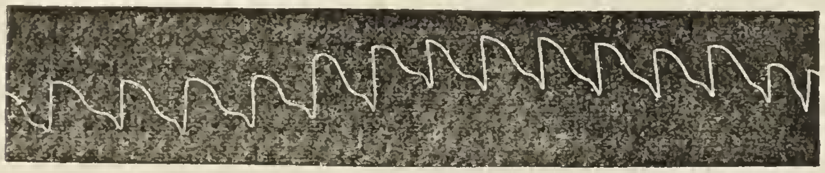

Fig. 3.

Calabar bean is a new therapeutic agent, for whose introduction into practical medicine we are indebted to physiological inquiry. It has been found to exercise a very beneficial effect over the course of that terrible malady, the general paralysis of the insane; and its use for such purpose took its origin in the perusal by Dr. Crichton Browne of Wakefield of a paper on the Calabar Bean by Dr. Fraser of Edinburgh, in the *Transactions of the Royal Society of Edinburgh* for 1867. Dr. Fraser described motor paralysis as one of the actions of the bean in full doses; and Dr. Browne conceived the idea of utilising this action to control the violence of the muscular movements of these patients in their periodical outbreaks of excitement. It was found to be most useful for this purpose; but something further was observed. Its use was found to exercise a beneficial influence over the progress of these unhappy cases; so much so that, in many cases, the untoward movement was arrested. After careful examination of numerous cases, it appeared to me that this beneficial action was due, to a great extent at least, to the effect of the physostigma upon the heart. Dr. Fraser found that the action of the bean was to diminish the vitality of the cardiac ganglia. With small doses, the heart's beats were diminished in frequency; and with larger doses, death arose from cardiac syncope. Though not quite agreeing with those of Von Bezold and Götz, Dr. Fraser's experiments are such as to inspire every confidence; and he found that the heart remained permanently in diastole and full of dark blood. In general paralysis of the insane, there is usually, in the earlier stages, high arterial tension, a powerful heart with much accentuation of the aortic second sound, cerebral hyperæmia, with grandiose delusions and periodical fits of general excitement.* That Calabar bean should exert a beneficial action upon such cases, is only what we might *à priori* expect from its physiological action; and, in actual fact, Dr. Browne has discharged a number of patients this year with their disease arrested. Dr. Fraser found that the bean dilated the peripheral vessels, as well as markedly depressing the heart's action; and the combined effect is to lower the blood-pressure on the brain, and so relieve the cerebral hyperæmia which is associated with this form of insanity. It may possess some action upon the motor centres other than that exercised by its effect upon the circulation, but of this there is no proof as yet; and its action upon the vascular system is, in all probability, the explanation of its beneficial action in these cases.

Dr. Browne has kindly supplied me with two illustrative cases of general paralysis successfully treated by the administration of Calabar bean, which I propose to read to you.†

Dr. Forbes, of Shoreditch Infirmary, has also tried Calabar bean in the treatment of acute cerebral conditions. He writes to me to the following effect. "I have not yet been able to give the 'bean' a sufficient trial; but, from what little I have seen of it, I am of opinion that it is a very useful remedy in the first stage of acute mania."

It would appear that the effect of the Calabar bean upon the cardiac ganglia is not only to depress their activity, but also to render them much more susceptible to extrinsic impressions. Thus, the exertion of walking, and the increased demand made upon the heart by this effort, will often produce temporary cardiac syncope; and, on several occasions, patients at Wakefield have been attacked by faintness when on their daily walk, while under the influence of the Calabar bean. No serious consequences, however, have resulted from its use, and the fainting soon passes away. But these easily induced syncopal attacks tell us how powerfully the physostigma acts upon the cardiac ganglia. The use of Calabar bean in the treatment of conditions of active hyperæmia within the encephalon, will probably ere long be general; and the application of cardiac depressants to the relief of cerebral hypervascularity, be another proof of the aid which physiology can afford to practical medicine. (*Journal of Mental Science*, April 1871, p. 149.)

Dangerous depression of the heart's action has always been the drawback to the use of these depressant agents, and has frequently occurred from the ordinary doses of antimony in common use. Whether idiosyncrasy extends so powerfully to the vegetable depressants or not, we cannot feel positive; but the Calabar bean fainting at Wakefield has so far been free from unpleasant consequences. It will be encouraging to those who propose to use aconite or Calabar bean in their practice, to know that both these agents have powerful antidotes, in case any symptoms provoking anxiety should arise. Fraser has gone at great length into the antagonism which exists betwixt the physostigma and belladonna; and Kleinwachter found physostigma exercised a marked influence over a case of belladonna poisoning. As to aconite, I myself found that in the frog, digitalis was a perfect antidote; and, soon after this observation, an opportunity of testing this in the human subject offered itself to my friend Mr. Dobie of Keighley. A veterinary surgeon of that town swallowed a large quantity of the tincture of aconite, and was apparently moribund, in spite of all the usual remedial measures. Mr. Dobie, being acquainted with my experiments, tried the antidotal action of digitalis, first administering it subcutaneously, and afterwards, as the man recovered a little, by the mouth. Complete recovery followed; and, from the history of the case, it is impossible to avoid the conclusion that the digitalis was largely instrumental in the induction of this result. The case is recorded in the BRITISH MEDICAL JOURNAL of December 21st, 1872.

Veratrum viride has long enjoyed a reputation, chiefly in America, as a neurotic of the circulation. Bullock has recently obtained from it two alkaloids, which he has named *viridia* and *veratroidia;* and Horatio Wood has investigated the action of each. Viridia, he says, is "a direct depressant of the circulation, lowering the force and rapidity of the blood-streams, slowing the action of the heart, and finally affecting the force of the single beat, independently of any spinal action it may assert. Veratroidia also depresses the heart's action, both in force and frequency, but the period of depression is followed by one of reaction." (*American Journal of Medical Sciences*, lix, p. 36.) Veratrum has also been tried on that curious therapeutic touchstone—pneumonia, and been pronounced to be of value, especially in sthenic cases.

Veratrum, aconite, and morphia, by subcutaneous injection, have all proved useful in the treatment of palpitation. Except in anæmic cases, palpitation is an active sign of incapacity, of inability upon the part of the heart to perform its duties smoothly, and indicates obvious effort; consequently, it is not likely to be benefited by a depressant in any other way than you can quiet a struggling creature by knocking it senseless or powerless, but this can scarcely be regarded as improving it much. Still, many cases of palpitation are unquestionably improved by the administration of these remedies; but these are cases not of incapacity or debility in the heart itself, but rather of increased obstruction offered to the blood-flow by spasm of the arterioles; the contracted peripheral vessels increasing the blood pressure, and so opposing ventricular action. Palpitation here indicates that the obstruction offered to the blood flow is more than the heart can comfortably overcome. Such is the palpitation common in Bright's disease, even when there is fair hypertrophy, more often however found in women with combined hypertrophy and dilatation, than in men with pure hypertrophy, until indeed that hypertrophy is yielding before structural decay. (Niemeyer, *Practical Medicine*, vol ii., p. 322.) Such is the palpitation of hysteria, where there is also spasm of the arteriole; here palpitation is not evoked by effort, but manifests itself only during the fit. The heart may be perfectly sound, and competent to meet ordinary demands upon it. But the spasm of the arterioles readily calls out palpitation, and these are the cases benefited by the administration of a depressant. The virtue of the drug lies not, however, in allaying the heart's efforts, but in its action upon the contracted peripheral vessels. Dilating them, and so lowering the blood-pressure, it thus removes the difficulty, and then the palpitation passes away; just as we have seen Dr. Brunton relieve angina by nitrite of amyl.

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* See a paper on the Heart-Sounds in General Paralysis of the Insane (*West Riding Lunatic Asylum Reports*, vol. iii, 1873).

† The complete notes of these cases were furnished by the friendliness of Dr. Browne. Abstracts of them will be found in the report of the proceedings of the Medical Society of London, at page 60 of last number.

In this way, colchicum and potash relieve violent action of the heart, which cannot be designated palpitation; a condition often found in granular kidney. Potash, like colchicum, is a vascular depressant; and Botkin of St. Petersburgh, in his work on *Diseases of the Heart* (1870, French translation), discusses its action at some length. But it is probable that these agents are useful, not so much by the direct depressant action which they possess upon the circulation, as by their indirect action in eliminating the histolytic products in the blood, upon whose presence in excess this condition depends. According to Ludwig and Traube, this excess of waste products stimulates the vaso-motor centre, and induces spasm of the arterioles and high arterial tension; their removal, then, by these agents, reduces the spasm, and with it the demand upon the heart. Practically I have found potash and colchicum more efficacious in the treatment of palpitation in Bright's disease, without the addition of digitalis, than digitalis alone without the other (*The Heart and its Diseases: with their Treatment*, 1872); nor is it difficult to see that it should be so. The combination of these remedies is the treatment *par excellence* of this condition.

If this consideration of the mode of action of the depressants of the circulation aids, however little, in casting into something like order this class of remedial agents, and in rescuing them from their chaotic condition, the time spent by me in preparing this paper, and taken up by you in listening to it, may not have been entirely wasted or consumed in vain. It might have been desirable to have contrasted with the agents enumerated here, the apyretic remedies so much employed in Germany, as digitalis, quinine, etc., which act by stimulating the vasomotor centre, and producing general contraction of the peripheral vessels, and a rising blood-pressure, with a falling temperature (Ackermann, *Berliner Klin. Wochenschrift*, 1872), had time and space permitted.*

THERAPEUTIC MEMORANDA.

AN IMPROVED PLUG FOR EPISTAXIS.

UNDER the above heading, I read in this day's JOURNAL a description of a new contrivance by Dr. H. C. Rose which he brings forward with a view towards superseding the old and commonly adopted method of nasal plugging in the more severe cases of epistaxis occasionally encountered. Doubtless, it will not be uninteresting either to Dr. Rose himself or our brother members of the Association, to become aware, should they not have been previously informed, that India-rubber plugs, on a similar principle, have already been invented by my friend, Mr. Nugent, F.R.C.S., of Monkstown, and can be procured of three different sizes (Nos. 1, 2, and 3, respectively), at Messrs. Weiss' of the Strand, by whom they have been devised, according to the instructions of Mr. Nugent. At the last meeting of the Drogheda Medical Society, of which I am Secretary, I exhibited, on behalf of the inventor, one of these plugs, and read extracts from a letter of his, wherein he describes the perfect efficiency of the appliance in cases in which he had recourse to it. The instrument to which I refer, is a simple India-rubber tube with a dumb-bell shaped dilatation about two inches in length at one of its extremities, which, when distended with air or filled with water, is meant to fill the nasal cavity and completely plug the fossæ posteriorly and anteriorly. There is an exterior pocket at the distal extremity of the plug, to accommodate the end of a gum-elastic catheter by means of which it is meant to be introduced. On the whole, the apparatus may be regarded as a Barnes's dilator adapted to the nose, though Mr. Nugent asserts that the former never occurred to his mind when the idea of nasal plugging by dilatation first struck him. I think I remember reading some such suggestion in the *Lancet* a few months ago, but whose it was, or to what exact purport, I do not remember. There is no stopcock attached to Mr. Nugent's plug, but one could easily be adjusted to it. A piece of worsted secures it equally well. I understand, wherever the contrivance has been made use of, it has been facile of introduction, and efficient as regards fulfilment of intention, and, should it continue to prove so upon a more extended trial, both operator and patient will be saved that most disagreeable operation—*obturatio narium*—with a Bellocq's sound.

For my own part, I may add that I seldom or never have to plug at all, as I find a strong solution of the persulphate of iron, or iron alum, in almost every case finally efficacious as a styptic.

FRANCIS E. CLARKE, M.A., M.D.Dub., L.K.Q.C.P., etc.
Drogheda.

TREATMENT OF ONYCHIA MALIGNA WITH NITRATE OF LEAD.

HAVING seen in the JOURNAL an abstract of Mr. Mac Cormac's paper, read at the British Medical Association, on Peruzzi's treatment of onychia maligna with nitrate of lead, I used the drug in the next case I met with. The disease, which affected the thumb of a girl aged 9, was of a severe form, and of many months' duration. The child's mother said she had taken her to various surgeons, and that none had done her any good. She was so discouraged by these failures that she believed the thumb would never get well, and said she would give any one five pounds who would cure it. I ordered the powdered nitrate to be dusted upon the onychia every night and morning, and gave the child cod-liver oil and steel wine. On seeing her again at the end of a fortnight, I found that she was cured. The fragments of the old nail had disappeared; the ulcer was completely healed; the end of the thumb was nearly restored to its proper size; and the skin, which at first was of a deep dusky-red colour, was now almost natural. The first application of the nitrate increased the pain for about a quarter of an hour, but after this scarcely any pain was felt. Before the lead was used, the pain had been very severe.

This case gives all the experience I have yet had of the treatment of onychia maligna with nitrate of lead. As far as it goes, it agrees precisely with those referred to by Mr. Mac Cormac, as having been treated by Dr. Johnstone Scott in Belfast. I may add, that the disease is clearly much more common and much more severe in Ireland than in London. Not more than five or six cases are seen in a year at the Children's Hospital. In the majority of these it is in the fingers, and not in the toes. Although arsenical lotions will very often quickly cure the affections, some cases have been extremely obstinate and troublesome; and the discovery of this new remedy will be most welcome, if it prove, as there seems good reason to believe, both rapid and certain in its effect.

HOWARD MARSH, F.R.C.S., Assistant-Surgeon to St. Bartholomew's Hospital, and to the Hospital for Sick Children.

CLINICAL MEMORANDA.

PRIMARY VACCINATION DURING PERIOD OF INCUBATION OF SMALL-POX: CONFINEMENT DURING ATTACK OF THAT DISEASE: RECOVERY.

ON the morning of November 19th last, I was called to see John Johnson, seaman, in this town, whom I found to be suffering from a severe attack of small-pox. On learning that his wife, who had been in attendance since the commencement of the disease, had never been vaccinated, I thought it right immediately to perform that operation on her, notwithstanding the circumstance that she was within a few days of her confinement. Both husband and wife were immediately removed to the Small-pox Hospital; and, two days afterwards—*i.e.*, as soon as arrangements could possibly be made—Mrs. Johnson was removed to a separate part of the building. Vaccination was as successful as could have been desired, both vesicles attaining maturity at the week's end—viz., on the 26th November. At this time the poor woman was enduring great mental distress, for the disease in her husband, who had never been vaccinated, assumed a semi-confluent form, and proved fatal on the morning of the 27th. That same day, Mrs. Johnson was seized with febrile symptoms, which I at that time attributed to vaccination. On the morning of the 29th, labour-pains set in, and that evening she was delivered of a living female child. Next night, the eruption of small-pox appeared on the mother.

Of this attack, there is nothing special to remark further than that it proved decidedly a case of unprotected variola—*i.e.*, it assumed none of the distinguishing features of the variola which occurs in a subject previously vaccinated. The eruption was discrete and remarkably well developed; and there occurred a decided secondary fever, accompanied by violent delirium, and followed by considerable prostration, during which stimulants were had recourse to. Convalescence, which may be said to date from the 9th December—the twelfth or thirteenth day of the disease—has progressed most satisfactorily.

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* It must not be supposed that, in classing the above mentioned agents as depressants of the circulation, there is any intention to insinuate the suggestion that these remedial agents possess no other action; or that mercury and opium act only upon and through the circulation. They are grouped here in so far as they are vascular depressants, and therefore coming under that heading, without reference to any other action they possess.

In this case the points which appear to me most worthy of note are : 1. Vaccination ran its course during the period of incubation of small-pox. 2. The small-pox following said vaccination was decidedly of what is usually regarded as the unprotected type. 3. Although it was complicated with the parturient and puerperal states, the patient has recovered from small-pox.

The important question arises, although variola in this instance was of the unprotected type, may it not have been mitigated by the cow-pox, which ran its course during the period of incubation ?

ROBERT COWIE, M.A., M.D., Lerwick, N.B.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

TINCTURE OF DIGITALIS AND CHLORAL HYDRATE IN DELIRIUM TREMENS.—Dr. E. Chenery (*Boston Medical and Surgical Journal*, October 16, 1873) records the case of a Scotchman aged 35, who, when first seen, had neither taken food nor slept for nearly a week, during which time he had been on a continuous debauch. His mind was greatly agitated, his muscular system in a state of unrest, and his pulse feeble and frequent. A strong mustard plaster was applied to the pit of his stomach; fifteen grains of chloral were given ; and, in twenty minutes, twenty drops of the tincture of digitalis. These were retained ; and, in ten minutes, thirty grains of chloral were administered, and were followed by three hours of refreshing sleep. A raw egg and some milk were then given, with another portion of digitalis, and in a short time thirty grains more of chloral. This time he passed off into a sleep of many hours, from which he awoke much relieved. Small doses of digitalis were continued for several days, partly to reduce the pulse, but principally for the sake of the eliminative action on the kidneys.

TRAUMATIC TETANUS SUCCESSFULLY TREATED WITH CALABAR BEAN.—Dr. J. A. Duncan (*Chicago Medical Journal*, November 1873) used Calabar bean in a severe case of traumatic tetanus, after large doses of opium, chloral, ether, belladonna, and bromide of potassium, had been given without benefit. A tincture of the bean was used, containing one grain of the powdered drug to four minims of the menstruum. Fourteen drops were given at once, and subsequently nine drops every two hours. In four hours, a troublesome spasmodic contraction of the neck of the bladder was overcome, a quart of urine was passed voluntarily, and the pulse fell from 104 to 80. The patient's general condition, however, remained about the same. The remedy was continued in doses of eight drops every three hours for fifteen days, when, as there was not much change for the better, fifteen drops were given every three hours for the entire day. The following day—the twentieth of the disease—the patient was able to leave his bed, ate with great appetite, and from that time progressed steadily to complete recovery.

SURGERY.

GUN-SHOT WOUND OF THE HEAD.—Dr. T. P. Prewitt (*St. Louis Medical and Surgical Journal*, November 1873) reports the case of a man aged 32, who, in endeavouring to shoot himself, inflicted a wound a little to the left of the median line of the forehead, and about an inch and a half above the supraorbital ridge. The man suffered somewhat from irritability of the stomach, nausea, and vomiting; but this condition was relieved by chloral and morphia. He was kept quiet, and in five weeks was discharged from the hospital greatly improved. About a year afterwards, he came under observation again, complaining of great headache, involuntary discharges of urine, and general *malaise*. He sank gradually, became semi-comatose, and died of asthenia. On the *post mortem* examination, the bullet was found encysted, lying near the anterior border of the left lobe of the cerebrum, on the under surface of which was a large sac filled with pus. There were evidences of inflammation of the brain and dura mater in the neighbourhood of the ball.

TWO NEW METHODS OF RECTAL LITHOTOMY.—Dr. Theodore Schaffer (*Vierteljahrschrift für die prakt. Heilkunde*) describes two new methods of lithotomy, which he calls, 1. recto-vesical lithotomy ; 2. recto-urethro-prostatic lithotomy. By the recto-vesical lithotomy, we penetrate directly into the bladder. This operation is performed in five stages. The first comprises the preliminary dilatation of the rectum and bladder. The dilatation of the rectum is intended to facilitate the access of instruments. It is effected by the aid of Sims's speculum, slightly modified. The rectal walls are further separated by means of hooks of metal wire. The dilatation of the bladder is intended to increase the projection which its base forms in the rectum, to separate laterally the seminal vesicles, and thus to remove them from the field of operation, and finally to elevate the peritoneal *cul-de-sac* which is thus protected. This dilatation is obtained by injection of air, or, preferably, of carbonic acid gas, the latter being better borne. When the bladder is very irritable, this injection of gas is not made until after the patient has been placed under chloroform. In the second stage, dissecting forceps are applied above the base of the prostate. The rectal mucous membrane is pinched up transversely, and the fold longitudinally incised. In the third stage, the muscular layer of the rectum is similarly divided. In the fourth, the prostati perineal aponeurosis is seized, drawn through the rectal wound, and divided longitudinally, after it has been ascertained that the incision will not affect either the seminal vesicles or the deferent canals. In the fifth stage, the base of the bladder (examined first with the same precaution) is longitudinally incised by the aid of scissors, which are conducted along a groove in the catheter. The incision is made to an extent proportional to the presumed size of the stone, but always taking care not to injure the peritoneum. The stone can then be extracted. A few points of suture are then applied by a form of needle invented and described by the author as greatly facilitating the operation. The second method is named by the author lateral recto-prostatic lithotomy. It is especially applicable to young subjects, with a view to avoid injuring the peritoneal *cul-de-sac*, which in them descends very low. As in the first method, the bladder and rectum are first dilated ; the catheter is then introduced into the bladder. The sound may easily be felt in the membranous part of the urethra, and the prostate explored. Half a centimeter below the border of this organ, a fold is caught by a strong forceps, including the mucous and muscular layers of the rectum. When once all the layers of the rectum are divided, small oblique incisions are made at the extremities of this wound, in such wise as to form a rounded flap convex below. This flap is lifted up, then dissected. The membranous portion of the urethra is then reached, which is divided, as well as the prostate, to an extent proportionate to the supposed extent of the stone. Some points of suture are then applied to the prostate and the flap, which falls back and applies itself to the spot by its own weight. The author considers the application of suture very important in these cases, to avoid fistulæ. In the operations of rectal lithotomy, where the parts divided have thus been brought together, cure was obtained once in eight days, and once in eleven days, without leaving any fistula.

PATHOLOGY.

CYSTICERCI IN THE BRAIN : ABSENCE OF SYMPTOMS.—Meschede (*Deutsche Klinik*, No. 32, 1873, and *Centralblatt für die Med. Wissensch.*, December 13) describes the necroscopic appearances found in the brain of a man aged 38, who had suffered for some years from heart-disease and a chronic frontal affection (the nature of which is not stated), but had never manifested any mental disturbance or other symptom of disease of the brain. On the convex surface of the cerebrum, embedded in the cortical substance, were three hydatids about the size of peas ; and, by microscopic examination, many of the ganglionic cells in their immediate neighbourhood were found in a state of fatty degeneration. Dr. Meschede remarks that the absence of symptoms gives a special interest to this case, in contrast with others in which the severest mental disturbance and dangerous nervous diseases have attended the presence of cysticerci in the brain.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AROMATIC CANDLES.

MESSRS. FIELD have introduced a novelty in the form of candles impregnated with aromatic substances—benzoic acid, styrax, etc.—which is at once ingenious and attractive. The air around is quickly impregnated with balsamic vapours ; and it may be expected that thus relief will be afforded in many cases of irritation of the pulmonary mucous membrane and bronchial spasm. The idea is one which is creditable to the ingenuity of the manufacturers, and we hope it may be largely tried and found generally useful.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 17TH, 1874.

CONFERENCE OF MEDICAL OFFICERS OF HEALTH.

IF the year 1873 has been rather barren of work calculated to promote sanitary progress, it would appear that 1874 is likely to be more fertile. In another column we publish a brief report of a Conference of Medical Officers of Health to combined districts, which was held in London last week, and which seems to promise an important contribution to what may turn out, if well managed, to be an active sanitary campaign. The mountain gives signs of being in labour; let us hope that the issue may not be abortive. From a statement of the circumstances which led to the calling of the Conference, and which we are informed was sent to the medical officers of combined districts only, it appears that these gentlemen consider that the time has arrived when they should meet and, to use a commercial phrase, take stock of their position. We apprehend that they have most of them by this time found out that, in reference to a good deal of the work which they are called upon to perform, they are pretty much in the position of the Children of Israel in Egypt; there is a very active demand for bricks from them, but an infinitely little amount of straw supplied for their manufacture. They are debited with an intolerable amount of *advice* to the sanitary authorities whom it is their duty to instruct, but are credited with a very "halfpennyworth" of *power* to procure the adoption of their advice. It is not surprising, therefore, that these gentlemen who have been invited, by the terms on which they are appointed, to devote themselves to sanitary work as a distinct profession, and who are, in consequence, on a somewhat different footing from other officers of health who combine practice with sanitary work, should consider it necessary to look about them and to ascertain what are the defects of their organisation, and how far they are susceptible of being remedied. We have always been of opinion that, however great are the merits or demerits of these combined districts, and of the apparently incomprehensible principle upon which they have been constructed, one good result could scarcely fail to flow from them; and that is, the enlistment in the cause of sanitary progress of a body of gentlemen who would be compelled, from the necessity of their position, to give more active attention to the requirements for sanitary reform, and to put more active pressure both upon public opinion and upon the Government than has been hitherto possible under the system of unconnected sanitary appointments. The magician who presides at Gwydyr House has succeeded in manufacturing his demon, and he may be pretty sure that the creature of his handiwork will find him work enough to do. This is as it should be. We have had occasion frequently to animadvert upon the unsatisfactory way in which these combined districts have been formed, and we shall not be at all surprised if in some cases the alliances which the inspectors of the Local Government Board have brought about, should be destined after having commenced, like the marriage service, in the "love" of the parties thus unexpectedly brought together, to terminate before long in their mutual "amazement". But no one will rejoice more than we shall do if Mr. Stansfeld's attempt to carry out in this way the objects of the Public Health Act shall eventuate in creating a body of gentlemen who, by the energy and intelligence which they may bring to bear on the question of sanitary reform, shall not only greatly promote the adoption of sound principles in sanitary legislation for the future, but, perhaps, rectify in no small degree the blunders which have been committed in the past. It is obvious that, if the medical officers of the combined districts can see their way to act in unison, they cannot fail to bring considerable pressure to bear both upon the Government and upon the various sanitary authorities with whom they are connected. A healthy public opinion will thus be created, which it would otherwise be very difficult to form and develope.

There is another reason, too, why we look forward to the results of this Conference with satisfaction; and that is, because it may possibly form a nucleus around which the whole of the medical officers of health in the kingdom may hereafter aggregate themselves for the promotion of objects in which they all have a common interest. It is exceedingly undesirable that the medical officers of combined districts should separate themselves in any way from the rest of their brethren who are engaged, though perhaps not so exclusively, in sanitary work and we presume that the reason why the Conference was on this occasion limited to them was, because their wants in regard to various matters are not only special but urgent; and because anything like a conference of medical officers of health generally being impracticable, it was impossible to draw any line except that which separates combined from uncombined districts. We trust, however, that a way will be found in any future Conference—and we understand, from the appointment of a permanent Committee, that such a step is contemplated—to extend the field of invitation so that all medical officers of health shall be able to take part in the discussion of matters which are of interest to them generally. The institution of such occasional conferences would not in any way interfere with the proceedings of the Public Health Section of the Association, which is always sure to find abundance of material both in the shape of speakers and of papers, and which, from being open to the medical profession as a whole, covers a much larger area than that of a sole conference of officers of health. The work of such a conference would deal mainly with details in which the profession generally would feel but little interest. We do not forget that there is already a Society of Medical Officers of Health which holds monthly meetings in London; but irrespectively of the fact that this Society does not seem, in consequence, perhaps, of its being only an expansion of the former Association of Metropolitan Medical Officers of Health, to have attracted the support of any large number of provincial officers, its sphere of action would appear, judging from what it does, to lie in the reading of papers. Now when we consider how new the whole subject of sanitary science is, how much there has to be done in the way both of organisation and of legislation before that department of local government which is charged with the protection of the public health can be considered as on a satisfactory basis, we think that there is need for some agency by means of which medical officers of health as a class shall be able to look after their own special interests, and to take such action in regard thereto as may appear to them desirable. From this point of view, therefore, and in the hope that the recommendations of the Conference may be both wise and practicable, we notice its meeting with pleasure, and shall look forward with interest to its promised report. There is one point, however, on which the report may possibly not be so illustrative as we are informed the proceedings of the Conference themselves were; and that is, with regard to the almost incredible variety of usage which exists in these combined districts on every matter which is involved in their organisation. The sanitary authorities in no two of them seem to look at their work from the same point of view. It follows, consequently that the difficulties with which the medical officers have to deal are of all sorts and kinds. Most of these difficulties are, we believe, merely defects of organisation which could be readily removed by the Local Government Board if it would only take the trouble to make itself acquainted with them; and, if it be of any use for us to offer Mr. Stansfeld any advice at all on the subject, we would suggest the desirability of his finding out without delay, and before existing practice has crystallised into the form of well established and inconvenient precedent, what is really going on in these districts, and how far the work of the officers whom he has induced the authorities in them to appoint is being obstructed by needless obstacles. There would be no difficulty in obtaining this information if the matter were only taken energetically in hand. The highly competent men in the medical department, if instructed to place themselves in communication with the medical officers, would soon find out what these difficulties are, and how far they are remediable without parliamentary legislation. For our own part, we believe, as we have said, they are to a large extent matters of mere organisation, with which the Local Government Board could itself deal without much need for further parliamentary powers. But, perhaps, it is too much for us to expect anything like spontaneous and energetic action in such a direction as this from Gwydyr House. Mr. Stansfeld appears to be so firm a believer in the great law of evolution as applied to sanitary authorities, that he prefers to leave them to work out their own organisation rather than to mould them into shape himself in accordance with the dictates of ordinary intelligence. What the results of such a happy-go-lucky policy will be, if further persevered in, needs no magician, outside of Gwydyr House, to foretell; if we sow the wind we shall assuredly have to reap the whirlwind. It is as true in sanitary as in humbler matters, that a stitch in time saves nine; and if the various local bodies to whom the responsibility of sanitary self-government is now entrusted be allowed to gradually learn that the powers of control which they now believe the Local Government Board to possess, are either non-existent or that the Board is afraid to use them, they will before long assume a tone of independence which will give it hereafter an infinity of trouble to remove the obstacles to progress which it will itself have been instrumental in creating.

GOVERNORS' LETTERS.

SIR C. TREVELYAN is rendering good service in persistently calling the attention of the public to evils connected with hospital administration, which have been repeatedly demonstrated in these pages, but which can only be remedied by lay co-operation; and, indeed, mainly by the enlightenment of the blind, though well-meaning, philanthropists who are at the head of hospital administration.

The question raised in the following letter from Mr. Charles Hall Hall is of such vital importance to the reform of our medical charities, that it will be well to bring the information relating to it under consideration in one point of view.

72, Oxford Terrace, W., November 26th, 1873.

Dear Sir,—The Council of the Charity Organisation Society has lately directed public attention to the abuse of letters of admission to hospitals. There is one point in connection with that subject which, I think, ought to be considered.

Some hospitals—St. George's, University College, and St. Mary's among the number—have, in consideration of their share of the Hospital Sunday Fund, issued a large number of letters for admission of patients. These have been given to the Hospital Sunday Council, to be distributed among the clergy in whose churches collections were made for the Fund. A very large number of these letters have been issued, and are now in the hands of the clergy. I understand that hitherto the clergy of all denominations have had no difficulty in obtaining for the sick poor of their congregation as many letters as they have needed. These hospitals consequently do not expect any increase in the number of patients. I have no wish to find fault with the way in which the clergy particularly use their letters; but it is now notorious that these letters are abused. It seems to me that this large extra and needless issue of letters must tend to increase the evil of which we complain. Hospital letters, already too plentiful, will be cheapened, and will be given away even more laxly than at present.

For this reason, as well as for other reasons which only apply to special hospitals of a similar kind, the Committee of Queen Charlotte's Hospital has declined to give any letters of admission to the Hospital Sunday Council. I have, as requested by them, written to that effect to the Lord Mayor.

I hope the Council will consider the matter, and if they agree with me in thinking that a large issue of letters of this kind year by year is not desirable, will see their way to take some means of preventing it by communicating their opinion to the Hospital Sunday Council and to the different hospitals.

We think, at Queen Charlotte's, that the collections made should be fairly distributed to all the hospitals as a free gift, and no letters asked for, or given, in consideration of the sums received.

I shall be much obliged if you will ask the Council to consider this matter. As it is of general, not local, interest, I could not well bring it forward at the Paddington Committee, of which I am a member.

I am, dear Sir, yours faithfully,
C. B. P. Bosanquet, Esq. CHARLES HALL HALL.

Three out of the four Subcommittees appointed in March 1870 by the meeting of the medical profession upon hospital out-patient administration, reported their opinion upon the subject of governors' letters.

The Subcommittee on General Hospitals are of opinion that the system of admission by the governors' and subscribers' letters is radically wrong as regards out-patients, and ought to be abolished. This practice is one of the chief sources of hospital abuse. The Subcommittee believe that many masters and employers of labour contribute to hospitals with the object of providing medical assistance for their servants and workmen at a cheap rate. Men whose ordinary income is two or three pounds per week expect to have letters of recommendation given them to the neighbouring institutions. They are thus relieved from the necessity of joining benefit societies and provident dispensaries, and the tendency of the masters' liberality is to destroy habits of forethought and independence. The system also forms the excuse for free dispensaries and hospitals, since it is often injurious to the really sick to be compelled to go about in search of governors' letters, whilst it is obvious that absolute freedom of admission is liable to very great abuse.

While the Subcommittee on Special Hospitals are strongly opposed to the system of governors' letters, yet, considering that the privilege of giving letters to patients is a great inducement to benevolent persons to subscribe to hospitals, they are of opinion that it would be better to adopt a plan of payment which did not interfere with this privilege, especially as such a plan would probably not diminish the number of subscribers. The Subcommittee remark that the present way of dispensing governors' letters is constantly abused, subscribers allowing their servants to give them to whomsoever they will without inquiry; and many, as a rule, using them for their own servants, when they themselves are well able to pay a medical man to attend them.

The Subcommittee on Dispensaries remark that, on the subject of subscribers' letters a wide diversity of feeling exists, some not caring to exercise the privilege of recommending patients, and others feeling aggrieved if their right in this matter is at all interfered with or curtailed. There is often a difficulty in the poor procuring a letter of recommendation, and besides, when obtained, it is generally after many hours spent in walking, which may materially increase their malady, and hinder that very recovery which they are striving to secure. A medical officer of the Kilburn Dispensary writes:—"I think the administration of out-patient relief is a scandal to our charities, and an injury to our profession." The committee of the same dispensary have also seen the difficulty just referred to, of patients obtaining letters, and in their report write as follows:—"The committee desire again to remark that during the later part of the year there were, as in former years, frequent complaints of great difficulty in procuring the letters of recommendation, although a large number still remained undisposed of. This doubtless has in part arisen from the distance of the residences of many of the governors; and with a view to meeting the difficulty, the committee would again suggest that subscribers who may not have found opportunities of making use of their letters during the first months of the year, should sign and forward them to one of the clergy on the list of vice-presidents, or to the medical officers, the treasurer or honorary secretary, who have hitherto had more applications than they have been able to meet."

At the conference upon out-patient hospital relief, at the Society of Arts, on December 12th, 1871, Sir C. Trevelyan made the following remarks.

> The other indispensable condition of improvement is that the subscribers should not insist upon their privilege of securing gratuitous admission for their nominees. At present the heads of domestic establishments in the west, and of industrial establishments in the east and south of London, subscribe expressly for this purpose, and resent any attempt to impose limits upon their "valuable patronage", as some of them consider it. From this practice two lamentable consequences ensue: first, the income of the hospital is stinted by being deprived of the contributions of the entire working class, and of no small proportion of the class immediately above; and secondly, the taint of dependence is inflicted on an immense proportion of these classes, whence it circulates through every vein of our social system. If any really useful improvement is to be attained, this great abuse of "governors' letters" must be got rid of, and people must subscribe from some less mercenary motive. The truly beneficent character of our general hospitals is so universally admitted that it is quite unnecessary to appeal to secondary motives of any kind. All that is wanted is that the rich should give of their abundance to these, as they do to other charities, leaving those who are benefited to contribute according to their means, if they are able to do so, and if not, to have the advantage as a gratuitous boon.

> In the following year Mr. Jodrell moved three resolutions in the managing committee of St. George's Hospital, the third of which was as follows:—That the system of admission of in-patients on governors' letters, as practised in this hospital, is liable to great abuse, and ought to be discontinued.

The grounds of this resolution were thus stated by him in his letter to the subscribers to the hospital.

> The practice of admission by governors' letters formerly extended to both classes of patients, but is now retained only as regards in-patients. The practice, as now existing, I understand to be this:—The bearer of a governors' letter is admitted as a matter of course, unless objected to on medical grounds as not a fit subject for hospital treatment. As to his position in life and circumstances, the letter is treated as a sufficient guarantee that he is a fit subject of relief, and any further inquiry on that point, I was told, would be regarded as an act of disrespect to the governor recommending him. Now, it can hardly be necessary to point out how wide a door this opens to irregularity and abuse. It is well known that in contributing to these institutions different people are actuated by very different motives. Some—and I believe a very large majority—do it as a pure act of charity, for which they look for no return but the pleasure of doing good and relieving distress, while others regard it as a purchase of a kind of patronage; and these accordingly feel no scruple in giving letters to their domestic servants, or other dependents or *protégés*—not with extra payment, which in many cases would be quite unobjectionable, but in the exercise of a supposed right which they acquire by subscription. Now I, in common, I believe, with the majority of the "governors" of St. George's Hospital, have no sympathy whatever with this school of benevolence. It is founded, in my judgment, on a false and spurious principle, which instead of being fostered by a regulation which seems to give it public recognition, ought by every means to be discountenanced and repressed, not only as discrediting to the charity which it counterfeits, but as engendering a spirit of mendicancy in the objects who benefit by it. Indeed, the only argument I have ever heard advanced in defence of it—and that even by some who agree with me in the principle—is, that if the practice of governors' letters were abolished, the contributions to the hospital would fall off. For my own part, I am convinced that this apprehension is utterly groundless. I cannot believe that the number of the really benevolent—especially in a constituency like that of St. George's Hospital—is so small as to need the alliance of those (if any such there be) who would make a trade of their charity; or that their bounty would not flow still more copiously if they had the assurance, which sound principles of administration alone can afford, that it would be applied for the benefit of those, and of those only, who were its intended and legitimate objects.

In the reply of Sir C. Trevelyan to the printed questions issued last year by the managing committee of the London Hospital, he observes:—

> Subscribers' letters are open to great objection from the difficulty which real sufferers often have in getting them at the time required, and also from their being extensively obtained by persons who are not at all objects of charity. There is a traffic constantly going on in "governors' letters" (as they are commonly called) for hospitals and free dispensaries. Women collect them by going about begging for them under pretence of wanting them for their own use; they also beg for money on the evidence of distress which these letters are supposed to afford; and, after all, they sell them, for the letters have a money value which ought to go in aid of the expenses of the institutions. Thus, to a great extent, the hospitals and free dispensaries are not really gratuitous, but the payments which, under a proper system, would be made to them, are intercepted by fraud.

Besides the other objections to governors' letters, they are obviously incompatible with any discrimination of the cases to which the benefit of gratuitous medical treatment should be extended; and, by requiring, as a condition of their grants, that governors' letters should be furnished to a corresponding amount for distribution through the clergy who preach for the fund, the Hospital Sunday Council has given a new development to the evil.

Sir C. Trevelyan now collects these data, and in publishing them adds that the true principles of medical relief would seem to be:—

> 1. That hospitals, which are intended for urgent and difficult cases, should be available for suitable cases without its being necessary to obtain the authorisation of a subscriber, but that persons able to pay, in whole or in part, for the benefits they receive, should be required to do so.
>
> 2. That dispensaries, which are intended to provide for the ordinary medical treatment of working men and their families, should be mainly supported by their respective "members", through periodical payments made on the principle of mutual assurance; and
>
> 3. That persons unable to make these small payments should receive gratuitous treatment at the Poor-law dispensaries.

This is not a question of funds, but of administration. The existing income of medical charities would more than suffice if we desisted from the impossible task of providing medical treatment, on a purely gratuitous footing, for the entire working class and a considerable margin of the lower middle class, and extended to our medical charity that discrimination without which all charity becomes injurious to the recipients and wasteful to the community.

AT the meeting of the Society of Medical Officers of Health on Saturday, January 17th, at 7.30 P.M., Dr. C. Meymott Tidy will make some remarks on Butter and its Adulterations.

DR. EDWARD SPARKS has been appointed Physician to the St. George's Provident Dispensary. We understand that several first-rate candidates offered themselves for the post; but the honours which Dr. Sparks gained during his Oxford career secured his election. This is only one among many indications that the provident principle is gaining favour with the profession. It shows that men of the highest standing would be as willing to serve under it as they now are to be attached to institutions which are purely charitable; and that, if other dispensaries were transformed as the St. George's has been, the managers need have no fear but that they would be able to recruit the staff with men of the same high class as heretofore.

DRS. CHORLEY and Hare have been elected Consulting Physicians, and Mr. Richard Davy Consulting Surgeon, to the St. Marylebone Dispensary, in recognition of long and faithful services to the institution.

THE SANITATION OF MAURITIUS.

IT is probable, though far from certain, that the people of the Mauritius will presently profit by the fearful lessons taught by the decimating epidemics through which they have passed. A recent severe epidemic of measles, which has carried off several hundreds of the population, has quickened the apprehensions of the legislature; and the Governor, in his opening address to the legislature, announces improved sanitary laws as part of the work of the session.

ORGANISATION OF CHARITY.

THE Great Northern Hospital is, it is announced, about to discontinue its out-patient department. We trust that this is so, and that the example will be widely followed. The out-patient departments of hospitals are at the present a source of public demoralisation; and, with a fitting organisation of Poor-law dispensaries for the poor and of provident dispensaries for the working classes, they would be universally recognised as useless if not mischievous in their present shape.

ECONOMICS IN THE ARMY MEDICAL DEPARTMENT.

IT is rumoured that an intention is entertained of cutting down the already scanty emolument of the Director-General of the Army Medical Department when a successor shall be appointed to Sir Galbraith Logan, at the close of his term of office. It is said that the economical proposition in question is to reduce the position to that of an Inspector-General, thus treating the appointment as if it were a temporary staff-appointment. This, if true, is one further indication of the spirit in which the present authorities are disposed to deal with the Army Medical Department—a mode of proceeding which is doing so much to render it popular and attractive to a good class of candidates.

THE ASHANTEE EXPEDITION.

IT is now well known that the recent attempt to establish a sanatorium for Gold Coast invalids at Madeira has proved a complete failure, the Portuguese authorities dreading the possible introduction of infectious disease into their island. Surgeon-Major Mackinnon has since proceeded to head-quarters at Ashantee; and, although this course of action was at first undertaken in no official capacity, we understand that it has since obtained the sanction of the authorities at home.

POISONING BY QUACK PILLS.

A MOST extraordinary case of poisoning has recently occurred at Hitchin, in which the coroner's jury brought in a verdict of manslaughter against a person well-known in the neighbourhood as "Professor" Morris. It appears from the evidence given at the adjourned inquest, and reported in the *North Herts Journal* of the 10th instant, that a box of pills was obtained from this man by the mother of the deceased, who was 22 years of age, and that he died under suspicious circumstances, after having taken in all four or five of the pills. The *post mortem* examination was made by Mr. Richard Shillitoe, surgeon, who, finding the digestive canal presented all the signs of irritant poisoning, and that the brain, lungs, liver, heart, and kidneys were quite healthy, forwarded the stomach, spleen, and pills to London, to Dr. George Harley, F.R.S., who along with Mr. Atkinson, chemical assistant in the laboratory of University College, made a careful examination of them, with the result of finding arsenic in the contents of the stomach, as well as in the tissues of the spleen, and in the pills remaining in the box from which the deceased had taken the others. It is not always that quacks employ such dangerous drugs, nor is it frequent for poison to be traced so completely as in the present instance. At the adjourned inquest, which was held at Hitchin, and of which a very full report is given in the local papers, Dr. George Harley exhibited the arsenic extracted from the stomach, spleen, and pills; both in the form of the metal, and as crystalline arsenious acid. He also showed drawings exhibiting the *post mortem* appearances in different stages of arsenical poisoning. A verdict of manslaughter was passed against the quack in the following words:—"That the deceased came to his death by taking pills containing arsenic, the same pills being supplied by 'Professor' Morris."

CLINICAL SOCIETY.

MR. PRESCOTT HEWETT, who has just been re-elected President of the Clinical Society, is to deliver his inaugural address at the Society's meeting on Friday, January 23rd. We understand that he will bring forward some facts bearing upon Pyæmia, which will probably lead to a lively and profitable discussion. At all events, the subject is one of special interest at this moment, and cannot fail to attract a large attendance of the members of the Society, as well as that of visitors. We may call attention, in this connexion, to the lectures of Mr. Erichsen, of which we publish the first to-day.

THE TREATMENT OF ANEURISM BY GALVANO-PUNCTURE.

WE have lately summarised the existing knowledge on this subject, and have published some valuable original contributions to that knowledge, of which one of the most notable was the careful and elaborate report of Dr. Charlton Bastian, F.R.S., of a case of aneurism of the arch of the aorta which he had been treating in University College Hospital. There is at this moment another case under treatment by Dr. Bastian at the University College Hospital. In this case, originally the aneurismal swelling protruded at the upper part of the sternum; the walls were greatly thinned; the skin glazed; and the distensile impulse was very forcible. The patient, a man of advanced age, had been suffering very severe pain for many years; the swelling had protruded for about two years; and he has been racked with severe pain. He has been under treatment, after the method described in the BRITISH MEDICAL JOURNAL of November 29th, 1873, about five weeks, and thus far with very favourable results. The swelling has much consolidated and diminished in size, and the pain has almost disappeared. Throughout the treatment there has been no local irritation produced by the punctures. The case is still in progress.

MELANCHOLY DEATH OF A MEDICAL STUDENT AT NEWCASTLE-UPON-TYNE.

MR. EDWARD FRANCIS PIPER, aged 20, eldest son of Stephen Edward Piper, Esq., F.R.C.S., of Darlington, died at the Newcastle-upon-Tyne Infirmary on the 11th instant, after a few days' illness, from sore-throat and toxæmia. Mr. Piper was in his third year, was a prizeman of his College, had passed his first professional examination, and had been resident in the Newcastle Infirmary for four months as dresser and clinical clerk. He was a student of much promise, and a favourite with his fellow-students. When his body was removed by railway to Darlington, the students of the College of Medicine, several of the honorary staff of the Newcastle Infirmary, representatives of the Committee, and other officials of the Infirmary and College of Medicine, were present at the railway station, in testimony of their sympathy with the sorrowing friends, and of their regard for the deceased, whose premature death is much deplored.

THE APPROACHING SERVICE EXAMINATION.

IT will be seen that an examination for commissions in the Medical Department of the Army will take place on February 16th. We have protested strongly, and we still protest, against the treatment which the department has lately received; and it remains for the profession to show that our protest has not been in vain. It is, perhaps, not too much to say that a liberal supply of candidates on the present occasion will greatly retard, if not altogether prevent, any useful reforms; and we hold that content cannot be re-established until the Warrant of 1858 is restored in its integrity. We are only expressing the views of the most experienced among our military brethren, when we urge young men to pause before committing themselves to a career whose present is so shifting, and whose future so uncertain. But, putting their own interests entirely on one side, we consider that they have now the opportunity of doing a signal service to a cause which now seems almost more desperate than ever, but whose future success must mainly depend on the action taken on the 16th. It will be remembered that on a former occasion, when success or failure hung in the balance, the vigorous action of local effort secured success to Government by a large infusion of raw material from the sister isle. Let us hope that the schools may now be more patriotic, and act up to the professions which they have not been backward in making under the pressure of recent events.

THE WORCESTER DISPENSARY.

THE governors of the Worcester Dispensary have determined to introduce a provident branch into their institution; but, unfortunately, a difficulty has arisen upon a point which is confessedly one of the vexed questions of the subject—*i.e.*, the number of medical men to be placed upon the acting staff. This is a point upon which considerable difference of opinion exists, even among those who are the strongest advocates of provident dispensaries. We trust, therefore, that at the meeting which is to be held on Tuesday next, it will be calmly and temperately discussed; and that no matters of secondary importance will be allowed to hinder what is intended for the general good. The Worcester Committee have as yet only appointed three medical officers; while Dr. Woodward, in a letter he has addressed to the governors, urges the appointment of a larger number, and alleges that he is in some measure entitled to election, in consequence of the interest which he has taken in the movement, and of his previous services to the dispensary. For our own part, we hold that the provident dispensaries should be served by as large a number of the medical men of the neighbourhood, as is compatible with giving to each a sufficient pecuniary interest to ensure that his work shall be zealously and efficiently done. The staff ought to bear a direct proportion to the members; and the ideal would be to find the working classes enrolling themselves in such numbers that all practitioners in the town who desired it might be placed on the acting staff. But we are still far from having reached this desirable condition. The artisan class require to be educated in provident habits before this ideal can be realised. Remembering that Worcester is the seat of an important manufacture, and comparing its population of 33,200 with that of other towns in which provident dispensaries are prospering, it appears to us that three medical officers in ordinary is a small number even for the outset. If more be not needed at once, they speedily must be, if the institution is to meet the wants of the working classes in all quarters of the town.

THE "WESTMINSTER REVIEW" ON MEDICAL CHARITY.

THE current number of the *Westminster Review* contains a valuable article upon "Medical Charity; its Extent and Abuses." It is written in a vigorous style, and gives a vivid picture of the evils with which it deals. The author travels over ground which, though too little known to the general public, is familiar to all hospital reformers. Among other topics, he treats of the proportion of the metropolitan population that is habitually receiving medical charity, the cost of that charity, the class of the applicants, the nature of the out-patient service, the sort of "religion" which the managers often make of extending their institution, regardless of the real good or evil that it may be doing, the "advertising hospitals," and their financial position; and his statements are supported by an array of statistics which are very cogent. In particular, the way in which the extravagant cost of medical charity is demonstrated is very telling. We do not recollect to have seen this point brought out elsewhere. The writer does not say anything about the remedies which he would propose. His object seems to be merely to expose abuses, and this he has done in a way that will impress the minds of all readers of the *Review*. But how long are we to be contented with exposing abuses, while yet the evils go on increasing year by year? When will London address itself earnestly to the question, as Birmingham and Manchester are now doing? Whenever that time comes—as come it must—such papers as this in the *Westminster Review* will have had no small share in bringing it about.

SECRET CANCER-CURES.

MESSRS. BAILLIÈRE, TINDALL, and COX, forward the following explanation of their appearances as publishers of a pamphlet by a Dr. De Grob, of which the object is to announce the author as the possessor of a secret for curing cancer by internal remedies, to which we last week referred.

"Dr. De Grob, who was known to us as a purchaser of foreign medical works, especially those treating on cancer, informed us that he had in preparation a large work on the subject addressed to the profession, recommending a course of treatment which had proved eminently successful on the continent; and, as an introduction to it, he intended bringing out a translation of some papers written for foreign scientific periodicals, which he asked us to publish for him. Not finding anything objectionable in the pamphlet itself—the treatment of a disease being a matter of opinion—and the author, anticipating the opposition he would meet with, did not even give his address in the work, so as to avoid the slightest trace of quackery; and, further, our inquiries being satisfactorily answered as to his professional status and qualifications, we had no reason for withholding permission."

So far as this singularly constructed sentence can be interpreted by English readers, it conveys the intimation that Messrs. Baillière, Tindall, and Cox, do "not find anything objectionable" in a pamphlet of which the object is to puff a secret internal remedy which the author affirms himself to possess for curing disease; and it would be well for them to reconsider that view of medical ethics and of a medical publishers' relation to them. Clearly, however, they have advisers who can give them better counsels; for they add:

"Directly we heard, some time since, a doubt expressed as to the character of the work, we withdrew it from our list. It has never been printed in our catalogue, nor in any way advertised by us; nor is it sold by us, directly or indirectly. During the past year, we have declined several works by members of the profession because we deemed them quackish."

To Dr. De Grob himself, who also writes to us, we have only to observe, the subject of our comment is the secrecy which he avows, to which we propose to confine our and his remarks.

"SATIS SUPERQUE."

THE practice is too frequently adopted at meetings of medical societies of prolonging the discussion beyond the time to which it should be restricted. Whenever this is done, the interests of many persons suffer, as a little consideration will show. Members of the Society who have made other appointments at the regular time of closing, either cannot keep them, or they lose part of the discussion. The reader of the last paper either finds no debate reward his trouble (as was the case when Mr. B. Carter read a paper on Sarcomata of both Irides, before the Clinical Society, on December 12th), or the discussion is hurried (as when Dr. Douglas Powell at the last meeting of the same Society read a paper). On both these occasions, patients were present; and it consequently may have seemed preferable to prolong the debate in their interests, that they might be excused from further attendance. But, if the patient can come at a subsequent date, slight, indeed, is the advantage which results from the reading of his case on the first night; and, if he cannot return, the members might examine him carefully, and discuss the case at the next meeting. Ninety minutes of "science," after a day of hard work, seem enough for ordinary mortals. It would appear to be generally better to cease a few minutes before the appointed time, than to waste a good paper by taking it at the fag end of a meeting.

STÆCHIOLOGICAL SECRETS.

THE *Hour* follows up its article on the published works of Dr. Churchill, and general abuse of the medical profession for failing to recognise the hypophosphites as a specific cure for consumption. It now announces itself the advocate of his invention of secret "stæchiological inhalations". The writer endeavours at great length to persuade his readers that, although professional traditions stigmatise as disgraceful the parading of "secret remedies" by a physician, and constitute him an outlaw, it is more in the interest of the public to ally itself with the vendor of secret remedies than to favour that generous professional tradition which treats medicine as a mission, and requires the physician to have no professional secrets, but to declare publicly his whole knowledge for the public good. It is painful to see a respectable paper allow its columns to be prostituted to so questionable a purpose. Let Dr. Churchill and his friends take what course they deliberately choose with the secret "stæchiological inhalations", which "operate upon the local pulmonary state with the same power that the hypophosphites do upon the tubercular diathesis". There is a market for patent medicines, and it is open; but we have never heard that any one was specially lauded because he chose to keep secret the ingredients of his pills instead of publishing them; nor can we understand a respectable journalist attempting to persuade on over-credulous public that, if a physician think he discovers an useful compound, it is for the public interest that he should sell it as a secret mixture, instead of announcing its ingredients and the nature of the evidence on which its claims rest.

THE DEVONSHIRE HOSPITAL, BUXTON.

From the report of this hospital for 1873, it appears that during the year the total number of in-patients was 1,407, being only four more than in 1872; it was, however, eighty-nine more than in 1871. The smallness of the increase, notwithstanding that there are more beds, is attributed to the reduction of the number of applicants in consequence of the wet weather which prevailed in the earlier months of the year. Of the 1,407 in-patients, 1,149 received benefit; 189 were no better; 22 were discharged at their own request, and 13 for breach of rules; 1 was an unfit case; 3 died; and 30 remained on the book. The number of out-patients was 179, or one less than in the preceding year. The comparatively small number of out-patients is regarded as the best possible evidence of the high estimation in which the internal comfort and appliances of the hospital are held. The average cost of each in-patient for three weeks has been £1 : 17 : 9½, or 1s. 9½d. *per diem*—being slightly less than in 1872. The report calls attention to the fact that, while the demands for admission to the hospital during the summer months are so numerous that applicants sometimes have to wait for weeks, the number of in-patients during the winter is comparatively small; and they suggest that, seeing that the sanitary advantages of the hospital and the curative effects of the baths and waters of Buxton are as great in winter as in summer, the recommendations of subscribers should be so regulated that the beds may be constantly occupied.

IRELAND.

UNIVERSITY OF DUBLIN.

It is stated that the Board of this University purpose to build a medical museum, to be attached to the school of physic, which it is expected will cost from £6,000 to £7,000.

SCARLATINA IN DUBLIN.

The scarlatina epidemic still continues; the deaths registered from this cause, in the Dublin district, last week, were nine. The number for the last thirteen weeks have been 9, 12, 13, 5, 10, 17, 23, 11, 11, 12, 4, 8, 9, respectively, from which it appears that the disease has shown a tendency to decrease.

THE DUBLIN POOR-LAW MEDICAL OFFICERS.

By dint of the combination of the various methods of procrastination, which dispensary committees and Poor-law guardians alone know how to utilise to the fullest extent for their own ends, the question of the increased remuneration of the medical officers of the Dublin Poor-law dispensaries has been postponed, we know not to when; we presume to the "Tib's eve" of Poor-law guardians. The demand is an extremely moderate one; namely, that the salaries of the dispensary officers should be raised to £150 (about the wages of a Dublin corn-porter) *per annum*. The officers who attend the workhouse hospitals, where there is no danger from contagious diseases (which are not admitted to these institutions), where all the work is collected into one place and can be *comfortably* got through in well aired, lighted and clean wards, receive £150 a year; while the guardians higgle over the same payment to those who have more work to do in the fever-dens of Dublin, and have to trudge through miles of filthy streets, in search of their wretched patients, at a great expenditure of time, and great inconvenience and often danger to themselves. We cannot see any grounds for refusing the request of the dispensary officers, except the grounds known to Poor-law guardians, namely, to get something for nothing, and maltreat the giver.

SMALL-POX IN LONDONDERRY AND BELFAST.

In Londonderry, no fewer than fourteen deaths from small-pox were registered during the past week, in a population of 30,000. This is a rather serious matter, as the disease has been gradually making way in that city, the deaths from small-pox having been during the last seven weeks respectively, 0, 1, 1, 0, 9, 0, 2, 14, previous to which no deaths had been registered from that disease for some time. The deaths from small-pox in Belfast have been two, registered in the week ending December 6th; two, on 18th; and two, on 20th. These are the only two towns in Ireland where small-pox have proved fatal lately.

THE KING AND QUEEN'S COLLEGE OF PHYSICIANS AND MEDICAL WOMEN.

We announced last week that this College had determined to confer upon women a license to practise midwifery; we hear an attempt will be made to reverse this decision at a future meeting of the College. Since our last notice of this question, a well-known medical woman has applied to the same College for admission to the examination for the license to practise medicine. The lady presented all the educational certificates required by the College, but her request for admission to the examination was refused by a large majority—more than four to one of those present. We believe there are grave legal doubts as to the possibility of the College admitting women to its license to practise medicine; but, with regard to the midwifery license, there is no doubt, as the College is especially enjoined under its charter, to "examine all midwives, and to license and allow all such as they shall find skilful and fit to exercise that profession, and to hinder all such as they shall find unskilful from practising;" and as the charter bears date the fourth year of the reign of William and Mary (December 15th, 1692), the clause must refer to women, not man-midwives, and so it was interpreted by the College until October 20th, 1715, when the midwifery license was conferred on Dr. James Hamilton, surgeon. (See Dr. Ringland's *Annals of Midwifery in Ireland.*)

CITY RAILWAYS AND THEIR EFFECTS.

This subject, lately brought under notice at the meeting of the London College of Physicians, is likely to interest those in the Irish metropolis who take an intelligent interest in the working classes, and their sanitary conditions. It is proposed to make a railway from Westland Row (a station of which most English visitors to Ireland must have very unpleasant recollections) to King's Bridge. This line must of necessity destroy many densely populated houses; and while the destruction of these must be looked upon as a blessing in itself, some of them being unfit for human habitation, yet, as no accommodation at present exists for those who may be displaced from their present houses, the result will be an increase of the overcrowding which at present exists to a dangerous extent on the south side of the city. Another strong objection, from a medical point of view, to the construction of this railway is, that it must, of necessity, run through the grounds belonging to Dr. Steevens' Hospital. Indeed, we understand that the fine wards of this hospital will be cleared away to make room for this noisy neighbour. As this line must run within a few yards of the north side of the hospital, we think it will be tantamount to destroying the institution, and we advise the governors of the hospital to claim such compensation as will enable them completely to remove the hospital from its present site, or else offer the most determined opposition to this railway scheme.

FURTHER REPORT ON DRINKING-WATER IN THE EASTERN COUNTIES.

Analytical Laboratory, 11, Salisbury Square, Fleet Street,
January 5th, 1874.

DEAR SIR,—We have to report to you that we received the samples of water forwarded here on the 6th and 14th of December last, and subsequently a copy of a report by Mr. Wanklyn, on the Drinking Waters of the Eastern Counties, reprinted from the BRITISH MEDICAL JOURNAL (No. 677), for December 20th, 1873. Both sets of samples were contained in clear one-gallon glass-stoppered bottles, securely tied over and sealed, and both samples were labelled as follows, "Sample of water from the tap situated on our premises, corner of King Street and Regent Street, the said tap being supplied by and in direct communication with mains of the Water Works Company; after the bottle was filled, the strings were secured with the seal of our firm, 'Samuel Grimmer and Co.' Signed, G. Grimmer."

We have carefully examined those samples and find that the proportions of actual ammonia and albuminoid ammonia, do not differ very essentially from those reported by Mr. Wanklyn; the proportion of chlorine also is nearly identical with that mentioned in Mr. Wanklyn's report, and so also is the proportion of solid matter, per imperial gallon, namely, from twenty-two to twenty-three grains. We find, however, that the water is absolutely free from nitrogen in the form of nitrates, thereby indicating the total absence of decomposed and oxydised nitrogenous matters, of the nature of sewage or other such drainage.

We are of opinion, therefore, that although the water contains a rather large proportion, namely from 0.72 to 1.06 of a grain of oxydisable organic matter per imperial gallon, yet it is manifestly of a vegetable (peaty), and therefore harmless, nature.

We have no hesitation in saying that the water is good and wholesome, and in all respects fit for domestic purposes, and that the results do not justify the observations made by Mr. Wanklyn in his report, namely, that "the water of Yarmouth is in a disgraceful condition and, as is apparent from the above (Mr. Wanklyn's published results), the water supplied by the Water Works Company is as bad as that of the wells of the place."

It is a significant fact that although Mr. Wanklyn has given the proportions of chlorine per gallon in those wells, namely, 10.2 grains in south well, and 15.2 in the north well, as against 4.2 in the water of the Yarmouth Company; yet he has not given the total amount of solid matter in those wells which we believe, from the results of former analyses, will be found to be from 60 to 80 grains per gallon.

We have further to remark that the statement of Mr. Wanklyn, namely, that "the mortality in Yarmouth is notoriously high, far too high for a town which, in other respects enjoys great sanitary advantages," is not founded on fact; for on reference to the Annual Summary of Births, Deaths, and Causes of Deaths in London and other large Cities in 1872 (published by the Registrar-General), we find that the death-rate for that year in Yarmouth and Gorleston, was but 22.7 per thousand of the population, against an average of 23.8 per thousand of fifty towns of England. Moreover, taking the mortality in Yarmouth and Gorleston for a period of ten years, namely, from 1861 to 1871, we find that the death-rate in Yarmouth and Gorleston was 22.5 per thousand of the inhabitants, against an average of 24.6 for the chief towns in England, that of all England being 22.6 for the same period.

We remain, dear Sir, yours faithfully,
AUGUSTUS VOELCKER, F.R.S., Consulting Chemist to the Royal Agricultural Society of England.
HENRY LETHEBY, M.B., M.A., etc., Professor of Chemistry in the College of the London Hospital, and Medical Officer of Health and Public Analyst for the City of London.

John Ayris, Esq., Great Yarmouth.

I have read the above report on the Yarmouth water by Drs. Voelcker and Letheby, and, in the first place, remark that these gentlemen do not contest the accuracy of my statement, that the water of the Yarmouth Water Company contains an exceptionally high proportion of organic matter (indeed, so far as their experiments go, they confirm my result); but they appear to object to my drawing the legitimate inference from my analysis, because they find the water devoid of nitrates, which, they say, shows that the unusually high proportion of organic matter in this water is of vegetable origin, and, therefore (as they contend), "harmless."

I do not agree with them in the opinion that a water which is devoid, or almost devoid, of nitrates, is necessarily devoid of organic matter of animal origin; neither do I admit that vegetable matter in drinking-water is necessarily harmless; and I have very cogent reasons for my dissent. Many years ago (before water-analysis had attained to its present state), chemists laid great stress on the presence of nitrates in drinking-water, as indicative of organic contamination; but the investigations of later years have completely discredited the nitrates as criteria of contamination, and, though chemists continue to measure the nitric acid in drinking-water, they do so now mainly from habit.

The inutility of the determination of nitric acid may be judged of from such facts as the following. The water of the Kent Company (London), which is admitted to be, organically, one of the purest natural waters in the world, contains as much as 1.3 grains of nitric acid per gallon; and, indeed, I have never, in the whole course of my experience, met with an example of natural water being highly pure and not highly charged with nitrates. If, then, the Yarmouth water be devoid of nitrates, it differs in that respect from all natural waters of high purity with which I am acquainted. Fresh sewage is alleged to be devoid of nitrates; wherefore, the point which the analyses of Drs. Voelcker and Letheby have disclosed is a point of resemblance between sewage and Yarmouth water, and a point of dissimilarity between pure water and Yarmouth water.

The observations which various chemists have made on the varying composition of the waters of the River Thames illustrate the fallacy of taking diminished nitrates as evidence of absence of animal contamination. Much sewage is, as is well known, poured constantly into the Thames above London, and even higher up than Hampton Court; and there is no very great variation in the quantity which is poured into the river at different periods of the year. Nitrates, too, are usually found in abundance in Thames water. But occasionally, and, curiously enough, at periods when the Thames is not higher than usual, the water of the river is found to be poor in nitrates. Why is the Thames poor in nitrates at these periods? Not because it has received less sewage than usual, but because vegetation in the river has assimilated the nitrates.

Let me ask Drs. Voelcker and Letheby if they know any reason why the absence of nitrates, which they report in Yarmouth water, should not be due to the same cause which diminishes the nitrates in the River Thames at certain seasons of the year? Chemists will be amused to find that, in defending the Yarmouth Water Company, Dr. Letheby has become a convert of Dr. Frankland's.

Drs. Voelcker and Letheby say that my statement, that "the mortality in Yarmouth is notoriously too high, far too high for a town which, in other respects, enjoys great sanitary advantages," is not founded on fact; and, as a reason for saying so, put forward a very singular reason, viz., that the average mortality in Yarmouth and its suburbs is 22.5, whereas the average mortality for towns in England is 22.6. Do these gentlemen mean that Yarmouth has no sanitary advantages over an average English town, or that the natural sanitary advantages of Yarmouth over an average English town are adequately measured by one in 225? If they do, I fear that their report will hardly be welcome to the inhabitants of that town, many of whom depend for their livelihood upon the sanitary attractions offered to visitors.

A further commentary on the statements contained in the report by Drs. Voelcker and Letheby will be found in the following extracts from the *Yarmouth Independent* of January 10th, 1874; and it will be seen that the report of the Registrar-General showed extraordinary mortality in Yarmouth.

"TOWN COUNCIL MEETING.

"*The Death-Rate of the Town.*—It will be remembered that at the last meeting of the Council the Registrar-General's return of the death-rate of Yarmouth was referred to, and it was resolved that the medical officers be requested to furnish the Council with reports upon the cause of the high rate of mortality of the town as shown in those returns which dated from July to September of the past year. Mr. Meadows had prepared a report, which he now read to the Board as follows," and from which these passages are quoted.

"The immediate object of my report is to show whether the Registrar-General has not painted us in too dark colours; whether, in fact, we are responsible for such an excess of deaths as he implies we are, by a neglect of the simple laws of health. In his report upon the death-rate of the borough for the quarter ending September 30th, 1873, he shows it to be something over twenty-seven per thousand, calculated upon the ordinary population; whereas in any district where the conditions of health are observed (and these, broadly stated, are pure air, pure water, and good food) there will be but seventeen per thousand, thus showing ten deaths per thousand directly caused by a violation of these conditions; and, reckoning the population at 42,000, this gives 420 deaths due to preventible causes..........................This excessive death-rate, I am aware, was due, in a great measure, to diarrhœa in young children; but this is especially a disease which is fostered by neglect of sanitary laws, and therefore no comfort can be derived from this circumstance."

Truly a satire on the passage, in Drs. Voelcker and Letheby's report, referring to the mortality of Yarmouth. J. ALFRED WANKLYN.

A SAD CASE.

WE have received the following subscriptions in response to the appeal which we last week published for assistance to Mr. Jackman, of Swymbridge. Mr. Jackman, a Licentiate of the Society of Apothecaries, has been discharged by his Board of Guardians, at the age of 73, after sixteen years of continuous service, on the ground that he has only one qualification, and that his contract is only annual. He is aged, without resources, and has a sick wife.

	£	s.	d.
William Fuller, Esq., London..............................	5	0	0
Henry Stear, Esq., Saffron Waldon	2	2	0
Joseph Bell, Esq., Edinburgh..............................	1	1	0
Anonymous, per Editor BRITISH MEDICAL JOURNAL...	2	2	0
Richard Ley, Esq., Newton-Abbott	1	1	0
T. Chambers, M.R.C.P......................................	2	2	0
W. Fairlie Clarke, Esq.	1	1	0
A Lady, per Editor BRITISH MEDICAL JOURNAL	1	1	0
E. H.	2	2	0
Henry Lowndes, Esq., Liverpool		10	6
Small sums..		15	0

Further contributions will be thankfully received by the Editor of the BRITISH MEDICAL JOURNAL, at the Office, 37, Great Queen Street; or by the Vicar of Swymbridge, Barnstaple, Devon.

THE WEBB FUND.

A MEETING was held at 11, New Burlington Street, on Wednesday, the 14th instant, with a view to the raising of funds on behalf of the family of the late Dr. Webb, editor of the *Medical Times and Gazette*, whose sudden and unexpected death we recently announced. There were present—Prescott Hewett, Esq., in the chair; Drs. Fayrer, Cholmeley, Symes Thompson, Sherwood, Stocker, Lavies, and Silver; Messrs. Augustus Churchill, Ernest Hart, Clover, Tweedy, Lampson, and Gore.

The chair having been taken, the following brief statement was made by Dr. Cholmeley as to the state of Dr. Webb's affairs. Dr. F. C. Webb, whose sudden death lately occurred at the age of forty-seven, died just when he had achieved such professional success as would in a few years have enabled him to provide for his family. But, as it is, his widow and ten children are left with an income of only £120 a year, derived from settled property, the insurance on the father's life being required to pay off some still remaining liabilities accrued during the years of struggle and anxiety before success came. The children vary in age from twenty-one to four years, the eldest son being just nineteen, and not yet in a position to earn his own living. Under these circumstances, many of the leaders of the medical profession and other friends are willing to form a committee to raise a fund which will be vested in the names of trustees for the benefit of the family.

It was then moved by Mr. Ernest Hart, seconded by Dr. Fayrer, and carried unanimously, that a committee be formed for raising funds on behalf of the family of the late Dr. Webb, and that all present be included in the committee.

Subsequently, Dr. Cholmeley read the following list of gentlemen who signified their regret at being unable to be present at this preliminary meeting, and promising their support in every way to the proposed end of the meeting. These, too, were added to the committee, which was empowered to add further to their number should they see fit to do so: Mr. E. Bradford; Dr. Peyton Blakiston; Dr. Burrows; Dr. A. Clark; Mr. Curling; Mr. J. Gay; Mr. H. S. Giffard, Q.C.; Mr. H. Gore; Sir W. W. Gull, Bart.; Mr. C. Humphreys; Sir W. Jenner, Bart.; Dr. Leared; Dr. Murchison; Sir Jas. Paget, Bart.; Sir W. Palliser; Dr. Quain; Dr. Randall; Mr. H. Lampson; Mr. Spencer Wells; Mr. Underwood; Dr. J. Waring; Dr. C. J. B. Williams.

It was next proposed by Dr. Stocker, and seconded by Dr. Symes Thompson, that Mr. Augustus Churchill be appointed treasurer, and Drs. Cholmeley and Silver secretaries to the fund in question. This was carried unanimously; and these gentlemen, together with Dr. Fayrer, Dr. Symes Thompson, Dr. Lavies, and Mr. Lampson, were appointed a subcommittee for the conduct of business.

Dr. Cholmeley read the following list of contributions already received:

	£	s.	d.		£	s.	d.
Proprietors of the *Medical Times and Gazette*......	50	0	0	Dr. Fayrer	5	0	0
Proprietors of the *Lancet*	25	0	0	Dr. J. Waring...........	5	0	0
Sir Wm. Jenner, Bart...	20	0	0	Dr. Leared	3	3	0
Dr. Peyton Blakiston ...	20	0	0	Dr. B. Woodman	2	2	0
Sir W. W. Gull	10	10	0	Dr. Randall..............	2	2	0
Sir James Paget	10	10	0	A Friend	1	1	0
D. D.	10	10	0	Mr. H. Gore	5	0	0
Dr. R. Quain	10	10	0	Mr. J. Warwick	5	0	0
Dr. A. Clark	10	10	0	Mr. H. Morris	1	1	0
Mr. George Lawson ...	10	10	0	Mr. H. Morley	1	1	0
Mr. Clover	10	10	0	Mr. Churchill	10	10	0
Dr. Stocker..............	20	0	0	Dr. Richardson	5	5	0
Dr. J. W. Ogle	5	5	0	Mr. P. Hewett...........	10	10	0
Dr. Burrows	10	10	0	Mr. E. Saunders	5	5	0
Dr. H. Greenhow	2	2	0	Dr. Symes Thompson	2	2	0
				Mr. H. Lampson	20	0	0

It was also intimated that all future contributions, which may be paid to the St. James's Square Branch of the London and Westminster Bank, directly, or through the Treasurer or either of the Secretaries of the Fund, would be announced in the *Times* and medical papers.

With a vote of thanks to the Chairman, the meeting adjourned.

THE UNIVERSITY OF STRASBURG.

THIS newly reconstituted university is probably well worth the attention of students desirous of adding to their English instruction a course of continental training under able masters whose time is not over-occupied. The following interesting account of its arrangements is forwarded to the *Boston Medical and Surgical Journal* by Dr. E. S. Cutler.

Among the German universities, that recently established at Strasburg is well worthy the attention of any who may be looking forward to a somewhat prolonged stay; this because, unlike Vienna, short practical courses form a comparatively unimportant feature in the medical department of Strasburg, and a stay of a full semester, at least, is necessary to enable one to derive full benefit therefrom.

During the last semester, four Americans were in attendance. Like the German students, they were obliged to matriculate, a formality which opened to them the very large university reading-room and library, and was attended with no difficulty in taking up their connection with the university at any time they chose.

The medical faculty contains the names of Waldeyer, Recklinghausen, Lücke, Hoppe-Seyler, Leyden, Gusserow, all of whom are sufficiently well known to most readers to render a more elaborate introduction on my part unnecessary; for most foreigners, Waldeyer and Recklinghausen are the chief attractions.

Professor Waldeyer fills the chair of anatomy, and lectures on histology chiefly; the descriptive anatomy being attended to by an Alsatian formerly connected with the French Ecole de Médecine, the place of which the present medical faculty has taken.

Professor Waldeyer has a large laboratory, divided into several rooms, capable of accommodating thirty pupils, each of whom has a separate table furnished with a lock-draw and the ordinary reagents and colouring fluids. A good microscope is furnished for the use of those who have none of their own. At one end of one of the rooms is a set of shelves holding all the reagents of a complete chemical laboratory, and the preserving and more rarely used colouring and injecting fluids; in this same room are other shelves holding dry and wet, injected and uninjected histological specimens for general use. Hand injecting apparatus, and an apparatus worked by a column of mercury are also here. In another separate room are kept the rabbits, doves, Guinea-pigs, frogs, and lizards, which are furnished gratis to the most liberal extent. The work for the semester is systematically arranged beforehand, each week's work being written out and posted up in a conspicuous place in the laboratory. At the beginning of the week, the professor gives a lecture of two or three hours on the tissues to be examined during that week, writes down all formulas on the board, draws the macro- and microscopical appearances as illustrative of the lecture, and gives all the new ideas and their authors. For the rest of the week, the laboratory is open from 6 A.M. till 8 P.M., and students work when they please. The professor goes about to each pupil at certain fixed times, at least four times daily, and gives every needful explanation and advice; he is aided by a competent assistant, who is always present when the professor is otherwise engaged. Meanwhile, each one is encouraged to make and put up preparations for preservation, and to make injections for himself; in this way, in one semester, one gets at least a tolerably clear idea of normal histology, and a capital drill in microscopical manipulation. Waldeyer has also other farther advanced pupils, who are making special studies, as of cancer, embryology, medulla oblongata, cerebrum, cerebellum. At present, he is paying much attention to embryology, a subject in which he is greatly interested, and to the knowledge of which he has contributed very much. The advantage of this laboratory is, that one has the personal instruction of one of the best and most celebrated microscopists in Germany at a very small cost and the free use of material, all of which one cannot have in Berlin and Vienna, and, it is said, also not in Bonn; in each of these latter places, the pupils are turned over to the first assistant, and, at rare intervals, have the advantage of personal intercourse with the professor himself, and, at the same time, each must prepare his own material.

Professor Recklinghausen, who teaches pathology, has one assistant, draws his material from a public hospital of 800 beds, and has also specimens sent him from the surrounding country; he has places for eight or ten private pupils working up special subjects, to whom he gives a great deal of time; he lectures three hours daily, makes autopsies himself, and works constantly. During the past semester, he gave a course on microscopical pathology of six hours a week, personally superintending, and aided by a competent assistant. He gave, also, a course on demonstrative pathological anatomy and physiology, similar to that of Professor Virchow of Berlin, and an hour's lecture, every afternoon, on special pathological anatomy and physiology. Each of these courses was systematic, and elaborately illustrated by microscopical specimens. On Monday mornings, three hours were devoted to the personal superintendence of necropsies done by the students. The material illustrating the demonstrative course is quite as abundant as one could wish, is fresh, and, after lectures, is free to the pupils, except, naturally, such specimens as are valuable for the museum. The pathological museum is very large, admirably arranged, perfectly free of access, and constantly used as illustrative of the lectures.

Lücke, Professor of Surgery, has large and well-filled wards, and lectures three hours daily; two hours devoted to an ambulatory clinic, very fully attended, and equivalent to our dispensaries and out-patient department in the hospitals. An hour's lecture daily is given in the afternoon on general and special surgery; in the evening, the professor gives a course on operative surgery. Microscopical surgical pathology forms an important feature in the instruction.

Hoppe-Seyler, Professor of Materia Medica, has a large, well-arranged, and well-attended laboratory, in which students are constantly at work with free material.

Leyden, Professor of Clinical Medicine, pays attention especially to nervous diseases, and so is not so interesting to the general student.

Gusserow has an admirably arranged and well-filled lying-in hospital, and wards for women's diseases; he draws his material not alone from Strasburg, a town of about 80,000 inhabitants, but the whole of Alsace contributes to keep the wards full, as is also the case with the General Hospital. He gives a clinical course on midwifery, very fully illustrated by plates, models, and patients; personally superintends a course on operative midwifery; gives a systematic course of six hours a week on women's diseases, illustrated by out-patients and those from his wards, and gives a course in midwifery of an hour every Monday afternoon.

A very good venereal clinic of six hours a week, with an out-patient department attached, is given by a private teacher.

The only drawback in Strasburg is the lack of sufficient instruction in children's diseases.

All the laboratories are very good indeed, and are well-supplied.

For the student who wishes to work in general pathology, to work up any subject in special pathology or histology, there is at present no place in Germany so good as Strasburg. This is not alone Dr. Cutler's conviction, but that of his fellow-students from America, who have been abroad already several years with this special object. The two sons of Professor Virchow have been students in the medical faculty since the beginning of the academical year, which fact might, perhaps, give weight to the above opinion.

THE WEST HADDON TRAGEDY.

The circumstances connected with this lamentable tragedy are such as to deserve the most grave consideration, and to awaken the most lively sympathy. That Mrs. Gulliver did not die from poison is, we think, morally certain. At any rate, the scientific evidence, on which the opposite suggestion was founded, was of the flimsiest character; and the inquiry failed to bring out a number of facts which are tolerably conclusive that the death was truly one of fatal syncope of an excessively degenerated and fatty heart, occurring in an aged and debilitated woman.

Let us briefly review the facts. Mrs. Gulliver was a woman aged 73, of spare habit, and enfeebled by poorness of diet. She had frequent fainting attacks; in her own written words—"I often go faint, and feel very queer." She had been ill for two days prior to her death with a bilious attack; she had eaten heartily of stale pork-pie on Friday, and uncooked apples on the day before her death; and, having passed a very restless night, on the next day (Saturday) she complained of pain at the chest, with sickness, and vomited bile mixed with undigested apple. After the sickness was over, feeling exhausted, she wanted sleep. Her cough was troublesome, and she took freely of cough-lozenges, as to which she remarked that they always relieved her cough when troublesome, and gave her a good night's sleep. Her medical man, Mr. Walker of Crick, was sent for. He examined her heart, and found it diseased, and he sent her a little medicine (spirit of lavender and Hoffman's anodyne), and found her so feeble that he advised that her friends should be sent for. When her friends came, the sitting up and excitement brought on some vomiting again, which presently ceased, and did not recur. Mrs. Waters and Mrs. Watts sat up with her during the night, Mrs. Waters, as the evidence showed, never having been alone with her during the night. The doctor came early on Sunday morning, and gave a favourable report. She ate a good breakfast of tea and toast, and afterwards asked Mrs. Waters to sit and read to her; then asked for something out of a private drawer, which was found to be locked, and the key taken away by Mrs. Watts. She was excited, and then complained of feeling very faint. Mrs. Waters immediately saturated a handkerchief with eau de Cologne, and spread it about the bed. Mrs. Gulliver complained of the room being close; and the window was opened to let in fresh air. She revived, and drank a glass of sherry and ate some toast. A chapter from the Bible was being read by Mrs. Waters, and Mrs. Gulliver was repeating after her, when she suddenly stopped and fainted, and the servant was called, all the windows were thrown open to get a current of air, and the doctor was sent for. Some sherry was poured into her mouth, which she swallowed; but she did not afterwards speak; and when the doctor arrived, life was extinct.

At the inquest, Mr. Walker, her medical attendant, testified that, when called to Mrs. Gulliver on Saturday, he found her suffering from sickness, and ascertained, by stethoscopic examination, disease of the heart. She answered questions rationally, but seemed drowsy, "answering questions with her eyes half-open." She died suddenly next day, and he gave a certificate expressing his belief that she died from valvular disease of the heart. At the *post mortem* examination, he found all the organs healthy, except the heart, which was in a state of advanced fatty degeneration, with its walls much thinned, and one kidney, which contained a calculus. The vessels of the brain were not at all injected, and he found no other abnormal appearance. He added, in his evidence, that he found "a high temperature of the body after death." Dr. Buszard, of Northampton, who assisted at the *post mortem* examination (after exhumation) corroborated Mr. Walker's statement of the anatomical appearances. Mr. J. D. Rodgers, lecturer on toxicology at the London Hospital, testified that he had examined the stomach and its contents, the heart, and the kidneys: that in the stomach and its contents only he found minute traces of morphia, which were not weighable, and certainly not sufficient to cause death. With the state of heart described, he would have expected Mrs. Gulliver to have had fainting attacks, and at any time a fatal syncope. When asked, however, whether he thought that Mrs. Gulliver's death arose from syncope, he said, "No, certainly not syncope. Mr. Walker tells me that there was a high temperature after death; and that would negative the idea that she died from syncope. Further, I would state that, in consequence of this high temperature, I am of opinion that she died from some volatile noxious substance given to her immediately prior to death, but which I am unable to detect." Upon that evidence, a verdict was found that Mrs. Gulliver died from poison, but by whom administered there was no evidence to show; and then a warrant was made out the apprehension of Mrs. Waters, who had been one of the persons in attendance on Mrs. Gulliver during her last illness. Mrs. Waters, who had been in a private room adjoining, on hearing this intelligence, took poison; and a jury, subsequently empannelled on the body of this unhappy victim of an overwhelming blow, enough to overturn a well balanced mind, returned a verdict of *felo de se*, necessitating her burial "without clergy" within three hours, the service being read by her husband.

Two more monstrous verdicts were, we believe, never delivered. The evidence of the expert in the case of Mrs. Gulliver was one of the flimsiest suggestions of suspicion ever brought into court. The suggestion of morphia-poisoning was negatived of necessity; the fact that the deceased had been freely using "cough-lozenges" was not brought out at the time, but it sufficiently explains the presence of "unweighable traces" of morphia. Under what impulse it is difficult to see, for it bears no relation to anything in the symptoms or history, Mr. Rodgers suggested that the deceased might have died from the administration, immediately before death, of a volatile noxious substance, such as prussic acid, but of which he had not detected any traces; this, after admitting that the *post mortem* appearances of the heart were quite sufficient to account for both the fact and the manner of death. The one circumstance which seems to have weighed on his mind, or rather, on his imagination, in putting forward this hypothesis was, that Mr. Walker had stated that he observed a high temperature after death. In the first place, it must be observed that this was not ascertained with any precision or exactness, nor was any means used to confirm what seems to have been a mere manual impression. It is unnecessary to observe how utterly unreliable, in such a case, is the impression of touch, not recorded at the time, but subsequently remembered; and how difficult it would be under any circumstances to base any conclusion on such an impression. Further, as far as we know, in death after prussic acid or volatile poison of any kind, such as alcohol or chloroform, the temperature after death is lowered rather than raised.

The suggestion seems to us, indeed, utterly worthless; that it should have been allowed to have weight with a jury so far as to lead to a verdict of murder, and to the issue of a warrant under such painful circumstances, is most deeply to be deplored. Mrs. Waters had already suffered great distress of mind from the knowledge of the fearful suspicions which idle gossips had raised. She exclaimed, in the throes of death, "I am innocent! I am innocent? They have persecuted me even unto death!" She was a woman, as was shown at the second inquest, given to despondency, and with a family history of mental weakness; and the shock of learning that, on the bare and, as we must call it, the feeble suggestion of a volatile poison, unknown and undetected, having been administered, a warrant for her apprehension had been issued, appears to have thrown her mind from its balance. The second jury (who included many of the first empanelled) were so harsh as to bring in a verdict of *felo de se*; and this seems to add something to the darkness of this black page in our juridical records.

We have had an opportunity of perusing the original MS. of a statement of Mrs. Gulliver's last illness, which Mrs. Waters had drawn up, at her husband's request, two days before the inquest; and also a letter which she had written to her husband at the date of Mrs. Gulliver's illness. These documents appear to us to go far in vindicating her character and innocence; and there is so clear a light thrown upon the nature of the illness, and upon her conduct in respect to it, that we think it our duty to put them here on record. We can but express our deepest sympathy with her husband, Mr. Waters of Worcester, who, under circumstances of the most painful trial and deep affliction, has shown a manly courage, and touching loyalty to the memory of his wife.

I.—*Account of Mrs. Gulliver's Illness, written by Mrs. Waters two days before the Inquest.*

"I wrote a friendly letter to Mrs. Gulliver the first week in November, enclosing a directed envelope. She replied in about ten days, and asked me to go down (I have the note). I wrote again, and told her to expect me on Thursday, the 20th. I arrived at her house about three o'clock; she expressed herself delighted to see me. Soon after four o'clock tea was brought, and a very stale pork-pie, of which we both partook. I thought it scarcely fit for consumption. We worked and talked during the evening. About seven o'clock, I noticed her head had fallen back. She was all right in a second or two. She told me she had a fluttering at the heart that made her often feel faint. Soon after eight, we had refreshment. She had a little brandy and water. We retired.

"On Friday morning, she was downstairs first; she told me her cough had disturbed her a little; she was eating a cough-lozenge; was very cheerful; we sat and worked after breakfast. About one o'clock, dinner—boiled fowl, ham, preserve pudding; we worked until tea, soon after four o'clock. After, I read amusing tales for some time; and then she began talking about her sister's death at about her age; said twice over how glad she was she had lived over the 29th September, on Mr. Burman's account; she said what she especially wished attended to when she did die—plain funeral, and so forth; she would have liked me to write it all down, but I demurred; told her that I hoped she would live a long time; we ate some uncooked apples, and had more of the pork-pie for supper; retired about half-past eight. At eight next morning, the servant brought my water; I inquired if Mrs. Gulliver was getting up; she said no—that Mrs. Gulliver was asleep; I desired her not to disturb Mrs. Gulliver; that I would have breakfast; I just looked in her room on my way down, saw her sleeping comfortably. In a few minutes after I had begun breakfast, I heard her knock; the servant went up, and I followed; we found her vomiting; there were large pieces of apple, and apparently bile; she said she had not slept at all during the night, but did not like to disturb me; she begged of me not to be the least alarmed, as she was subject to bilious attacks, and she had been indulging; I asked her to let me send for the doctor, but she would not hear of it, and repeatedly asked me not to send for anyone. Having eaten two large uncooked apples the night before and more of the pork-pie, there was a sufficient cause for it; she gave me her keys, told me to get her a little brandy, with a cup of tea and some toast; she said I might prepare what I liked for dinner, and she would try and have a sleep. I went myself and told the doctor every particular, and asked him to call, as if by accident, later in the day. I made a rice-pudding for dinner, then went up and sat with Mrs. Gulliver; she told me that the Sunday before her nose had bled, she believed a quart. I sat with her until about one; then fetched her a nice plateful of the rice; she ate and enjoyed it, taking a glass of sherry with it. At four, she had a cup of tea and some toast; and soon after the doctor came. He said, from her natural weakness, he considered her in a very critical state; he ordered beef-tea, and advised, in spite of her remonstrance, to send for her sister. The girl went immediately. I soon had beef-tea made, and Mrs. Gulliver drank a breakfast-cupful. Soon after, her sister and Mrs. Watts came. Her sister being dreadfully deaf, it fatigued Mrs. Gulliver to make her understand; sitting up and the excitement brought on the sickness again. The sickness had ceased from ten in the morning until about eight in the evening. I told Mrs. and Miss Watts every particular. Mrs. Watts decided to sit up with me all night; Mrs. Gulliver wished us to go to bed. All through the night she seemed to be tolerably comfortable; she took sherry, tea, and a little toast; did not once complain of pain; later on, I thought her much better, and she herself thought she was better.

"Mrs. Watts left, and the Doctor came; he thought her decidedly better, and advised me to send her sister a favourable report; she enjoyed a breakfast—tea and toast. About ten she asked me to read to her; I sat on the bed beside her, and read a chapter she selected; she requested me to read it again. She then asked me to get something out of her drawer; I told her Mrs. Watts had taken the key; she sat up in bed and excited herself, and then complained of feeling faint. I sprinkled eau de Cologne freely about the bed; her head felt hot, and I put a wet towel round her forehead; she talked very seriously to me for a few minutes; I told her not to trouble, but keep herself quiet. She then said the room was close, would I open the window; I opened it wide. She asked me to read again, and then stopped me to give her more scent as it revived her; I threw it all about, and saturated her handkerchief; she smelt the bottle, and then asked me if it would revive her more to drink some of it; I told her she had much better have sherry. She drank a glass off, and ate some toast. She then asked me to read on, and repeated after me, but suddenly stopped. I heard the girl upstairs, and called her in the room. I told her I thought there seemed a change in her mistress, and she had better fetch the Doctor and Miss Watts. I threw up the window to get a current of air in the room, put a little sherry down her throat; she swallowed, but did not speak. Mr. Walker soon came, and quite astonished me when he said the heart had ceased."

II.—*Letter from Mrs. Waters to her Husband, written during Mrs. Gulliver's Illness (November 22nd); received November 23rd.*

Saturday, November 22nd.

My Dearest,—Expect me when you see me; poor aunt is very poorly indeed—severe bilious attack. She ate two raw apples yesterday; they seem to disagree with her weak stomach, for she vomited up pieces as large as a walnut. The violent sickness tries her strength. I have given her a little weak brandy and water, and a little plain rice pudding; she has no pain, and the skin is nice and moist, so she may be all right again in a day or two; at any rate I shall see her through it. I called upon Mr. Walker, and told him every particular, and asked him to call, as by accident, as she positively refuses to call in a doctor; but I thought I should like to be on the safe side. She fainted soon after I came, and really she is so feeble that I should not care for all the responsibility. Whether she were suffering from simple or complicated disease, I will write you to-morrow; perhaps she may be better—it seemed all bile with the apple that she vomited.

Yoursdevotedly, POLLIE.

Take care of the house, and let me find you have been a good housekeeper; I will come back as soon as she is well enough to be left comfortably.

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE next meeting of the Branch will be held at the York House, Bath, on Thursday evening, January 22nd, at 7 o'clock; E. LONG FOX, M.D., President.

R. S. FOWLER,
E. C. BOARD, } *Honorary Secretaries.*

Bath, January 1874.

METROPOLITAN COUNTIES BRANCH.

AN ordinary meeting of this Branch will be held at 11, Chandos Street, Cavendish Square, on Friday, January 30th, at 8 P.M., when Mr. W. H. Michael will read a paper on "The Public Health Act (1872): its defects and suggested amendments."

A. P. STEWART, M.D.
ALEXANDER HENRY, M.D. } *Honorary Secretaries.*

London, January 13th, 1874.

NORTH WALES BRANCH.

MR. G. TURNER JONES of Denbigh, treasurer of this Branch, has, on account of his ill health, been ordered to the South of France for six months. During his absence, Mr. D. Kent Jones of Beaumaris, honorary secretary, will act as treasurer of the Branch.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 9TH, 1874.

PRESCOTT HEWETT, Esq., President, in the Chair.

Business of the Annual Meeting.—Dr. J. C. J. Fenwick and Mr. E. Venning having been appointed scrutineers of the ballot for officers and members of Council, declared the election by the meeting of the gentlemen whose names were proposed by the Council for the several offices (a list of the names appears at another page).—Dr. SOUTHEY, honorary secretary, read the annual report of the Council.—Dr. THOROWGOOD moved that the report be received—Dr. CAYLEY seconded the proposition, which was carried unanimously.

Dr. GREENHOW moved that the following new rules and alterations in the existing rules be made. In place of additional Rule III—

"Every non-resident member elected prior to January 9th, 1874, shall be entitled either to purchase the *Transactions* of the Society at prime cost, or, on payment of a composition fee of two guineas, to have delivered to him at any place in the United Kingdom, without further expense, a copy of every volume of the Society's *Transactions* which may be published subsequently to such payment.

"Every non-resident member of the Society elected subsequently to January 9th, 1874, shall be entitled, on payment of the sum of three guineas in addition to the usual admission fee, to have delivered to him at any place in the United Kingdom, without further expense, one copy of every volume of the Society *Transactions* which may be published subsequently to such payment.

"Every resident member of the Society who may become non-resident shall be entitled, on payment of the sum of three guineas, to have delivered to him at any place in the United Kingdom, without further expense, one copy of every volume of the Society's *Transactions* which may be published subsequently to such payment."

Mr. CALLENDER seconded the proposition, which, after discussion by Dr. J. E. POLLOCK and Dr. C. T. WILLIAMS, was adopted.—Mr. B. CARTER moved that "The Laws of the Society, with the additions just made, be codified afresh, and published in the next volume of the Society's *Transactions.*"—The proposition was seconded by Dr. BUZZARD, and carried unanimously.

Mr. B. CARTER, in an eloquent speech, moved that the thanks of the Society be given to the retiring officers.—Dr. J. E. Pollock seconded the proposition, which was carried with acclamation.

Sarcoma by the Orbit cured by Actual and Potential Cautery.—Mr. BRUDENELL CARTER exhibited a patient, of whose case he gave the following account. L. C., a girl aged 12, was brought to St. George's Hospital, on March 5th, 1872, on account of a rapidly growing tumour, occupying the upper part of the left orbit, and displacing the eye outwards and downwards. It was removed on the following day; but was found, on microscopic examination, to present the characters of spindle-celled sarcoma. In six weeks it returned; and a second attempt at its removal was unsuccessful, as the new growth was very soft, had no defined limits, and seemed to infiltrate all the tissues of the orbit, and to extend far back towards the apex. On May 2nd, the eyelids, eye, and the whole contents of the orbit, were removed; and the cavity, after being carefully dried with a hot iron, was lined with chloride of zinc (Fell's) paste, in the manner successfully practised by Mr. Lawson. The bones of the orbit were thrown off by exfoliation, the sides of the cavity have skinned over, except where there is exposed mucous membrane at its apex, and there has been no return of the disease. The girl is strong and healthy, and may fairly be considered cured. Mr. Carter said he believed there was no other instance on record of the application of this treatment to a quickly growing malignant tumour in a young subject; and he urged that the facts supported the view that malignant disease was essentially and originally local. In confirmation of this opinion, he cited a case that he had formerly published, of the removal of an eye containing a gliomatous tumour of the retina, the patient being still alive and well, and with no return of the disease, twelve years after the operation. He also mentioned the case of a child with glioma of both retinæ, from whom the right eye was removed in infancy, to determine the nature of the disease. The parents were then urged to permit the removal of the left eye also, but they refused. The glioma of the left eye remained stationary for more than three years, after which time it grew rapidly, and was eventually removed too late, having already spread along the optic nerve to the brain. On the right side no return of the disease had taken place, and the right optic nerve had wasted into a fibrous cord. Mr. Carter admitted the facilities for the complete removal of morbid growths, which were afforded by the anatomical conditions of the orbit and the eyeball; but urged that surgeons should aim at early and complete removal in other portions of the body. A section of the growth, removed from the patient shown, was placed under a microscope for the inspection of the members of the Society. The patient was exhibited to the meeting.—The PRESIDENT thanked Mr. Carter for his paper, and remarked that it seemed to show that, if the surgeon happened to catch the case at a sufficiently early period, he might hope to eradicate the disease by operation. He believed also that the most successful cases had been those in which, as in Mr. Carter's case, the whole of the contents of the orbit had been removed.—Mr. H. ARNOTT inquired if it was a fact, in Mr. Carter's fatal case, that, for three years after the removal of the right eye, the growth in the left eye remained *in statu quo* before beginning to grow.—Mr. CARTER replied that it was so. The growth was not on the optic nerve, but scattered in two or three patches over the retina. Certainly, the child was not seen for the three years, but it was said to have been well during that time by its parents. Upon being seen, the left conjunctiva was found injected. There was no discoloration or derangement of the iris; the retinal growth could not be seen, so that it was not positively known if it had increased. It seemed to have been passive during three years, and then grew rapidly from that time.—Mr. T. SMITH remarked that the old division of growths into malignant and non-malignant was being daily broken into. These tumours of the orbit occupied a peculiar position, from the fact that the circulation of the orbit was not so closely connected with the general circulation of the body as was the circulation of most other parts. He thought there was every degree of malignancy in tumours, from the most benign to the most malignant. One could scarcely argue from the ocular growths to tumours elsewhere situate, as cancer in the female breast. Cancers even varied. Some were simply locally malignant, and would not return after removal; others most certainly appeared at the original site and in other parts of the body. For example, in cases of melanotic cancer, the surgeon felt that, at however early period of the disease he might operate, and however small the growth removed might be, the patient was almost sure to be in his grave in two years. Other cancers would scarcely return in years, or perhaps not at all. He had seen even a fatty tumour return after removal, manifesting a certain degree of local malignancy.—Mr. ARNOLD stated that glioma was considered to be a very malignant tumour, and that Mr. Carter's case was valuable because it showed that a malignant tumour at the first seemed to be merely a local affair, and that early removal should be urged.—Dr. Cayley said that the tendency to recur did not prove the constitutional character of a tumour. Tumours might be malignant and yet purely local in origin.—Mr. Carter remarked that glioma was common to the cell-elements of all nervous tissues, and was not confined to the retina. Only five cases of glioma had been reported, in which after removal of the eyeball there was no return of the disease: of those cases, his own was one. The recurrence was probably due in general to an extension of the disease along the optic nerve to the brain. If degrees of malignancy were discussed, surely the most malignant tumour must be a soft tumour, which could be positively seen to grow from day to day; and if the complete removal of such a tumour prevented its recurrence, then there was likely to be no other growth of which the early removal might not be expected to produce a similar happy result. Such was the tumour and such the result of operation in his case.

Rheumatic Origin of Aneurism of the Aorta.—Dr. Douglas Powell brought forward three cases illustrating the two ways in which he thought aneurism of the aorta might arise as the result of rheumatic fever, viz. (1), by extension of the rheumatic endocarditis to the commencement of the aorta, and subsequent yielding of the vessel to the blood pressure; (2), by chronic atheromatous disease of the aorta, arising as the later result of the aortic regurgitant disease left behind by the rheumatism. With regard to the first proposition, Dr. Powell said that he had never seen, nor did he know of, any recorded *post mortem* evidence of extension of rheumatic endocarditis to the aorta; but he thought the following case furnished strong *clinical* evidence in favour of it. Case I.—A youth, aged 17, had two attacks of rheumatic fever six years ago. In January, 1873, he complained of increasingly urgent dyspnœa, and was admitted into University College Hospital, presenting the signs of aortic regurgitant disease and of circumscribed aneurism (probably of the globular kind) of the ascending aorta, the chief signs being impulse, thrill, dulness, and double *bruit* over the second and third cartilages, and some tubular respiration at the posterior apex of the right lung. There was in this case no history of any injury or other cause to account for the aneurism. This patient was in attendance at the last meeting of the Society. In illustration of the second proposition, Dr. Powell adduced the two following cases. Case II.—A bricklayer, aged 37, of temperate habits, had been healthy up to 1862, when he had rheumatic fever, and was severely ill for two months. In 1869, he was under the care of a colleague, Dr. Tatham, for three months, presenting the signs of uncomplicated heart-disease, mainly aortic regurgitation; he was at the end of that time discharged much relieved. In March, 1873, he came under Dr. Powell's observation at the Brompton Hospital, presenting the marked signs of aortic aneurism, viz., impulse, *bruit*, thrill, and displacement downwards of the base of the heart. This patient was in attendance in an adjoining room. Case III.—A woman, aged 48, had had rheumatic fever seventeen years ago. From February, 1870, to January, 1872, she had been under the careful observation of Dr. Theodore Williams and Dr. Powell, and repeated examination of the heart and pulse only discovered the signs of cardiac disease, more particularly aortic regurgitation. In February, 1873, she, for the first time, presented signs of aortic aneurism, viz., *bruit*, thrill, impulse, etc., which had subsequently increased. Dr. Powell's theory in explanation of the occurrence of aneurism secondarily to aortic regurgitant disease of the heart, was that this latter disease was attended with great hypertrophy of heart and increased patency of the aortic orifice. The aorta at one moment received the unduly forcible shock of an increased volume of blood, and the next moment was unduly empty and flaccid from the escape of that blood both onwards and backwards. The strain thus occasioned to its first portion tended in time to produce atheromatous disease and dilatation, or positive aneurism, as in the two cases last referred to.—Dr. C. T. Williams had not seen many cases in which aneurism seemed due to rheumatism. That case of Dr. Powell's, which had previously been under his (Dr. Williams's) care, certainly at that time had no thoracic aneurism.—Dr. J. E. Pollock thought the great value of the paper arose from the fact that it would direct attention to the subject. He had not seen any cases in which aneurism seemed immediately caused by rheumatism. If there were cases of the kind, he would have thought them not so much directly due to any rheumatic arteritis, as secondary upon thickening and incompetence of the valves of the heart, caused by the rheumatism.—Dr. Burney Yeo's opinion was in conformity with that of Dr. Pollock.—Dr. Green said that there were two distinct propositions in the paper. The increased strain due to aortic regurgitation produced atheroma of the vessel, whilst endocardial mischief also spread to the aorta.—Dr. Powell remarked that in some rheumatic aortic regurgitation and consequent straining of the aorta produced disease of the vessel. Only to aortic regurgitant disease, and not to other cardiac affections, did his remarks apply. In one case the endocardial disease spread from the heart to the aorta.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

CONFERENCE OF MEDICAL OFFICERS OF COMBINED DISTRICTS.

A conference of medical officers of health of "combined districts" was held on Friday and Saturday last in King's College Library. As it was understood that the meeting was not intended to be of a public nature, we do not give a detailed account of its proceedings. We understand, however, that a committee was appointed to draw up a report on the results of the Conference, with the view of its being published, and of its serving as a basis for further action. The programme of the Conference was very comprehensive. It included three groups of subjects: matters connected with the general organisation of combined districts; matters connected with the ordinary work of the officer of health; and matters connected with amendments or enlargements desirable in sanitary law. The first of these sections includes such subjects as the desirability of permanently embodying a central committee of delegates in each district; the facilities necessary in the shape of offices, apparatus, and secretarial assistance, to enable the medical officer of a combined district to carry on his work; the advisability of the appointment of a sanitary committee by each sanitary authority; and other similar matters. The second group of subjects deals with matters which are in some respects of common interest to all medical officers of health: such as the relations of the medical officer of health to the inspector of nuisances; vital statistics; the best way of bringing a district under sanitary supervision; forms of survey and of report; provisions against infectious disease in rural districts; legal proceedings in respect to nuisances; and the principles upon which a variety of unsanitary matters, such as overcrowding, dilapidations, etc., should be dealt with. The third group of subjects deals exclusively with proposals for the amendment of the sanitary law, and includes special suggestions for additional legislation on the prevention of infectious disease; the provision of cottages for agricultural labourers; the supervision of dairies; the promotion of scavenging; the establishment of a code of bye-laws for sanitary authorities by the Local Government Board; the pollution of rivers; and other matters of a more or less important character. The Conference was attended by twenty gentlemen, representing almost all the large, and some few of the smaller, districts, including upwards of one hundred and fifty sanitary authorities; and we are informed that most of those who were absent were so from unavoidable causes. The Conference resolved to permanently embody itself, with the view of future meetings and for other purposes, by the appointment of a committee, composed of Mr. Haviland of Northampton, Dr. Child of Oxford, Dr. Woodforde of Reading, Dr. Robinson of Dover, and Dr. Bond of Gloucester, the latter gentleman acting as secretary. It is obvious that the proceedings of a body of gentlemen so largely representative of sanitary work as the Conference was, cannot fail to have considerable weight; and we shall await with interest the report which the committee are empowered to draw up.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Tottenham.—The Local Board of Health of Tottenham appears to be in difficulties, and it finds that, between the Court of Chancery, on the one hand, and the Lea Conservancy Board, on the other, its sanitary action is, in several respects, hindered. A short time ago, this district was inspected by Mr. Netten Radcliffe, on behalf of the Local Government Board, and, as the result of his visit, we learn that one source of water-supply which he condemned has, with advantage to the public, been disused; but, in most respects, no real progress appears latterly to have been made. Fever is reported by Dr. Watson, the medical officer of health, to be unduly prevalent, sewage mud is accumulating at the sewage-works, the River Lea is fouled by the effluent water, the sewers having no proper system of ventilation, sewer-air escapes into houses, and even the public roads and foot-paths are in a state of deplorable neglect. Whatever legal straits this authority may be in, it can surely take some steps to stay the spread of enteric fever, the causes of which are, in most cases, far more likely to be found in association with localised and easily removable conditions of excremental poisoning than even with the faulty method by which the sewage is ultimately disposed of. Dr. Watson strongly urges the adoption of efficient ventilation and flushing of the existing sewers, and these measures should be carried out without delay.

CHESTERFIELD.—In connection with an inquiry into the sanitary administration of the district and neighbourhood of Chesterfield, Dr. Thorne Thorne, one of the inspectors of the Local Government Board, has had an interview with the Town Council, at which he reviewed the conditions which affect health in the borough. According to the *Derbyshire Times*, Dr. Thorne stated that the mean death-rate for the town had been 25.7 per 1,000 inhabitants, but that this mortality was reduced to 22.1, if deduction was made for the artificial increase caused by the existence within the borough of the workhouse and the infirmary. The class of preventable diseases, and especially enteric fever, scarlet fever, and small-pox, had each had their share in swelling the death-rate; and whereas, in the healthy districts of England, only about 12 infants die within the first year of life, an average of 15.8, and in one year as many as 18.1, have died in Chesterfield. The causes of the unnecessary large mortality were dealt with at some length, and the imperfect conditions of excrement disposal and of sewerage were specially referred to. The outfall for the sewerage is into the Rother, and that stream, which reaches Chesterfield, in an already polluted condition, is thus further fouled. Strong objection was raised to the general use of rain-water pipes as ventilating shafts for sewers, on the ground that, owing to the position of the upper and open end of the pipe, sewer-air had such facilities for gaining access to the interior of houses through open windows; and, in support of this view, Dr. Thorne cited instances in which he found sewer-air carried up to within a foot of bedroom windows, and in which the foul effluvia were made to escape beneath overhanging roofs, whence they could easily reach rooms in the upper floors. The facilities afforded for the escape of sewer-air into houses by means of overflow pipes from cisterns, was also adverted to, and it was explained that no reliance should be placed on the ordinary mode of trapping these pipes with a sigmoid bend, because, in the first place, the water in the trap is, after evaporation, never replaced, unless the ball-cock is by chance out of repair, and, secondly, because, during the rapid fall in the depth of sewer contents, which takes place in many sewers after heavy rainfall, a strong suction often takes place, by which these traps are deprived of the water they contain. Nothing short of detaching these overflow pipes from any connection with the sewer can remedy this evil, and this point has received special notice in the regulations made under the Metropolis Water Act, 1871, which have received the sanction of the Board of Trade. The water supply for Chesterfield was next adverted to; it appears to be derived from an admirable gathering ground, but, owing to neglect on the part of the water company, pollution of the storage reservoirs was ascertained to have taken place. The state of the common lodging-houses, which the inspector had visited at midnight, was such as to call for the strongest condemnation. The conditions found to be prevailing in them appear to be opposed to every consideration of health and decency, and both the physical and moral well-being of the classes occupying them seem to be utterly ignored. The grossest cases of overcrowding, however, were met with in rooms which were rented by colliers for periods exceeding one night; and, with a view of dealing with these, the Town Council was recommended to accept the definition of the term "common lodging-house," which has been adopted by the Metropolitan Commissioners of Police, and which includes any house, or any part of a house, in any room of which persons, being members of different families, pass the night. At the conclusion of Dr. Thorne's address, a vote of thanks to him was passed, and a hope was expressed that advantage would be taken of the information he had supplied.

KINGSHOLM ST. MARY.—We learn from Dr. Bond that the most important of the recommendations contained in the report, on which we offered some remarks last week, has taken a practical shape, and that a Bill is being promoted by the Corporation of Gloucester for including Kingsholm St. Mary in the borough. Dr. Bond may well be congratulated on this result, which, we trust, will have a successful issue. He can well afford also to neglect form in his reports, if he can obtain for his authorities the precise things he aims at. He agrees with us in distinguishing what is provisional in his recommendations and what is permanent; and he will equally agree with us that provisional recommendations should be unmistakeably set forth as such in formal reports, or, indeed, any reports.

DR. HOWDEN (Manson-le-Wear).—We shall be obliged by copies of the reports.

WILL you kindly give me the benefit of your advice on the following points. I have lately been appointed Medical Officer of Health over a large area, and by the terms of my appointment am "excluded from private practice, and required to devote the whole of my time to the discharge of the duties of my office."

A. Under these circumstances, would it be a breach of contract, or, at any rate, unadvisable, for me to visit on an emergency an ordinary medical, surgical, or obstetric case, to oblige a professional friend, either as his substitute or in consultation with him, provided I took no payment for so doing?

B. Would it be a breach of professional etiquette, or in excess of duty, for me to visit the patient of another medical man, whom I had reason to suspect to be suffering from an infectious disease, in order to verify the diagnosis, and judge for myself what preventive measures, if any, were necessary? I mean, of course, supposing that I had not an opportunity of asking the permission of the medical man in attendance to let me meet him in consultation, or that such permission were refused. I am, etc., M.D.

*** We think both questions must be answered in the affirmative.

A "MEDICAL OFFICER", to whose letter we promised lately to refer, thinks that a justification of the provisions of the Public Health Act of 1872, will be found in the recommendations of Mr. Simon, in his *Eleventh Report*, pp. 26, *et seq.* The Act, however, contravenes those most valuable recommendations. True, the distinguished adviser of the Privy Council assumed that in "all special health areas the health authority will, for the present, be distinct from the destitution authority"; but he avows his doubt of the advantage of such an arrangement, and recommends in its stead the very combination of objects under one committee, which we, with the Joint Committee of the two Associations, have uniformly advocated in opposition to the Government measure. Mr. Simon's opinion, under B, that "the law ought to take security for the co-operation of the two sets of officers", has certainly not been adopted by the framers of the Act: still less has the Legislature given heed to those most weighty recommendations under C (p. 28) concerning county authorities, and the advantage of bringing various medical functions in large areas under one system of management, on a magisterial basis—viz., "the protection of the public against the sale of adulterated and damaged food, against the malpractices of water-companies, and against offences under the Pharmacy Acts; . . . the local supervision of cattle diseases and of lunatic asylums, and local arrangements for providing skilled evidence in aid of coroners' inquests". Mr. Simon's suggestions, under D, E, F, about the correlations of central and local authorities have never been called in question by any medical writers, although they have been most imperfectly acted on by the Government; while his plan for the registration of sickness and causes of mortality has been hitherto neglected.

It is thus clear that there is a much closer agreement between the principles of legislation advocated by Mr. Simon and those supported by the BRITISH MEDICAL JOURNAL, than there is between the former and those adopted by the Legislature and the Local Government Board. We advise our correspondent to peruse more carefully and to represent more accurately the documents which he somewhat incautiously cites, and he will then acknowledge that Mr. Simon's admirable recommendations have *not* been carried into effect. Again, the extremely valuable labours of Mr. Simon's Inspectors are all but ignored by the Local Government Board. Instead of being printed in full, as under the former administration, and thus forming a choice *catena* of sanitary literature, they are now exhibited obscurely in the briefest abstract. Moreover, it is clear that the labours of the eminent authors of these reports, for some dozen years past, cannot be reasonably adduced in favour of an Act passed only last year, and hitherto characterised chiefly by its neglect of their advice. This officer of health has completely misunderstood the line taken in this JOURNAL respecting the sanitary employment of union surgeons. We have always advised their being employed universally as deputy health-officers. The Sanitary Commission and the Act of 1872, on the other hand, would have made them the sole health-officers, but only in their respective *rural* districts. The principle of the Act was not, as our correspondent assumes, "to exclude its medical officers from private or curative practice". Just the contrary; they were to be all practitioners. But the fact is, that the central authority soon found that this Act could scarcely be worked on its own principles; and, therefore, the appointment of officers over large areas, debarred from private practice, was encouraged in virtual evasion of the Act. We are now stating a well-known fact, and not our opinion about it.

Had the union surgeons and private practitioners generally been placed in their proper relations to the health-officers, it is certain that the present difference between the leaders of the sanitary party in our profession and the Government would never have existed. Dr. Alfred Carpenter's able paper, reviewed in our last, helps to show that if the BRITISH MEDICAL JOURNAL errs, it does so in company with many of the most thoughtful and independent writers of the day.

We wish to be just to our correspondent, and, therefore, give in his own words an account of his proceedings. Forgetting that there were very able and efficient health-officers acting in London and in several provincial towns long before the Public Health Act (1872) came into operation, he says:

"Take the work which is accomplished by health-officers, great and small, in their several districts—Is it, or is it not, good and real work, greatly in advance of what was practicable, or even dreamt of, years ago? To take an illustration from my own district. I have obtained powers for bye-laws, framed by myself according to the latest conclusions of modern science, controlling the erection of new buildings, though I am officer to a rural sanitary authority. I have under me inspectors whose business it is first to attend, under my direction, to the disinfection of houses and localities occupied by zymotic disease. I have an order from my Board to take summary proceedings before magistrates for the purpose of suppressing a nuisance, removing a patient with an infectious disease to a hospital, or closing a house unfit for human habitation. By vigilant attention, aiding and working with the Poor-law surgeons, we have been able speedily to suppress many outbreaks of small-pox in various parts of my district. I have had no difficulty, in accordance with existing statutes, in dealing with overcrowding; and have only failed once, through indicting the wrong person, when I have been obliged to take proceedings on this subject. I have been able to reconstruct the closet-system of several villages—or at any rate such process of reconstruction is going on. There are one or two matters upon which I might wish for more decided powers; *e.g.*, power over watercourses, and early and authorised information from private practitioners as to the existence of epidemic diseases."

There may be some medical officers of health (not many, we believe) like this gentleman, who are so delighted with their own work under the Act, that they see everything *couleur de rose*, and fancy that, with their facile authorities, they are accomplishing the sanitary regeneration of the country. A little more modesty on their part, less confidence in first attempts, and less hasty generalisation from a few isolated facts, might lead them to pause before attacking an independent journalist for pointing out defects which they themselves are only just beginning to feel, and for asking the profession to join in obtaining great organic reforms in sanitary administration.

MILITARY AND NAVAL MEDICAL SERVICES.

THE BLANE MEDALS.

THE award of the gold medals of the late Sir Gilbert Blane has recently been made, in accordance with the bequest of the founder, by the Presidents of the Royal Colleges of Physicians and Surgeons, and the Director-General of the Medical Department of the Navy, and they have been bestowed on Staff-Surgeon John D. Macdonald, M.D., F.R.S., Professor of Naval Hygiene at Netley, for his Journal of the ship *Lord Warden;* and on Staff-Surgeon (second class) Thomas Colan, M.D., for his Journal of the *Rattlesnake*, in which ship he is still serving.

HINTS FOR PRESERVING HEALTH ON THE WEST COAST OF AFRICA.

THE following succinct and sensible suggestions are furnished to us by an experienced medical officer, and, although coming rather late in the day, we publish them, hoping their circulation may be of service.

1. Good water being of the first importance, the following rules should be observed as far as possible. The water should be boiled and filtered; but the best way to use water, and for thirst, is to drink it with *tea.** It is strongly recommended that all ranks fill their water-bottles with tea, and use it in preference to plain water. Water should always be drank in moderation when the body is heated. The less a soldier drinks when on the march the better.

2. Flannel shirts should invariably be worn. No linen or cotton shirts should be used. The most experienced officers in such climates have all recommended flannel. The best writers on the hygiene of the tropics (Chevers, Jeffreys, Moore) all recommend flannel. From experience at Rome and the West Coast of Africa, it is protective against malaria.

3. All ranks are warned against intemperance. The men who drink spirits to excess are the first to fail when strength and endurance are required; and they are less likely to recover from disease, wounds, and injuries.†

4. Great care should be paid to the feet. At the close of a day's march every man should bathe his feet, and wash his socks whenever they are soiled. If the feet chafe, rub the socks with common soap where they come in contact with the sore places. Rubbing the feet with oil or fat of any kind before marching is a good remedy. If blisters form on the feet, they ought not to be opened during the march; but at the end of the time a needle and thread should be drawn through, and the fluid will gradually ooze out.

5. An old and experienced soldier eats and drinks as little as possible whilst marching. The young soldiers are warned against eating the contents of their haversacks, and using their water-bottles on the line of march. It is a bad habit, and causes more suffering in the end.

6. At the halt, or at the end of the day's mach, the heated men should not uncover themselves. They should take off their valise and belts, but keep on their clothes for an hour. Then they may be taken off, well shaken, and dried. This will prevent the danger of chill and exposure.

7. Quinine, as a daily article of diet and not as a medicine, is recommended. It should be taken every morning, to the extent of as much as will lie on a halfpenny.‡

8. Men should never march on an empty stomach. Tea or coffee and bread should invariably be taken before commencing the morning's march or work.

9. Camp-fires should be allowed whenever admissible. They purify the air, prevent annoyance from insects, dry clothing, and are a security against chilliness during the night.

10. Perhaps in no expedition ever undertaken by this country will greater vigilance be required over health matters than on this to the West Coast of Africa. It behoves, therefore, all ranks to aid and assist the commanding officer in maintaining the battalion in the highest physical efficiency.

SURGEONS AT ALDERSHOT.

WE can hardly believe that the authorities have really intended to place any obstacle in the way of those zealous surgeons who wish to pay an occasional visit to our London hospitals. But, as we have already pointed out, the fact remains, that every medical officer taking twenty-four hours' leave over and above the annual allowance of sixty days, must refund to the exchequer all emoluments drawn by him during that period. And we have also directed attention to the significant distinction that, whilst the doctor is thus compelled to give up his entire pay, other departmental officers are only put under stoppages for that extra allowance which they draw in virtue of their staff employ. Now, what we think would amply meet the necessities of the case, would be a general permission, given to the regimental medical officer of each large station in the neighbourhood of London, to confer an occasional day's leave, *gratis*, on as many of his surgeons and surgeons-major who wish to get away for strictly professional purposes. We know very well that the best of us are apt to lose heart and grow rusty when kept entirely to monotonous duties, and that medical practice under these circumstances is too apt to degenerate into mere routine. The surest preventive of such a state of matters is to be found in frequent association with our medical brethren, and by frequenting the wards and operating-theatres of those institutions where progress is most appreciated.

By this means, our army colleagues will be inspired to make the best use of the very great opportunities they frequently possess for the special study of disease, and will succeed in commanding the respect and confidence of the combatant branches, by that familiarity with recent inventions which every one must now possess who seeks to hold his own in general society. May we venture to urge upon the Director-General, or (if Whitehall Yard is really powerless even to suggest any useful reform) on Mr. Cardwell, how highly such a privilege as we have now described would be valued by Woolwich, Aldershot, and other great military stations. Only one possible objection presents itself to our mind, and it is within the limits of possibility that the same may have suggested itself to the ruling officials. It is acknowledged that an enthusiastic man is often a very troublesome one, and that the pertinacity with which a medical officer of this class will detect sanitary defects, suggest alterations and improvements, and apply for new things, has often proved far more detrimental to the health of our economical principal medical officer than even the climate of the Gold Coast.

The effect, therefore, of permitting surgeons to visit metropolitan hospitals may be most injuriously felt in requisitions for expensive drugs and appliances, on the frivolous pretext that they are new and have proved useful elsewhere; and it is perhaps desirable to place restrictions on such intemperate zeal.

If the progress of science be checked by these obstacles, the public purse may be a few shillings the heavier, and we must remember that the lavish expenditure on the *Victor Emmanuel* must be met by cheese-paring at home. And, looking at affairs from the most purely utilitarian aspect, we fear that the successful officers of the medical department in the future are most likely to be those who adopt the immortal words of Talleyrand—"Surtout point de zèle."

OBITUARY.

JOHN THOMPSON DICKSON, M.A., M.B.

THE late Dr. Thompson Dickson, whose sudden and lamented death was announced in our last number, took his degrees of M.A. and M.B. at Cambridge in 1867. In 1863 he had passed the examinations of the Royal College of Surgeons and of the Apothecaries' Hall; and in 1868 he became a member of the Royal College of Physicians of London. He was a Fellow of the Linnean Society, and a member of the Pathological Society and of the Medico-Psychological Association. He was honorary physician to the Royal Dramatic College; late medical superintendent of St. Luke's Hospital; honorary physician to the Leamington Hospital; and lecturer on mental diseases at Guy's Hospital. The course of lectures which he gave on this subject are now in the press, and ready for publication. To the BRITISH MEDICAL JOURNAL, the *Lancet*, the *Medical Times and Gazette*, the *Journal of Mental Science*, and *Guy's Hospital Reports*, he contributed several articles, on epilepsy, insanity, and other interesting subjects.

UNIVERSITY OF CAMBRIDGE.

DR. BRADBURY'S LECTURES.—The Linacre Lecturer in Medicine gives notice that he will resume his lectures on Pathology on Tuesday, January 27th, at 10 A.M., and continue them on every succeeding Tuesday at the same hour throughout the term.

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* "Tea has a great purifying effect on water."—Professor Parkes.

† One drachm of rum was allowed daily in the Abyssinian expedition, and was, in the opinion of the principal medical officer, conducive to health. Bowel-complaints were less frequent when it was given, than when the men were unavoidably deprived of it. No spirit-ration was issued on the Red River expedition, and no men could have had better health; but the principal medical officer reports—"I do not think one instance sufficient as a precedent for all future expeditions, as the climate and weather of this one were exceptional."

‡ The Yearly Reports from the Mauritius, where malarial fever has been so bad, speak most favourably of daily doses of quinine. It appears to be the one remedy to prevent it. Experience alone can prove it on the West Coast of Africa.

MEDICAL NEWS.

THE LONDON SOCIETIES.

THE following are the new office-bearers of the principal London Societies which at this time of the year renew their "bureaux". The gentlemen whose names are marked with an asterisk (*) were not on the Council, or did not hold the same office during the preceding year.

PATHOLOGICAL SOCIETY OF LONDON.—*President:* Sir William Jenner, Bart., M.D.. K.C.B., D.C.L., F.R.S. *Vice-Presidents:* *L. S. Beale, M.B., F.R.S., W. Howship Dickinson, M.D., *C. J. Hare, M.D., J. Burdon Sanderson, M.D., F.R.S., J. Hilton, F.R.S., *C. Holthouse, J. W. Hulke, F.R.S, John Wood. F.R.S. *Treasurer:* C. Murchison, M.D., F.R.S. *Honorary Secretaries:* W. Cayley, M.D., H. Arnott. *Council:* *H. H. Crucknell, M.B., J. Langton H. Down, M.D., A. B. Duffin, M.D., *C. Kelly, M.D., *A. Leared, M.D., *J. W. Legg, M.D., F. W. Pavy, M.D., F.R.S., J. F. Payne, B.A., M.B., *A. Julius Pollock, M.D., R. D. Powell, M.D., *P. H. Pye-Smith, M.D., W. M. Baker, W. F. Clarke, M.A., *M. Berkeley Hill, M.B., H. J. H. Lawrence, F. Mason, H. Cooper Rose,.M.D., Henry Smith, *W. W. Wagstaffe, B.A., John Way, M.D.

CLINICAL SOCIETY OF LONDON.—*President:* Prescott G. Hewett. *Vice-Presidents:* *G. Johnson, M.D., F.R.S., A. P. Stewart, M.D., H. Weber, M.D., G. W. Callender, F.R.S., J. Cooper Forster, T. Holmes. *Treasurer:* E. H. Greenhow, M.D., F.R.S. *Council:* J. Andrew, M.D., T. Buzzard, M.D., *W. Cayley, M D., *W. S. Church, M.D., W. Cholmeley, M.D., E. Clapton, M.D., *W. H. Dickinson, M.D., A. B. Duffin, M.D., A. Meadows, M.D., *W. Moxon, M.D., *R. D. Powell, M.D., H. Arnott, R. Barwell, R. B. Carter, *J. Couper, J. C. Langmore, M.B., *G. Lawson, *A. T. Norton, T. W. Nunn, S. W. Sibley, A. Willett. *Honorary Secretaries:* R. Southey, M.D., *T. P. Pick. *Trustees:* E. H. Greenhow, M.D., F.R.S., J. B. Sanderson, M.D., F.R.S., G. W. Callender, F.R.S.

OBSTETRICAL SOCIETY OF LONDON.—*Honorary President:* Sir C. Locock, Bart., M.D. *President:* E. J. Tilt, M.D. *Vice-Presidents:* J. Clay (Birmingham), E. Copeman, M.D. (Norwich), H. M. Madge, M.D., *A. Meadows, M.D., W. S. Playfair, M.D., *C. H. F. Routh, M.D. *Treasurer:* G. C. P. Murray, M.D. *Honorary Secretaries:* J. J. Phillips, M.D.. *A. Wiltshire, M.D. *Honorary Librarian:* *J. H. Aveling, M.D. *Honorary Members of Council:* H. Oldham, M.D, R. Barnes, M.D., J. Hall Davis, M.D., G. Hewitt, M.D., J. Braxton Hicks, M.D., F.R.S. *Other Members of Council:* *G. G. Bantock, M.D., *J. Bassett, M.R.C.S. (Birmingham), J. Watt Black, M.D., J. M. Bright, M.D., G. B. Brodie, M.D., *T. Chambers, M.R.C.P.Ed., W. H. Day, M.D., J. Duncan, M.B., A. W. Edis, M.D., J. Ellison, M.D. (Windsor), J. Fowler (Wakefield), *J. H. Galton, M.D., J. R. Kirkpatrick, M.B. (Dublin), W. Newman, M.D. (Stamford), J. B. Potter, M.D., *A. Roberts, M.R..C.S., Heywood Smith, M.D., *A. B. Steele, L.K.Q.C.P.I. (Liverpool).

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, January 8th, 1874.

Bates, William, The Crescent, Birmingham
Brayn, Richard, Hollystone, Market Drayton
Hughes, William, Her Majesty's Hospital Ship, Cardiff
Page, Herbert Markant, General Hospital, Birmingham

MEDICAL VACANCIES.

THE following vacancies are announced:—

ARDNAMURCHAN, Argyleshire—Medical Officer for the Districts of Sunart, Ardnamurchan, and Moldart: £100 per annum, house, and garden. Applications, 2nd February, to Wm. Ralston, Inspector of Poor, Ardshealach, Strontian.

ARMY MEDICAL DEPARTMENT—Assistant Surgeons.

BINGHAM UNION, Nottinghamshire—Medical Officer for the South District: £22 per annum,

BIRMINGHAM GENERAL DISPENSARY—Resident Surgeon: £130 first year, £140 second, £150 per annum afterwards. £30 per annum for cab-hire, furnished rooms, etc. Applications, 28th instant, to Alexander Bottle, M.D., Secretary.

BOLTON (Borough)—Medical Officer of Health: £400 per annum.

BURTON-ON-TRENT, Lichfield, and Penkridge Rural, and Lichfield and Rugely Urban, Sanitary Districts—Medical Officer of Health: £600 per ann., for three years. Applications, 26th inst., to John Bown, The Close, Lichfield.

CITY OF LONDON UNION—Medical Officer for District No. 2: £140 per ann.

CRANBROOK UNION, Kent—Medical Officer and Public Vaccinator for the Benenden District: £43 per annum, and fees. Applications, 26th instant, to H. J. Farrar, Clerk.

DEVON AND EXETER HOSPITAL—Physician.

DUNDRUM CRIMINAL LUNATIC ASYLUM—Visiting Physician.

EXETER DISPENSARY—Consulting Physician.

FARNWORTH URBAN SANITARY DISTRICT—Medical Officer of Health.

GLENTIES UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Dungloe Dispensary District: £100 per annum, and fees. Applications, 27th instant, to W. Hammond, Hon. Sec.

HUDDERSFIELD UNION—Medical Officers and Public Vaccinators for the Huddersfield South, and Wodehouse Districts: £37 and £12 per annum, and fees, respectively. Applications, 23rd instant, to John Cocking, Clerk.

HUDDERSFIELD INFIRMARY—Physician.

INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications to Major-General Pears.

KINGSTON UNION, Surrey—Medical Officer and Public Vaccinator for the Kingston District of the Kingston Union: £125 per annum.

LINCOLN UNION—Medical Officer for District No. 3: £30 per annum.

LITCHURCH URBAN SANITARY DISTRICT—Medical Officer of Health: £25 for one year. Applications, 26th instant, to W. H. Whiston, Clerk to the Authority.

NAVAL MEDICAL SERVICE—Surgeons. Applications, 12th February, to A. Armstrong, Director-General.

NORTHUMBERLAND LUNATIC ASYLUM, Cottingham, Morpeth—Medical Superintendent.

NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th March, to E. M. Kidd, Sec.

OUNDLE UNION—Medical Officer for the Weldon Union: £41:10 per annum.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN—Resident Medical Officer. Applications, 26th instant, to John Henry, Secretary, 20, St. Andrew Square, Edinburgh.

ROYAL SOUTH LONDON DISPENSARY, St. George's Cross—Two Honorary District Surgeons.

ROYAL GENERAL DISPENSARY, Bartholomew Close—Resident Medical Officer: £100 per annum, apartments, etc. Applications, 23rd instant, to E. P. Rowsell, Secretary.

SOUTH STOCKTON URBAN SANITARY DISTRICT—Medical Officer of Health. Applications, 21st inst., to Joseph Dodds, Stockton-on-Tees.

STOWMARKET URBAN SANITARY DISTRICT—Medical Officer of Health: £10 10s. per annum.

ST. MARYLEBONE GENERAL DISPENSARY—Resident Medical Officer: 100 guineas per annum, apartments, etc. Applications, 19th instant, to Peter Matthews, Sec.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, Quay Street, Manchester—Honorary Surgeon. Applications, 20th instant, to J. Barber, Sec.

SCARIFF UNION, co. Clare—Medical Officer for the Annacarriga Dispensary District: £100 per annum. Applications, 26th instant, to W. H. Mayne, Honorary Secretary.

SEAMEN'S HOSPITAL, Greenwich—House-Physician: £120 per annum, and furnished rooms. Applications, 17th instant, to S. Kemball Cook, House-Governor and Secretary.

SUNDERLAND EYE INFIRMARY—Surgeon. Applications, 26th instant, to Thomas Dixon, Honorary Secretary.

TEWKESBURY UNION—Medical Officer and Public Vaccinator for the Forthampton District; £55 per annum, and fees. Applications, 20th inst., to George Badham, Clerk.

THE FRIENDS' RETREAT, near York—Medical Superintendent. Applications to Jonathan Burtt, Treasurer.

THRAPSTONE UNION—Medical Officer for the E. District: £26:8 per ann.

UNIVERSITY OF DUBLIN—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.

VICTORIA HOSPITAL FOR SICK CHILDREN, Gough House, Chelsea—Second Assistant Surgeon. Applications, 24th instant, to Capt. H. B. Scones, Secretary.

WESTMINSTER HOSPITAL—Assistant-Surgeon. Applications, 10th February, to F. J. Wilson, Sec.

WHITCHURCH (South Hants) UNION—Medical Officer for the Overton District: £40 per annum, and fees. Applications, 19th inst., to S. Clarke, Clerk.

WORCESTER GENERAL INFIRMARY—Dispenser and Assistant to the House-Surgeon: £50 per annum, board and washing. Applications, 17th inst., to Alfred P. Watkins, Sec.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CREAN, Richard, L.K.Q.C.P., appointed Assistant-Surgeon to the Royal Eye Hospital, Manchester.

ESTCOURT, Henry, M.R.C.S., appointed Assistant-Surgeon to the Royal Eye Hospital, Manchester.

MULES, Philip H., M.D., appointed Assistant-Surgeon to the Royal Eye Hospital, Manchester.

POCOCK, Frederick E., M.R.C.S., appointed House-Surgeon to the Queen Adelaide's Dispensary, Bethnal Green Road, *vice* G. E. Herman, M.R.C.S., resigned.

*SOUTTER, M. C., M.R.C.S.Eng., appointed Surgeon in sole charge of the Hornsey Road Branch of the Islington and North London Provident Dispensary.

*WATERSON, John, M.R.C.S., appointed Surgeon to the Birmingham Borough Prison, *vice* *Alfred Hill, M.D., resigned.

WYNTER, Hugh Bold, M.R.C.S., appointed Surgeon to the Surrey House of Correction, Wandsworth, *vice* Thomas P. Wright, M.R.C.S.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication,

DEATHS.

*ELLIOT, William Henry. M,D., Physician to the Devon and Exeter Hospital, at Bouverie House, Exeter, aged 68, on January 10th.

LATHAM.—Lost at sea, in the *Ben Lomond*, off Cape Horn, end of 1872, in his 21st year, Walter John, second son of *Charles W. Latham, M.R.C.S., L.S.A., Assistant-Surgeon Tower Hamlets Rifle Brigade, of Hackney Road.

MARRIOTT, John, Esq., Surgeon, at Colston Bassett, Nottinghamshire, aged 79, on January 2nd.

MARTIN, Robert, F.R.C.S., late of Holbrook, Suffolk, at Ipswich, aged 81, on December 22nd, 1873.

SKAIFE, John, L.R.C.P.Ed., late of Northampton Square, London, at Easingwold, Yorkshire, aged 40, on December 12th, 1873.

STICKINGS, George, Esq., Surgeon, at Wye, aged 73, on January 9th.

WARNER, John, M.D., M.R.C.S.E., L.S.A.L.M., only son of the late John Warner, Esq., of Leighton Buzzard, at the Towers, Torquay, aged 35, on January 11th.

WILSON, Richard, Esq., Medical Superintendent of the Morpeth Asylum, aged 46, on January 9th.

TESTIMONIAL.—On the occasion of his leaving Coton Hill Asylum, Stafford, to enter into private practice in Perthshire, Dr. William Yeats, assistant medical officer to the institution, has been presented with an elegant and valuable timepiece, along with other drawing-room ornaments, by the attendants and servants, in token of the great respect and high esteem in which he was held by them, and of their good wishes.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY .St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Broadbent: Lettsomian Lecture, "Syphilitic Affections of the Spinal Cord and Membranes; of the Pons, Medulla Oblongata, and Cerebellum."

TUESDAY.—Pathological Society of London, 8 P.M. Mr. Lennox Browne: Cast and Photographs of Lymphoma, causing displacement of Trachea. Dr. Goodhart: Syphilitic Phthisis. Dr. Crisp: Specimens of the Grouse Disease. Dr. Wickham Legg: Hydatids of Liver, Omentum, and Recto-Vesical Pouch; Jaundice; Xanthelasma Multiplex. Mr. Arnott: A Cyst in a Child's Scalp, simulating Meningocele.

FRIDAY.—Clinical Society of London, 8.30 P.M. The President (Mr. Prescot Hewett) will deliver an Inaugural Address. Dr. Cayley, "Case of Hæmoptysis"; Mr. T. Warrington Haward, "Case of Blood-cyst of the Hand"; Mr. Callender, "Description by John H. Puckard, M.D., of Philadelphia, of a Bracketed Splint employed in cases of Excision or for Compound Fracture."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

L.K.Q.C.P. is referred to the Council of his Branch for an opinion.

WILL some of your readers kindly state what mixture they have found most beneficial in hooping-cough?—INQUIRER.

H.—Singapore has a warm but very equable temperature—between 76 deg. F. and 80 deg. F. It agrees well with people of a consumptive tendency.

DR. CHARLES KIDD is once more requested to abstain from the abominable practice of forwarding anonymous post-cards.

THE PROPER TREATMENT OF TAPEWORM.

WE have received many letters complaining—some in rather severe terms—that the proper treatment of tape-worm still remains obscure, after Dr. Cobbold's letter as also after his lecture on the subject. Rather than publish them in their present form, we shall bring their contents to Dr. Cobbold's notice, who will, no doubt, be able to clear up what is obscure, and to supply what is omitted in his former communications.

A NEW SCHEME OF MEDICAL EDUCATION.

SIR,—An inquest on the body of a child, who had died of measles after being attended by an unqualified person, was the occasion of the following remarks by the deputy-coroner for Central Middlesex. To a question from the foreman of the jury, which I did not catch, the deputy-coroner replied that there is no law which forbids any person from giving advice, or any other person from taking such advice, in a case of illness. After some more conversation, it was asserted that the person in question had been house-surgeon to a neighbouring hospital. The deputy-coroner then said that no doubt he was fitted to undertake the treatment of disease. "There are several such persons practising in my neighbourhood, whom I know to be 'good' men, and I feel their case to be a rather hard one. They have been assistants for some years to regular practitioners, and they are well qualified to practise, only it unfortunately happens that they have not the *legal* qualification. Either they or their friends have not had the money to pay their fees; and under similar circumstances I am unwilling to blame them, or to blame them much." I wish I had a a greater command of language, that I might point out how much these sentiments say for the largeness of Mr. Deputy-coroner's heart, without seeming to imply any odious comparison. For my own part, I have been in the habit of feeling and of expressing myself rather strongly in such cases as this; but I see now that I must be cautious. A gentleman, himself a legally qualified practitioner, and in high legal authority, thinks that persons who practise medicine without any of those guarantees which it is generally believed the laws of the country demand, are not to be too harshly nor too hastily condemned—indeed, are not to be condemned at all, but pitied rather. But it is not to this point that I wish to draw your attention. When so much is being said about the institution of one examining board which shall confer one sufficient qualification to practise, I feel that you, sir, who are interested in the subject, should be made acquainted with the fact that, in the opinion of at all events one whose position attracts attention, your schemes (though they may be admitted to be ingenious) are unnecessary. Here is a new, and, like some other great discoveries, a beautifully simple scheme of medical education which has been proved, on this occasion, to be practically sufficient. Let your aspirant assist a "good man" for several years, and then—he may start in practice on his own account without bothering any board about it at all. The advantages of this plan in saving labour, money, and brains, to the candidate are obvious. I have not time just now to search out the other advantages. I daresay the author of the scheme would be anxious to point them out to you if he knew you were interested in it. But what is your opinion, as far as this information goes?

I am, etc., K.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal: The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal: The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail: The Blackburn Times: The Glasgow News; The Glasgow Herald: The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Erichsen, London; Dr. Broadbent, London; Dr. Cobbold, London; Our Glasgow Correspondent; Dr. Cotton, London: Dr. Marcet, Nice; Dr. Braxton Hicks, London; Dr. Semple, London: Dr. J. G. Wilson, Glasgow; Dr. George Johnson, London; Dr. R. Douglas Powell, London; Mr. T. P. Pick, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; F.R.C.S.E.; Dr. Edis, London; Dr. Gream, London; The Secretary of the Clinical Society; Mr. Eastes, London; Mr. Bellamy, London; Mr. P. Higgs, Penarth; Dr. Parsons, Dover; Dr. Moriarty, Woolwich; Mr. Berkeley Hill, London; Mr. Waren Tay, London; Dr. Rumsey, Cheltenham; Mr. Fairlie Clarke, London; Dr. Tripe, London; Sir Charles Trevelyan, London; Mr. Ley, Newton Abbott; Mr. Hickes, Gloucester; Dr. Coyne, London; Mr. Jonathan Hutchinson, London; Mr. Edwin Chadwick, London; Dr. Young, Malton; An Associate; Dr. Cockle, London; Dr. Corfield, London; Dr. Stocker, London; Dr. Woodward, Worcester; Mr. Joseph Thomson, Hawes, Bedale; Dr. Mordey Douglas, Sunderland; Mr. J. H. Coveney, Prestwich; Mr. H. Nichols, Haddenham; Dr. Robert Barnes, London; Dr. Hassall, London; Dr. Gardner, Box, Wilts; Dr. F. Gordon Brown, London; Dr. J. R. Roe, Bridgnorth; Mr. Elliot, Exeter; Dr. Maclagan, Berwick-on-Tweed; Mr. Sissons, Barton-on-Humber: A Member; Mr. J. Bell, Edinburgh; Mr. W. H. Michael, London; Mr. Dixon, Whitehaven; Mr. Holmes, London; Dr. T. Snow Beck, London; Dr. Reginald Southey, London; Dr. Alexander Reith, Aberdeen! Mr. D. Kent Jones, Beaumaris; etc.

BOOKS, ETC., RECEIVED.

Diseases of the Urinary Organs. By J. W. S. Gouley, M.B. London: Trübner and Co. 1873.

Animal Locomotion; or, Walking, Swimming, and Flying. By J. B. Pettigrew, M.D. London: H. S. King and Co. 1873.

Handbook for Hospital Sisters. By Florence S. Lees. London: W. Isbester and Co. 1873.

Pathologie und Therapie de Muskulären Rückgratsverkrummungen. Prof. Dr. Axel Sigfrid Ulrich.

Ninth Annual Report of the Sanitary Commissioner with the Government of India. 1872.

Fruits and Farinacea the proper Food for Man. By the late John Smith, of Malton.

Clinical History of the Diseases of Women. By R. Barnes, M.D. London: Churchill. 1873.

The Conservation of Energy. By Balfour Stewart, M.A., LL.D., F.R.S. London: H. S. King and Co. 1873.

Veterinary Medicines: their Actions and Uses. By Finlay Dun. Edinburgh: Edmonston and Douglas. 1873.

Report on the Sanitary Administration of the Punjab for the Year 1872.

Report of the Sanitary Commissioner of Madras, 1872.

LECTURES
ON
HOSPITALISM: AND THE CAUSES OF DEATH AFTER OPERATIONS.

Delivered at University College Hospital, London.

By JOHN ERIC ERICHSEN, F.R.C.S.,
Holme Professor of Clinical Surgery in University College, and Senior Surgeon to University College Hospital.

LECTURE II.—ON THE CAUSES OF DEATH AFTER OPERATIONS.

CONTENTS.—*Conclusions in last Lecture.—Four great causes of Death after Operations.—Shock and Septic Disease the most important: Relative influence of these in Amputations.—Influence of Shock.—Question of Amputation in Severe Injuries of Lower Limbs.—Exhaustion. Septic Diseases.—Pyæmia and Erysipelas.—Amount of Hospitalism: Meaning of Word.—Deaths in Private as compared with Hospital Practice.—Evidences of Hospitalism, as afforded by Maternity Statistics, by Ovariotomy Statistics, and by results of Amputations in Military Practice.—Hut-Hospitals in Franco-German War.—Simpson's Statistics.*

IN the last lecture, I pointed out to you the percentage of mortality that still prevails after the major amputations. The figures that I laid before you admit of no doubt or cavil, as they have been drawn from the statistical reports which are now annually published by the officers of many of our hospitals: their accuracy cannot, therefore, be questioned. They prove incontestably that the average mortality after amputations in general hospitals in this country, taken as a whole, is from 35 to 40 per cent., whilst the available continental returns show a much higher rate. I also pointed out to you the important fact, that there has been no diminution in this rate of mortality during the last thirty-five years; that it is, in fact, higher than that furnished by statistics then published. If the figures are correct--and for the reason given I have no doubt of their accuracy—the deductions I have made from them are legitimate.

To-day we will proceed to inquire into the most important question of all—viz, the causes that have led to the production, and are still leading to the perpetuation, of so lamentable and unsatisfactory a result.

These causes may, by a reference to any published statistical table of Hospital Reports, be found to arrange themselves under four distinct heads. First, there are certain conditions inherent in the operation itself which dispose to, or directly determine, a fatal result; as, for instance, the exposure of the membranes of the brain in trephining, the opening of the peritoneum in operations for hernia, or the deep cellular planes of the pelvis in lithotomy. To these conditions it is sufficient to advert, and no description of them is rendered necessary, as they explain themselves. But it is well to bear in mind that the influence of such direct conditions as these is much increased by the complication of septic agencies.

Secondly, we have a series of causes which exercise a very minute influence upon the general rate of mortality, although they are individually serious and important; such, for instance, as tetanus, secondary hæmorrhage, etc. But undoubtedly the two principal causes that determine death after the greater operations, such as amputations, ovariotomy, and others of the more important operations, are—

Shock and Septic Disease.—The influence of these in amputations is well marked. Out of the 80 cases occurring at University College Hospital, which form the basis of these observations, I find that there were 3 deaths from shock (all primary), and 10 from pyæmia and erysipelas; leaving only 8 deaths to be accounted for by exhaustion and the other minor and more varied causes that I have mentioned.

On referring to Table B, we shall find that of a total of 631 amputations, 110 died from shock and pyæmia together, or 17.5 per cent. of the whole operated on; whilst of the 239 deaths, 48 per cent. were from the combined influence of these two causes—and this is irrespective of those that are reported as dying of "exhaustion", which is closely allied to shock, or from "erysipelas", "low cellulitis", and other forms of septic disease than pyæmia. This terrible disease proved fatal in as nearly as possible 36 per cent. of all the deaths, and shock in about 10 per cent. of the deaths, or in 3.8 per cent. of all amputations.

But the respective influences of these two great causes of death after amputations will be found not only to vary very greatly according as the operation is primary, secondary, or for disease, but also to exercise very different degrees of influence in different hospitals, as may be seen by Table B.

Shock was most felt in primary amputations, in the proportion of 25 per cent. of the deaths; was but little fatal in secondary amputations, 6 per cent.; and was entirely absent as a cause of death in pathological amputations.

Pyæmia was fatal in about one-third, or 33 per cent., of the primary amputations; in 44.4 per cent. of the secondary; and in those for disease it again acquired nearly the level of the primary—viz., 34.6 per cent.

We shall proceed to consider these two conditions more in detail; and, first, with regard to shock.

The influence of shock is necessarily most felt in primary amputations. Indeed, I believe that its fatal results are almost entirely confined to amputations performed within twenty-four hours of the infliction of the injury; at least, I have never known a case of intermediate or secondary amputation, or amputation for disease, in which the patient died from this cause. Fatal shock, in fact, is the result of the combined depressing influence of the injury and of the operation. It is the more likely to occur in the exact proportion of the severity of the injury and the age of the patient. It is often rather referable to the injury than to the operation, and it becomes a question whether, in many cases of serious and almost hopeless smash of a limb, it might not be better to let the patient expire in peace, than subject him to the repetition of a shock which his nervous system will be utterly unable to endure. This is more especially the case in extensive crush and disorganisation of the lower extremity up to, or above the middle, of the thigh, such as are not unfrequent at the present day from railway accidents, in which the mangling of the limb rather resembles that produced by cannon-shot than by an ordinary injury of civil life. In these cases, amputation through the upper third of the thigh, or at the hip-joint, is the only available operation. It is usually done in such cases. But is it ever successful? That is a question which deserves the serious consideration of hospital surgeons. I am not acquainted with a single case in which such an operation has succeeded in general hospital practice. The three cases in which it was done, out of the eighty University College cases, all died of shock. The same catastrophe has happened in every other case on record with which I am acquainted. It is an operation that has been abandoned by military surgeons in cases of compound comminuted fracture of the femur from bullet-wound in this situation; ought it not to be equally discontinued by civil surgeons, in those more hopeless cases of utter smash of the limb that occur in their practice? For my own part, I shall never again amputate in that situation for such injuries—hopeless alike, whether left or subjected to the knife; but surely better left to die in peace than again tortured by amputation, which all experience has shown to be useless.

It is of importance to observe, in reference to these cases of death from shock after primary amputations, that the fatal result happens a few hours, usually within twenty-four, of the performance of the operation. Hence, although it may be disposed to by the previous condition of the patient as to his power of endurance, his age, etc. (for death from shock necessarily occurs more frequently under similar conditions of injury at advanced than at early periods of life), or even by season of year, yet it cannot in any way be affected by the conditions to which the patient is exposed subsequently to the performance of the operation, so far at least as hospital or other external influences are concerned. We must therefore look upon death from shock as a part of the general accident to which the patient has been exposed and of the injury that he has sustained, aggravated, doubtless, by the further depressing influence exercised by so serious an operation as an amputation possibly high up in one of the limbs. It is interesting to observe that season exercises an influence on the liability to death from shock after primary amputations. According to Hewson of Philadelphia, it is most common in winter. The reason is obvious; the cold, to which the sufferer has been exposed at the time of the occurrence of the accident for which he has to undergo an amputation, is an additional cause of vital depression. If, therefore, we want to improve our statistics of amputations—in other words, to lessen the mortality consequent on these operations—the first point to look to is not to amputate needlessly in hopeless cases of smash of the thigh high up, in order to give "a last chance" to a patient whose vital powers have already been depressed to the lowest ebb by a fearful mutilation. Such amputations, which often consist in little more than the severance of a limb still attached to the trunk by shreds of muscle, ought scarcely to find their way into a statistical table professing to give the general results of operations the majority of which are more deliberately performed, and with a better prospect of success. They ought, in point of fact, to constitute a class of cases apart, in which the operation is subsidiary to the injury that has preceded, and that leads to, it.

Shock, as has already been shown, exercises its influence chiefly in primary amputations; far less in secondary ones; and disappears entirely, as a cause of death, in pathological amputations. There, however, it is replaced by "exhaustion." This condition stands in the same relation to amputations for disease, that shock does to those that are practised for injury. Death by "exhaustion" or "collapse" is, in fact, an indication that the impression produced by the operation on the nervous system has been greater than the already enfeebled powers of the patient were able to endure; and the frequent occurrence of these terms, as indicating the cause of death in any table of amputation statistics, may be taken as evidences of the operation having been practised too often when the patient was already too enfeebled by long continued disease or suffering to be able to support the additional depressing influence of a serious surgical operation.

The next and the most important influence is undoubtedly that exercised by the development of septic disease after the amputation. The importance of this is obvious, from a consideration of the following statistics. Out of the 21 deaths that occurred in the 80 University College amputations (Table A), no less than 10, or nearly one-half, arose from this cause; and, out of a grand total of 239 deaths occurring in four metropolitan hospitals, I find that 86 died from pyæmia alone, without including other septic diseases and septic visceral diseases, being nearly four times as many deaths from pyæmia as from shock.

The amount of septic disease varies very greatly in different hospitals, not only after amputations, but after other operations and injuries. It is extremely difficult to form, not only a correct, but even an approximative estimate of the number of cases that occur; for many cases, which are undoubtedly due to septic causes, are returned under the heads of various visceral inflammations, as "pneumonia," "pericarditis," "pleurisy with effusion," etc. Besides this, there are certain forms of erysipelas or of diffuse septic inflammation which attack the peritoneum and cellular planes of the pelvis after herniotomy and lithotomy, and which are looked upon as cases of simple peritonitis or of infiltration of urine, when in reality they are diffuse erysipeloid inflammations.

In University College Hospital, during the three and a half years in which the 9 deaths from pyæmia after amputation occurred, we had 14 other cases of pyæmia, and 2 of septicæmia, all fatal; and 85 cases of erysipelas, of which 16 died. From this, some estimate may be formed of the amount of septic disease that probably exists in those other hospitals in which the mortality from pyæmia after amputation far exceeds that which occurs in University College Hospital.

Now, it is this septic influence which has been termed "hospitalism," a word much objected to by some, possibly somewhat incorrect in its application, but yet explicit and convenient for our present purpose, and one to which, I think, no serious objection applies. We have long familiarly recognised the effect of hospital influences, in speaking of "hospital sore-throat," "hospital gangrene," etc.; and I see no sufficient reason for abstaining from the use of a word that places other deleterious influences met with in hospitals in the same category as these two diseases.

By "Hospitalism" I mean a septic influence capable of infecting a wound or of affecting the constitution injuriously. This septic influence—this miasma, or poison, if you will—commonly exists to a greater or less extent in all hospitals, or in any building, temporary or permanent, where large numbers of wounded and injured persons are congregated under one roof. It may be kept in check, even remain in abeyance, under ordinary circumstances, by close attention to sanitary measures; but it will develops itself in proportion as this is relaxed; and it may at any time, at any season of the year, and under any circumstances, acquire extreme virulence, if the crowding together of the operated or injured having suppurating wounds be excessive—if, in point of fact, under such circumstances, one of two conditions be established, either that the cubic space of air for each patient be brought below a certain level, or if ventilation be neglected, whatever that cubic space may be. But attention even to these precautions will not prevent the generation and development of septic influences if the aggregation of the wounded be very large.

It is important to observe, that by hospitalism is not meant a disease that is peculiar to, that specially or only occurs in, hospitals, and that never occurs under any combination of circumstances out of such institutions. By it is meant a general morbid condition of the atmosphere productive of disease, that, for the reasons just mentioned, is more rife in hospitals than elsewhere. Doubtless all the septic diseases that are met with in hospitals are encountered in the practice of surgeons out of these institutions, but they are unquestionably infinitely more common in hospital than in private practice.

Erysipelas, in some form or another, is the septic disease that is most frequently met with in private practice; and undoubtedly very severe cases of this disease are occasionally seen under circumstances where they would scarcely be expected. I have frequently, in my practice, met with as serious cases of phlegmonous erysipelas after often trivial injuries, as I have ever seen in hospital, although I have comparatively rarely met with serious forms of erysipelas after operations in private. Pyæmia is very rarely met with amongst the out-patients of hospitals, or as admitted from out of doors; and I can safely assert that during the last twenty-five years I have never seen a single case of acute pyæmia or septicæmia following an operation in private practice. I have met with it, though very rarely, after carbuncle, sloughing abscess, and dissection-wound; but I have never met with it out of a hospital after an operation of any kind. In saying this, I am only speaking of my own experience; and, if it differ from that of some surgeons, it certainly agrees with that of others. I have lately been called to see patients in two large provincial towns widely removed from each other, each being furnished with a county hospital of old standing, containg from one hundred and forty to one hundred and fifty beds. The surgeons whom I met in consultation on these occasions were men of the highest experience and in very extensive operative practice. They both told me the same story—that they were much distressed by the large amount of pyæmia in their respective hospitals, which had become so serious, notwithstanding the careful and vigilant employment of sanitary measures, that it was a question with the governing bodies of each of these institutions whether the existing buildings should be pulled down and reconstructed at a very great cost. These gentlemen both told me that they had never seen a case of pyæmia out of the hospitals in the towns in which they were situated. One of them mentioned a single exception in a case of lithotomy. I think it is impossible, in the face of facts such as these, which might easily be greatly multiplied, to doubt that there is a special, if not specific, morbid influence, capable of being generated, and of continued persistence, in large hospitals.

But, although I do not happen to have met with pyæmia after operations in private, I do not for a moment deny the possibility of its occurrence; for it is only reasonable to believe that, if a combination of the same circumstances that are met with in hospitals were to occur elsewhere, as in a close, overcrowded, badly drained, or ill-ventilated house, the same condition of septic influence might be developed.

It necessarily follows that, if there be an increased rate of mortality occasioned by septic influences generated within hospitals, there must be a rate of mortality smaller in the direct ratio of that which is produced by these causes, in those patients who are operated upon out of hospitals. In other words, the success attending operations in private ought to be greater than that which follows similar procedures in hospitals, in the direct proportion of the deaths that arise from so-called hospitalism, other conditions being equal. As an evidence of the proportionably small amount of septic disease that occurs out of, in comparison with that which is developed in, hospitals, it may be stated that Simpson found that, out of 160 deaths after amputation in private and country practice, only eight occurred from pyæmia and one from erysipelas. The majority of the deaths arose from shock. This part of the present inquiry is one the elucidation of which is involved in extreme difficulty, owing partly to the comparative absence of statistics of private operations, and in some degree to the different conditions of patients, so far as social status, habits of life, etc., are concerned, that are operated upon out of hospitals, in comparison to those that are the inmates of such institutions. There are, however, certain classes of cases into which these disturbing influences do not intrude themselves, and between which comparisons may, therefore, more justly be made, than can be done is others. The cases to which I refer are met with—1, in maternity charities; 2, in the operations for diseases special to women; and 3, in military practice.

Attention was first of all drawn to the high rate of mortality that occurs in hospitals in comparison to what is met with in private practice, by obstetric practitioners finding that the mortality in maternity charities attendant on parturition was infinitely greater than that which occurred amongst poor women delivered at their own homes. The statistics of Lefort, on the rate of mortality following the delivery of nearly two million women in different parts of Europe—one-half in their own homes and the others in lying-in hospitals—are so distinct and definite in their results as to leave no doubt whatever upon the infinite increase of risk that is attendant upon parturition in a lying-in hospital. Lefort states, as the general result of his inquiries, that of nearly 900,000 women delivered in hospitals, 1 in 29 died, whereas of nearly a million women delivered in their own homes, the mortality was only 1 in every 212; and Simpson, whose authority on such a subject as this cannot certainly be questioned, cites these figures in order to show the greater danger to life which women undergo who are confined in lying-in hospitals over those who are delivered in their own homes. It is well known that it is absolutely impossible to establish a maternity ward in a general hospital without exposing the women confined in it to the greatest possible peril of life; and in every instance, I believe, in which it has been attempted in London, the mortality has been so great that it has become necessary to close the ward. The fact is certain, that a woman has a better chance of recovery after delivery in the meanest, poorest hovel, than in the best conducted general hospital, furnished with every appliance that can add to her comfort, and with the best skill that a metropolis can afford. The conditions of a parturient woman are not altogether dissimilar from those of one who has undergone a surgical operation; and a comparison between the two, although not absolutely accurate, is sufficiently so to entitle us to draw this conclusion, that there is a septic influence existing in hospitals which is highly destructive to the life of women who have recently been delivered.

But if we compare the results that have been obtained in and out of hospitals in that operation which may justly be looked upon as one of the greatest glories of modern British surgery—Ovariotomy—we shall find somewhat similar results; namely, that the mortality after this operation, when done in general hospitals, amounts to from 60 to 80 per cent., whilst in private, in the hands of Keith and Spencer Wells, it is only from 18 to 24 per cent., and, indeed, is gradually on the decline. The history of ovariotomy, indeed, points most conclusively to the evils attendant on the performance of this operation in general hospitals. All the early successful cases were done in private. When practised in the London hospitals, the mortality became so excessive, that the operation was looked upon as unjustifiable by surgeons as much distinguished by their boldness as by their skill in operating; and ovariotomists were stigmatised by opprobrious epithets by some of the most distinguished hospital surgeons of the day. Continued experience has shown that ovariotomy is not an operation that is practicable with any prospect of success in general hospitals. No amount of skill, no amount of care, no amount of sanitary arrangement that has as yet been brought to bear upon such cases, can overcome the destructive influence of septic hospital influences; and if a patient on whom ovariotomy has been practised be placed either in a large ward of a general hospital, or secluded in a private one, her chance of recovery is rendered so small, that I believe I am correct in stating that no surgeon at the present day will venture to undertake the operation in such circumstances. In some general hospitals in which ovariotomy has been largely practised, a special building detached from the hospital has been erected for the reception of such cases; and every possible care has been taken to prevent the contamination of the patient by influences generated in, and emanating from, the parent institution.

On such a question as this, the statements made by so distinguished and successful an operator as Spencer Wells must be considered as authoritative. After pointing out the importance of isolation and of close attention to sanitary arrangements in these cases, he concludes with these words.—"And the question seriously presents itself, whether ovariotomy, or any other surgical operation attended with risk to life, should ever be performed in a large general hospital in a large town, except under such circumstances as would render removal to the country or to a suburban cottage hospital more dangerous." And he states further, in the last volume of the *Medico-Chirurgical Transactions*, that his conviction is, "that the surgeon who hopes to obtain better results than have hitherto been obtained, must place his patient, as nearly as possible, in the position of a person in a private house in a healthy situation."

That which holds good with ovariotomy may reasonably be supposed to be applicable to other operations in which the abdominal or pelvic cavities are opened.

When we turn to the subject of amputations, we find it somewhat difficult to institute so accurate a comparison between cases requiring this operation in civil practice, in which it is performed in and out of hospitals.

But, in military practice, this difficulty does not exist. Amputations in active warfare are practically performed on individuals under very similar conditions, so far as age, sex, previous condition of patient, cause and nature of injury are concerned. The only differences to which the sufferers are exposed are the different conditions to which they may be subjected after the operation has been done. Now, on this point, the recent experience of the Franco-German war confirms that which has been derived from the results of operations practised in all modern wars, namely, that those patients have the best chance of recovery who are treated in the open, under canvas, in temporary huts, with the slenderest possible shelter, perhaps; whilst the mortality from pyæmia, erysipelas, hospital gangrene, and other septic diseases, is developed almost in the direct proportion of the accumulation of wounded in regularly constructed buildings, converted for the purpose into temporary hospitals. The employment of hut-hospitals in the field during the late war in France proved incontestably that septic hospital influences of a destructive character may be almost entirely prevented. These huts, which were single-roomed, built of rough weather boarding raised on stages about two feet from the ground, were isolated one from the other. The lightness and looseness of the construction adapted them admirably for ventilation, the wind blowing freely through on all sides. Mr. Berkeley Hill, who visited these hut-hospitals at Saarbrück, states[*] that each hut contained about fifteen beds, which were almost all occupied; that there was a complete absence of anything like a sick-room smell in any of the hut-hospitals, whilst in buildings of every other kind, used for the reception of the wounded, it was easy to detect that peculiar odour so universal in continental hospital-wards. He states:—"In all the hut-hospitals I visited, the condition of the patients was most satisfactory; not a single case of pyæmia had occurred. In the houses and other buildings converted into hospitals, in too many instances, hospital diseases had begun to appear."

It is impossible to give a better illustration of the development of hospitalism under, apparently, the most favourable circumstances for its prevention than by a reference to what occurred in the orange conservatories which were converted by the Duke of Hesse Darmstadt into temporary hospitals for the reception of the wounded. These orange-houses, Mr. Hill states, were wide, lofty rooms, with windows on the southern side that reached from ceiling to floor, and opened freely. They were situated in a fine garden, and the patients treated in them had every appliance of comfort and cleanliness. Several cases of pyæmia had occurred in them, and one of extensive gangrene, which ceased as soon as the patient was removed from the orangery to a small tent, and the surgeons in charge became thoroughly impressed with the unfitness even of such a building as a conservatory for the accumulation of wounded. The same happened with the school-house at Saarbrück—a large building that had been occupied for a few weeks as a hospital—apparently well-adapted for this purpose, having lofty rooms, an airy staircase, large windows, and situated in the outskirts of the town; yet pyæmia and hospital gangrene had been so rife within its walls, that one ward had already been closed. These and similar instances, which I might multiply to a considerable extent, prove, as clearly as it is possible to demonstrate any pathological fact, that septic influence, or, in other words, hospitalism, becomes generated by the accumulation of wounded persons under one roof, and may be prevented by their isolation in scattered groups. It is only in this way, viz., by the absence of septic diseases amongst those operated on in the field, whilst they are fearfully destructive amongst the wounded who are lodged in hospital, that we can explain the remarkable statistics published by Guthrie as to results of primary and secondary amputations in the Peninsular war. Of 291 primary amputations done in the field, and necessarily treated in the open, only 24, or 1 in 12, died; whilst, of 551 secondary amputations done in hospital, 265, or nearly one-half, died. This statement, which, I believe, has never been challenged, is of itself almost conclusive as to the comparative safety of the two methods of treating amputated soldiers.

As is well known, Sir James Simpson has attempted to prove, by a large body of statistics collected from various sources, that amputations performed in country and private practice are far less fatal than those that are practised in general hospitals. These statistics have now been so long before the profession, and have led to such an amount of controversy, that I need do no more than allude to them. It is quite possible that they are not absolutely correct, and that certain sources of fallacy have intruded themselves into his tables; that successful cases have been recorded and unsuccessful ones kept back; that the conditions of the patients compared, although belonging practically to the same class of society, were different before the operation, inasmuch as one was derived chiefly from an agricultural and mining population, the other from inhabitants of towns. After following the controversy with much attention, I cannot but come to the conclusion that Simpson's statistics have been rather objected to than actually disproved; and, making all reasonable allowance for every possible source of error, the difference between the results arrived at is so great, namely, a mortality of one in 2.4 in general hospitals, against a mortality of one in 9.2 in country and private practice, that I cannot admit that the sources of fallacy are sufficiently numerous or great to reconcile this disparity. It has been supposed that the very success of amputations in country practice—a mortality amounting only to about 12 per cent.—was so great as of itself to prove the existence of some error in the figures; but yet we have seen that, for the last thirty-five years, the mortality in the University College Hospital has only been from 23 to 25 per cent., and, by the last statistics, it would appear that, during the past three years, at St. Bartholomew's, as low a rate as 18 per cent. has been obtained, and Mr. Callender, by the admirable method of treatment of stumps, which he has, for some time past, adopted, appears to be likely to reduce this rate of amputation-mortality to a considerably lower level still; in fact, to bring it within the limits of Simpson's returns from country and private practice.

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[*] *Treatment of the Sick and Wounded at the Seat of War.* Walton, 1870.

Let it not be forgotten also that Guthrie's returns of primary amputations of all limbs, performed during the Peninsular war, show a mortality of only 1 in 12, or, in other words, for those amputations that are usually the most fatal, little more than 8 per cent.—a considerably lower rate than, according to Simpson, is obtained for all cases, inclusive of pathological cases in country practice. I believe that the fact is, that many amputations are performed in hospital practice, under circumstances both of injury and disease, in which consent would be refused by the patient and his friends in private. If we look at the table of amputations in this hospital, which I use as the basis for the observations I am making to you, I cannot but come to the conclusion that we have amputated rather freely, and that, under similar circumstances of injury and disease in private, some of the cases would have been left to die without amputation. However this may be, we have abundant evidence, independently of that furnished by Simpson's figures from the returns which I have already given you, of the results of parturition, ovariotomy, and military amputations, to show that septic influences of the most destructive character are capable of being generated by the accumulation, under one roof, of people under certain conditions of natural process, of injury and of operation. It is to this condition so generated, and which might, so to speak, at any time be developed at will, grown, as it were, by the overcrowding of a ward with suppurating wounds, that we apply the term "hospitalism".

In the next lecture, we will proceed to the consideration of these conditions, their mode of production, and the influence they exercise on hospital mortality.

LETTSOMIAN LECTURES

ON

SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

Lecture II.

Gentlemen,—In my last lecture, I considered the various features of syphilis which will bear on the consideration of this disease as it affects the nervous system, and more especially the nature of the morbid changes to which it gives rise, and the habits of locality and rate of progress of the morbid processes. It remains now for me to apply the general conclusions there given, and to trace the effects of syphilitic lesions in the different nerve-centres.

I showed, and illustrated by a few cases, the results when individual nerves or groups of nerves were involved. I did not attempt to distinguish between syphilitic neuralgia and neuralgia arising from other causes, and, so far as I am aware, no distinction exists, and the syphilitic origin is ascertained only by the syphilitic history. In paralysis of individual nerves, it is already a feature suggestive of a syphilitic source, when it is made out that the cause of the paralysis lies within the cranial or spinal cavity, and outside the nerve-centres.

Paralysis of the third nerve is so commonly a result of syphilitic disease about the base of the brain, that this is the first supposition which arises when a case presents itself, and it requires elimination before other hypotheses are entertained. The same might be said of the other cranial nerves, except the seventh; and, when more than one cranial nerve is affected, the presumption of syphilis increases. Corroborative evidence, if not at once yielded by history or co-existing lesions, would be sought in evidence of the constitutional condition produced by syphilis and in nocturnal pains. But I must proceed to that part of the subject which will engage our attention this evening.

Syphilitic Affections of the Spinal Cord.—The range of symptoms producible by disease of the cord is not very wide. The tendency of most is to paraplegia; and, to understand this, we have only to remember that, in some parts, the cord is not thicker than the little finger, and that consequently a limited area of inflammation, or a small tumour, might involve a complete segment, which is all that is required to cut off the parts below from the volitional centres in the brain, and produce this form of paralysis.

Paraplegia is rather common as a result of syphilis (Bazin says that two-thirds of the cases are syphilitic), and, if taken early and treated energetically, it is usually curable. It is, therefore, very desirable that, if possible, the distinguishing features of syphilitic paraplegia should be pointed out. It has been given, as one of the characters of syphilitic paralysis generally, and of syphilitic paraplegia, that sensation is usually not impaired, and that reflex action persists; but this, if it were true as a matter of fact, which I shall show is not the case, would not constitute a peculiarity. It is the rule, in any form of disease of the nervous system, that the motor functions are more easily affected than the sensory. Even in nerves in which motor and sensory fibres are mixed up together, an injury, such as pressure, may destroy for some time the conductibility of motor impulses, while the only effect on the sensory functions is a temporary dysæsthesia. In experimenting on the cord, this difference has been found to be even more marked; division of the white fibres constituting the motor tract being followed by distinct and definite motor paralysis, while, in the case of the central grey matter which is the channel for sensations, a slight bridge suffices to convey upwards the sensory impressions; and, while there is any continuity of grey matter, anæsthesia is not produced. Again, it is the rule, in hemiplegia from cerebral lesion, that motion is more frequently and persistently impaired than sensation.

It is not in individual symptoms, nor in any arbitrary and unexplained difference in the phenomena, that we shall find the distinctive characters of syphilitic affections of any part of the nervous system, but in a comprehensive view of all the facts of the case.

It will not occupy much time, and will conduce to clearness, if I enumerate the principal diseases which affect the cord, with their leading characters.

Myelitis, inflammation of the substance of the cord, if general, gives rise to a progressive loss of motor-power from below upwards, with loss of sensation, preceded by tingling; the rectum and bladder, and their sphincters, sharing in the paralysis. There is little pain, at most a dull aching. Reflex action is abolished, and death occurs when the inflammation extends to the respiratory centres. Bed-sores come on early. A local myelitis, involving a segment of the cord, causes paralysis of the parts below, motor and sensory (or motor only for a time), with loss of control over the evacuations. Reflex action will persist, and may be exaggerated from concentration on the motor-cells of the anterior nerve-roots of impression, which normally would have been partly transmitted upwards to the brain; the paralysed limbs often start involuntarily. If there be pain, it is usually due, not to the myelitis, but to some extraneous cause, as, for example, to disease of the vertebræ.

Spinal meningitis is attended with pain, both along the spine and in the limbs, provoked by movements, especially such as involve motion of the spinal column. There are painful startings or tonic contractions of the limbs or muscles of the trunk, and sometimes severe tetanoid spasms; sensibility is usually intensified. Paraplegia comes on late and gradually, if at all. There is loss of power in the bladder, not usually in the rectum. Spinal congestion, according to Dr. Radcliffe, gives rise to sudden incomplete paraplegia, varying in degree, without loss of sensation or of control over the evacuations, but attended with aching in the back and limbs. There may, however, be a rapidly progressive and fatal paraplegia, which leaves evidences of congestion only.

Other diseases are sclerosis of the posterior columns and cornua, and of the anterior white columns and cornua, the former giving rise to locomotor ataxy, the latter to wasting palsy. There may, again, be softening of the cord, which, if non-inflammatory, is not to be distinguished from local chronic myelitis, or it may be the seat of tumours. Syphilis may give rise to myelitis or meningitis, or to the local sclerosis or gummatous tumour described by Dr. Moxon; but, before speaking of these, the question of the dependence of locomotor ataxy on syphilis may be considered. It has been stated that locomotor ataxy is a form of disease often set up in the cord by syphilis; but I find no support for this view in recorded cases, or in my own experience, and it is not the habit of syphilitic disease to follow, in its advance, any functional or structural arrangement in the part affected, or to confine itself to a particular vascular area. I have had under observation, for a long time, a woman suffering from ataxy, which I attribute to an attack of meningitis along the posterior aspect of the cord, possibly syphilitic; and it is easily conceivable that, in multiple syphilitic deposits in the cord, a sufficient number might be situate in the course of the posterior white column and grey matter to impair spinal co-ordination; but it is not probable that degeneration or sclerosis of a considerable length of the posterior columns, invading other parts of the cord reluctantly, so to speak, will be due to syphilis.

So far as I know, there is still less reason to attribute atrophic paralysis to syphilis than locomotor ataxy.

Coming now to myelitis—the form most frequently seen in syphilis is subacute or chronic inflammation of a segment of the cord; but in my opinion acute general or local myelitis may be caused by syphilis, especially in the secondary stage.

This is a point which cannot easily be proved. There is nothing peculiar in acute myelitis to indicate its cause, and, the disease being rare, it must be long before a sufficient number of cases can be collected in which it is associated with syphilis, even by observers alive to the possibility, while in the secondary stage a *post mortem* diagnosis cannot be made so readily as in the tertiary period of the disease.

In 1859, I saw in quick succession two cases—one in the Hôpital du Midi under Ricord, the other under Trousseau in the Hôtel Dieu—of rapidly progressing paraplegia, terminating fatally. In both, there was general and advanced inflammation, and softening of the spinal cord. Both the patients were young, and suffering from secondary syphilis in an early stage. Ricord, with characteristic caution, refused to pronounce the myelitis syphilitic, though it was not the first case of the kind he had seen in his wards. Trousseau was more disposed to consider syphilis as the cause of the inflammation.

Of acute local myelitis, I give a case in which also the disease of the cord came on in the secondary period.

CASE I. *Paraplegia, in Secondary Syphilis, Acute Myelitis of a Segment of Cord just above the Lumbar Enlargement: Death from Ulceration of Bladder and Extravasation of Urine.*—A warehouseman, aged 28, was admitted under my care at St. Mary's Hospital February 23rd, 1872. His habits had been loose and irregular; he had had sores on the penis twice, eighteen months and twelve months before his admission, and had suffered from sore-throat and fissures in the palms of the hands. The inguinal glands were enlarged and matted together. It could not be made out which of the ulcers had given origin to the syphilis.

Eighteen days before he entered the hospital, he had stiffness in the right knee; next day in the left; no pain. Afterwards, pain came on in the lower limbs above and below the knees, with numbness; and, as he walked, he did not feel the feet when put to the ground, so that he tottered; a sensation also of pins and needles came in the feet. Three days after the accession of the symptoms, he was compelled to remain indoors; next day, to remain in bed; and on the day following, five days from the commencement of the illness, the sphincters were relaxed. He did not feel ill, but was thirsty. He had been taking warm-baths with mustard.

On admission, he was pale, but the expression was natural. The pupils were large. He complained only of loss of power and sensation in the lower limbs. The legs were absolutely powerless, and sensation was lost in them, except at the inner side of the thigh (obturator area), the insensibility extending on the abdomen nearly as high as the umbilicus. Reflex action was vigorous, and the legs were constantly kicking of themselves. There were incontinence of urine and fæces, and small sores were seen on the sacrum and trochanters. Tenderness on pressure and percussion was found to be present over the three lower lumbar spines, but not in the skin here, or round the abdomen at the same level. Tongue moist, but coated. Pulse 90, full. Temperature 98.4 deg., both in groin and axilla, though the legs felt warmer to the hand. Urine turbid and ammoniacal.

The treatment ordered was as follows:—Iodide of potassium in doses of six grains; catheterism twice a day; protection of the abraded points by cotton-wool; a free supply of milk and beef-tea.

On the 28th, he said sensation was more distinct over the inner aspect of the thigh, and a pinch was felt at any part of the limb above the knee. The dose of iodide was increased to nine grains.

On March 2nd, the patient was feverish, and had no appetite. Temperature 101 deg.

On the 4th, he complained of sore-throat, and the tonsils and soft palate were seen to be inflamed and swollen; there was blood as well as pus in the urine, which was still ammoniacal.

On the 7th, the tonsilitis had subsided, but the temperature remained at about 100 deg., the same point as during the previous four days, and the thirst was excessive. The bladder was washed out with weak carbolic acid lotion, as well as emptied. The fever continued, and on the 9th, was rather higher, the temperature being 101 deg. in the axilla, 101.5 deg. in the groin, but he said he had better sensation in the legs, and he had begun to feel the catheter for the first time. He was, however, weaker, and bark and acid were substituted for the iodide of potassium; wine also was given.

On the 10th, symptoms of perforation of the bladder set in—rigors, sickness, severe pain in the abdomen, paroxysms of violent contraction of the abdominal muscles, and great exhaustion.

On the 11th, the face was expressive of collapse; the abdomen was tender; and the muscles were easily thrown into a state of rigid tension; there were no abdominal respiratory movements; no urine could be obtained. Death took place on the 12th.

On *post mortem* examination, fourteen hours after death, there was a remarkable amount of *post mortem* staining. In the abdomen, the effects of general peritonitis were seen; and in the bladder, a large ragged ulcer near the neck, which had penetrated the coats and allowed the urine to be extravasated. The liver was large, pale, and fatty; the kidneys healthy; the lumbar, mesenteric, and inguinal glands were large. A little old tubercle in the lungs; heart healthy. In the cord, about two and a half inches from its lower extremity, just above the lumbar enlargement, was a softened portion about half an inch in length. Above this part, the cord was firm, and the vessels were of the usual size; below it, the cord was firm, but the entire posterior aspect was covered by enlarged and tortuous vessels.

The paraplegia generally produced by syphilis is the result of disease slowly invading a segment of the spinal cord. The course of symptoms is such as might result either from a limited chronic myelitis, or from softening, or from tumour.

The age at which syphilitic paraplegia occurs, namely, in early adult life, or early middle age, excludes degenerative non-inflammatory softening. Embolic softening, so far as I know, only occurs in the cord in connection with a very general distribution of embola, as in acute fatal chorea, or as in ulcerative endocarditis, when the effects produced elsewhere predominate. The absence of angular spinal curvature, and of the symptoms which disease of the bones or cartilages of the vertebral column produces before the cord is affected, excludes the most frequent cause of local myelitis not depending on syphilis; and we are left to decide, from the history or from collateral circumstances, between syphilis and rheumatism, or exposure to wet and cold, or injury.

In syphilis, the condition present is probably a small gumma, around which inflammatory softening is set up, and this explains the slow, halting, and unequal progress of the paralysis. Conversely, paraplegia, at first slight, remaining long at a given point, or advancing very slowly, then suddenly worse, mending a little again, perhaps spontaneously, or at least without specific treatment, but again increasing, and so pursuing its course to absolute loss of sensation and motion, while reflex action persists, should excite a suspicion of syphilitic mischief, and should lead to energetic treatment, whether corroborative evidence is forthcoming, or no.

While it was still uncertain whether syphilis could give rise to disease of the nervous system, and the purpose of inquiry was to establish a fact in medical science, no caution could be too great in accepting evidence on the point; but, the fact of causation once established, we are justified in going in advance of positive knowledge in our treatment.

[*To be continued.*]

THERAPEUTIC MEMORANDA.

EFFERVESCING ASTRINGENT VOICE-LOZENGES.

CLERGYMEN, vocalists, actors, and public speakers, frequently suffer from dryness of the throat in commencing to use the voice. This dryness is very generally the result of nervousness, which arrests the secretion of saliva; and attention has already been drawn to the value of the simple effervescing lozenge of Mr. Cooper, of 26, Oxford Street, in allaying this trouble. Another cause, however, and one often found in conjunction with the foregoing, is relaxation of the uvula and mucous membrane of the pharynx; and this condition is always more or less present in the case of those who are constantly using the voice. For its relief an astringent is required; but most astringent lozenges produce dryness. The combination, however, of an astringent and effervescing saline, while bracing the mucous membrane, does not cause dryness, but, on the other hand, promotes a free secretion of saliva. Mr. Cooper has prepared some lozenges for me of this character, using the gum of eucalyptus as the astringent. By the addition of a small amount of cinnamon and clove, he has made it agreeable in taste, while it is quite free from any irritant stimulant, so frequently found in "voice-lozenges". Having prescribed these lozenges for some months with very considerable success, I am induced to think they may be found a useful addition to our remedies for some of the slighter throat-troubles for which one is constantly consulted in this climate.

LENNOX BROWNE, Welbeck Street.

CLINICAL LECTURE

ON THE

RELATION BETWEEN LARYNGEAL AND PULMONARY DISEASE.

By GEORGE JOHNSON, M.D., F.R.S.,
Physician to King's College Hospital; Professor of Medicine in King's College.

History of a Case of Tertiary Syphilis.—Ulceration of the Larynx, followed by Acute Pneumonia.—Symptoms and Physical Signs.—Post Mortem Appearance.—Explanation of the Symptoms and of the Relation between the Laryngeal and the Pulmonary Disease.—Chronic Laryngitis a frequent Cause of Disease in the Lung.—Two Modes in which the Lung may be infected by a Primary Disease in the Larynx.—Importance of early and careful Treatment in Cases of Laryngeal Disease.

GENTLEMEN,—I wish to direct your attention to a case which has recently occurred in Craven Ward. I will give you a brief abstract of Mr. Brayn's full and complete notes of the case.

John B., aged 33, a labourer, about three years ago had two venereal sores on the prepuce at the same time, then a suppurating bubo in the left groin, and soon afterwards an eruption on the skin. The eruption appears soon to have assumed the form of rupia, and it left several circular scars about the size of a shilling on his arms, legs, and neck. About six months ago, a node formed on the centre of the forehead. Five weeks before his admission, his throat became sore for the first time; and with this he had cough, hoarseness, and some difficulty in breathing. For these symptoms, he was admitted on October 6th. He had a pallid, somewhat emaciated, and cachectic appearance. There was a swelling on the forehead about the size of half a hen's egg, hard at the margins, soft and elastic in the centre, not painful. There was a prominence—a bony node, not painful—on the front of the right tibia. There was cough, with some mucous expectoration; the voice was feeble and husky; no dyspnœa, or stridor, or dysphagia. Laryngoscopic examination showed a sharp-edged somewhat irregular ulcer, about the size of a pea, over the right arytenoid cartilage; the mucous membrane round the ulcer being red and swollen. The chest-sounds were normal; the urine was normal. He was ordered to take the following mixture.

℞ Potassii iodidi gr. v; liquor. hydrarg. perchloridi ʒi; tinct. cinchonæ comp. ʒi; aquæ ℥i—ter die post cibum.

On the evening of the 8th, he had a rigor; and at 7 P.M. the temperature rose to 103.2. Pulse 144.

On the 9th, the morning temperature was 102; pulse 144; respirations 24. He had some pain in the right side of the chest. In the evening, temperature 103.6: pulse 144. Up to this time, no abnormal sounds were heard over the lung.

On the morning of the 10th, there was some dulness on percussion and fine crepitation over the lower lobe of the right lung. Temperature 99.6: pulse 120. The sputum was somewhat viscid and slightly rusty. He had severe pain over the right side, for which a linseed poultice was applied. There was free perspiration.

On the 11th, he had slept fairly well; the pain was less severe; there was profuse perspiration; the dulness on percussion over the lower lobe of the lung had increased; and dry tubular breathing and bronchophony were heard over the dull space. The vocal fremitus was decidedly lessened over the hepatised lung. Temperature 99.6; pulse 144. He had cough, with muco-purulent expectoration.

October 12th. He was much the same in every respect.

October 13th. He had frequent cough, with rather copious expectoration and free perspiration. Temperature 100; pulse 128.

October 16th. There was no material change. The physical signs remained as before, except that the respiration was less distinctly tubular, and there was some loose crepitation over the dull space.

On the 23rd, the physical signs over the lower lobe of the right lung remained the same; but there was now decided dulness on percussion over the middle lobe. There was a copious frothy expectoration. He was ordered to have a quinine mixture three times a day, and six ounces of brandy in the twenty-four hours.

From this time, there was a rapid loss of flesh and strength, with an extension of disease in the right lung. On October 30th, there was dulness on percussion, with blowing respiration, over the upper lobe; so that the physical signs now indicated consolidation of the whole right lung, and these signs remained the same until he died on November 8th.

On inspection, the whole right lung was found in a state of red hepatisation, and the lower lobe was adherent to the wall of the chest by recent lymph. The left lung was engorged and œdematous. There had been no excavation of the lung-tissue; nor was there any tuberculous deposit. There was an ulcer over the right arytenoid cartilage, exposing the cartilage, which was indurated by calcareous deposit, and apparently in a state of necrosis.

There are several points of interest in this case to which I wish to direct your attention. First, we had the opportunity of witnessing the onset of the pneumonia; and we saw, what may be seen in most cases of acute pneumonia, that rigors, high temperature, quick pulse and breathing, preceded the local symptoms in the chest. The febrile symptoms began on the evening of the 8th; and on the morning of the 10th, about thirty-six hours afterwards, the physical signs of pneumonia were first noted, though there had been pain over the right side on the previous day. Then we saw what I have frequently pointed out to you in similar cases, that, simultaneously with the exudation into the lung, the febrile symptoms abated. Between the evening of the 9th and the morning of the 10th, when the physical signs indicated inflammatory exudation into the lower lobe of the right lung, the temperature fell from 103.6 to 99.6, and the pulse from 144 to 120. It would seem that the febrile symptoms are associated with some morbid blood-changes; and that, with the exudation of the morbid products into the lung, the fever abates. The phenomena are strictly analogous to the rapid subsidence of the initiatory fever of small-pox with the first appearance of the variolous eruption on the skin. I therefore am in the habit of saying that a case of so-called idiopathic pneumonia may be looked upon as an acute febrile eruptive disease, the eruption occurring, not upon the skin—except in the form of herpes labialis, which so often accompanies it—but into the lung. In uncomplicated cases of pneumonia, there is no considerable rise of temperature again after the lung is consolidated; but, with secondary changes in the lung, softening, and suppuration, there may be febrile symptoms analogous to the secondary fever during the suppurative stage of small-pox.

We noticed in our patient what may usually be observed in cases of acute pleuro-pneumonia; namely, that the pleuritic pain which marks the onset of the local changes in the lung and pleura, is much mitigated when the physical signs indicate that the lung is hepatised. The probable explanation is, that the consolidation of the lung lessens the movement and friction of the opposed pleuritic surfaces; and, with diminished friction, there is diminution of pain. So we may often observe that during the stage of resolution, when the air re-enters the pulmonary cells and the lung expands more freely, the greater friction between the lung and the chest-wall is associated with a temporary increase of pain, and with a friction-sound and fremitus, which are sometimes erroneously supposed to indicate a renewal or an increase of the pleuritic inflammation. I believe the explanation of the phenomena to be that which I have given. The pleura over a hepatised lung is usually, as in this case, more or less inflamed and covered by exuded lymph; while the lung is solidified, there is little or no movement of the opposed surfaces, and therefore little pain, and no friction-sound or fremitus; but there is often a return of pain and friction-sound during the stage of resolution, and before the formation of adhesions between the pulmonary and costal pleuræ.

Another physical phenomenon to which I would direct your attention for a moment is the marked diminution of the vocal fremitus over the hepatised lung. You will often find it stated that an increase of the vocal fremitus is an almost constant phenomenon during the second stage of pneumonia, and that by this physical sign you may distingush consolidation of the lung from liquid in the pleura. I warn you, however, that you cannot rely upon this means of diagnosis. You will find that in about half the cases of pneumonia, while other physical signs clearly indicate consolidation of the lung without liquid in the pleura (we have seen that in our patient's pleura there was no liquid effusion), the vocal fremitus over the hepatised lung is either unchanged or, as in this case, very decidedly less than on the sound side.

Now there arises the interesting question, What was the exciting cause of the pneumonia in this case? I cannot give you an infallibly certain answer to this question; but I suspect, and I venture to suggest, that the pneumonia was the result of a blood-infection through the absorption of morbid products from the ulcer in the larynx. The pneumonia came on after the patient had been for some days in bed, and without exposure to cold or other obvious external exciting cause. We may be quite certain that every so-called idiopathic disease has a physical exciting cause, whether we can discover it or not. It is always scientifically interesting, and not rarely it is of the highest practical importance, to discover the determining cause of any malady that we are called upon to treat. Not long since, I saw an acute pneumonia occur under the following circumstances. A boy about fourteen years of age had his membrana tympani punctured for the relief of deafness. The operation was attended with considerable pain, and followed by a discharge from the external meatus. In the course of two or three days, the boy began to complain of chilliness and languor; there was some stiffness in the neck; and the lymphatic glands below the damaged ear were enlarged. When I saw him on the eighth day after the operation, he was in bed, with a temperature of 103 deg.; there was some dulness on percussion, and fine crepitation over the lower lobe of the left lung. On the following day, the dulness over the lower lobe had increased, and there was bronchial breathing and bronchophony, while the temperature had fallen to 99. The consolidation of the lung rapidly passed away, and in a few days he was convalescent. In that case, the sequence of events was sufficiently obvious. Some morbid infecting product from the wounded ear passed through the lymphatics in the neck to the general circulation. The blood-infection was indicated by general *malaise* and a febrile elevation of temperature; and this again subsided with the occurrence of exudation into the lung. In that case, I have no doubt that the wound of the membrana tympani was the primary cause of the pneumonia. In the case which we are now discussing, it is not so certain, but it is, I think, highly probable, that the ulcer in the larynx was, through a secondary blood-infection, the determining cause of the pulmonary inflammation which supervened, and which proved fatal in consequence of the very enfeebled and cachectic condition to which the patient had been reduced by a long train of syphilitic symptoms.

There is good reason to believe that disease beginning in the larynx is a frequent determining and exciting cause of disease in the lungs. During the last ten years, since I have learnt to use the laryngoscope, I have seen, both in hospital and in private practice, a large number of cases in which chronic disease beginning in the larynx has been followed by tubercular disease of the lungs. These cases come under the designation "laryngeal phthisis". This painful and fatal malady often begins with a neglected cold. The sore-throat and hoarseness excited by exposure to cold and wet remain for weeks and months; there is cough, with mucous expectoration; perhaps some pain and difficulty in swallowing; and there may be more or less stridor on deep inspiration. Looking at the larynx with the mirror, we see swelling and perhaps ulceration of the epiglottis, or of the mucous membrane within the larynx, the false cords, and the interarytenoid fold. In some cases, the mucous membrane is injected and red; but the most characteristic appearance consists of a pale, doughy, œdematous thickening, with or without ulceration. In some cases, the swelling of the mucous membrane remains for months without the occurrence of ulceration. In the earlier stages of this laryngeal affection, there is no evidence of pulmonary disease. The chest-movements and the percussion-sound are normal; and, when auscultation is not interfered with, as it often is, by laryngeal obstruction and stridor, the natural respiratory sounds may be plainly heard. Sooner or later, however, in a large proportion of cases, the physical signs of pulmonary disease are discoverable, and the patient dies with tuberculous lungs. Having closely observed a large number of these cases, I have gradually arrived at the conclusion that the pulmonary disease is a more or less direct result of the pre-existing laryngeal affection. There are two modes in which it is conceivable that a disease in the larynx may be a source of infection, and so a cause of secondary disease of the lungs. It is possible that morbid infecting materials from an ulcer in the larynx may be carried directly by the inspiratory current of air into the interior of the lungs, and there set up disease. This supposed mode of infection would be analogous to that which occurs in cases of diphtheria. The air-borne diphtheritic poison first infects those parts of the throat with which it comes into direct contact. Then the morbid process set up in the fauces acts as a new source of infection, from which the poison is conveyed by the inspired air into the larynx, trachea, and bronchi, with results usually fatal. I refer to diphtheria only as an illustration of my meaning. Obviously, the infective qualities of an ordinary laryngeal ulcer must be far less than those of a diphtheritic exudation in the fauces. Again, it is highly probable that a swollen and ulcerated larynx may, through the lymphatics or the blood-vessels, prove a source of infection and of a secondary tuberculous disease in the lungs—a result analogous to that obtained by Drs. Sanderson, Wilson Fox, and others, who, by exciting suppuration beneath the skin of the guinea-pig, have determined the formation of a kind of tuberculous deposit in the lungs and other organs of the animal.

The probability that a chronic laryngeal inflammation may, in addition to the local suffering which it often occasions, prove a source of blood-contamination, and ultimately of fatal pulmonary disease, affords a powerful argument, if such were needed, in favour of the early and careful treatment of all cases of laryngeal inflammation. Prompt and persevering treatment is obviously most urgently demanded in the case of those whose family history or constitutional diathesis indicates a more than ordinary proneness to disease of a strumous or tuberculous character.

ADDENDUM TO A LECTURE ON THE TREATMENT OF TAPEWORM.

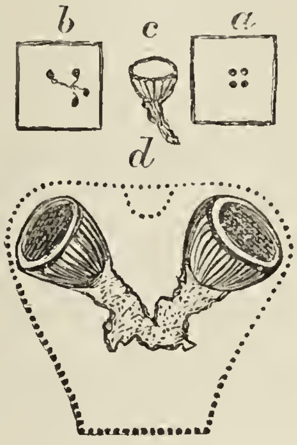
By T. SPENCER COBBOLD, M.D., F.R.S.,
Lecturer on Parasitic Diseases at the Middlesex Hospital Medical College.

In reply to numerous letters, the substance of which has been communicated to me, I beg to state that one main object of my lecture was to insist very strongly on the necessity of persistent and careful personal search by the medical attendant of the stools of his patient, until he was satisfied that the neck and entire head were found. To some practitioners, this seems apparently a trivial and easy thing to do. On this score, however, I have reason to know that it is not easy, and that the duty is frequently, in many cases habitually, omitted; and hence we have one important cause of failure to cure tapeworm.

No portion of the fæces should be left uninvestigated. On many occasions I have remonstrated with patients and attendants, who, from motives of delicacy, have, prior to my visit for the express purpose of ascertaining results, carefully removed all floating matters of a non-fæcal character. I have obtained proof that the head of the worm is liable to adhere to such light materials.

Of course, in conducting these researches, one is apt to encounter rather unpleasant experiences. Some of these I recounted to my class with the view of impressing my hearers with the necessity of performing this duty in a thorough manner. The examination should extend to every stool while the patient is kept under treatment. As I invariably employ disinfectants, the disagreeableness of the task is not so marked as many might suppose; nevertheless I have sometimes been attacked with nausea, consequently upon several hours' search in a stooping posture.

By way of illustrating the proceedings necessary in some cases coming within my experience, I narrated in the lecture, which appeared in these columns in an abbreviated form, the following case. A practitioner of repute having repeatedly attempted and failed to cure his daughter, solicited my advice, by letter, in the first instance. I prescribed male-fern extract in the ordinary way, and recommended a search for the head after the exhibition of the tæniafuge. As, however, at varying intervals, the worm continued to reappear, I at length advised him to send the patient up to town, which he did. I again prescribed the oil of male-fern. The body of the worm came away, as usual. After removing from the stools some ten or eleven feet of the body, including many loose proglottides, I continued the search for about two hours, during which I obtained some fragments of the neck, which were so fine from the part near the head that the transverse lines of segmentation were barely discernible. Ordering a small dose of castor-oil, with plenty of weak tea and warm milk, I promised to renew the search next day. I felt confident the head must have been dislodged from the upper bowel. When I called next day, the fresh evacuations had been retained in accordance with my instructions, and the investigation was renewed. Greatly advantaged by the strong light coming through the large hotel window, it was not many minutes before I noticed in the fæces four minute dots of uniform size. As these mere specks were placed side by side in a symmetrical manner, I concluded that they were the suckers of the head of the tapeworm.



a. The four dots seen in the fæces. *b.* The same on removal. *c.* One of the separated suckers (enlarged). *d.* Diagram of the head of the tapeworm, in which the shaded portion represents what remained of the head. The central falsely so-called supplementary sucker was entirely obliterated.

The conjecture proved to be correct. Much, if not fully half, of the head was gone, whilst the loose and partially disconnected suckers only remained attached to one another by fine connecting shreds of parenchyma. On carefully transferring them without injury to a small glass tube containing water, the help derived from a powerful pocket lens at once set every trace of doubt at rest. My previous day's examination having afforded proof that only one tapeworm existed, I had now no hesitation in giving the necessary assurances as to the completion of the cure.

I must not omit to state that I transferred the corked tube to my waistcoat pocket, and when, after walking a short distance, I again looked at the specimens, the four suckers had separated. The gentle agitation produced by walking had sufficed to break up the delicate connecting filaments.

This case explains one of my reasons for insisting upon the careful and assiduous examination of the stools. In making such investigations, the practitioner should employ a disinfectant (the solution of permanganate of potash is, I think, the best), diluting the stool copiously with water. He should obtain a powerful light, a strong magnifying lens, one or two glass tubes filled with water, three or four empty basins or other utensils, and a pair of delicate long forceps (ten inches). Armed with these few essentials, he will treat his cases after a "proper method," and thus probably reduce the relative number of failures in practice. Of course, it is assumed that he must have previously familiarised himself with the naked eye appearances presented by the heads of different tapeworms, sufficiently to enable him to recognise any portions of the head that have separated by disintegration.

I come now to the question of preliminary treatment, as to which more details appear to be desired.

I said appropriate preliminary treatment, because I consider that the commonly received rules as to "fasting," etc., should vary according to circumstances. It is true, that I did not state what preliminary advice had been given in the particular case referred to; consequently, the more unsparing of my critics immediately jumped to the conclusion that I desired to conceal something! If my memory serve me correctly, I not only called attention at the time of delivery of the lecture, to certain points in this matter, but I wrote off on the black board a prescription similar to the one I had employed in that case.

In the instance named, I particularly requested the patient not to starve himself, but to take plenty of readily digestible food the day before the emulsion was given. I especially advised this in his case, because the chief symptoms were marked lassitude and nausea, sometimes amounting to actual sickness. I judged that, if I allowed him to let down his strength, by the starvation method, he would (in spite of retaining the horizontal posture, which I also enforced) throw up a great part of the male-fern emulsion. In short, it was a case in which I was anxious to deal as gently as possible with my patient, without losing the full benefit of the worm poison. In this view, further, I ordered a mild aloetic pill; not, be it observed, with the intention of producing catharsis, or even so much as a simple aperient action, but merely with the purpose of softening the fæces, and thus clearing the colon and upper bowel. The result was satisfactory. On referring to a note I made of the case at the time, I find it stated that the entire worm came away, "without any violent action of the bowels." There had been no motion as resulting from the aloetic pills, and no sickness from the male-fern mixture.

This, then, was a patient who, as before remarked, had repeatedly taken one-drachm-and-a-half doses of the etherial extract without success, but, by the observance of the preliminary rules, modified to suit what were deemed to be the particular exigencies of the case, his cure was effected, in the proper acceptation of that much abused term, by the employment of two half-drachm doses of the same drug. Further than this, the patient was put to much less inconvenience than he had suffered on former occasions, without successful results.

Finally, I may say that I have been not a little surprised and hurt at the tone assumed in some of the communications above referred to. I shall only add on this head, that the object of the lecture, and I believe its matter also, were purely scientific and unimpeachable. As to the form, I do not pretend to be so good a judge.

For twenty-six years, I have been engaged in the study of the entozoa; and, for the first fourteen years after taking my degree, I rejected all but purely scientific labour. During the last eight years in which I have been in practice, a very large amount of my time has been occupied in solving difficulties for, and giving gratuitous aid to, my medical brethren. The suggestion, that on this occasion I desired to withhold any useful information, is one which, I venture to think, my labours and my career contradict. I shall take no further notice of it.

ON SOME PECULIAR MODES OF TRANSMISSION OF SYPHILIS IN MARRIED LIFE.

By VICTOR DE MÉRIC, F.R.C.S.,
Surgeon to the Royal Free and German Hospitals.

I WISH to draw attention to some cases in which the transmission of syphilis from husband to wife took place under exceptional circumstances. The possibility of such transmission, even when no outward symptoms of the disease exist, is well-known. The wife, however, suffers more frequently through the offspring than in a direct manner. This has been well-ascertained, and I have had occasion to see many examples of this mode of infection. When syphilis is conveyed to the wife, independently of gestation, there is generally on the side of the husband some secreting lesion, and, under such circumstances, no excuse can be urged for him. He is guilty of an actual crime. The contamination may, however, occur from ignorance, from carelessness, or from some erroneous popular notions. Among the latter, I should mention the belief that a week or ten days after impure connection all danger is past. But medical men know full well that incubation may last one month and more. Now, the peculiarity of the case I am going to relate is, that a soft sore developed upon a syphilitic patient may convey syphilis.

In 1859, a gentleman, about 28 years of age, was sent to me from the country with numerous mucous turbercles of the cheeks and severely ulcerated tongue. Four months previously, he had taken chancres, which healed rapidly; six weeks afterwards, he suffered from ulceration about the tonsils and velum without general eruption. He was treated by iodide of potassium and cauterisation with some success; but, three weeks before I saw him, the whole mouth had again ulcerated. I now instituted a mercurial treatment; and found it difficult to get the patient under the influence of the metal. In two months, however, the mouth was well. I saw him occasionally during the next four years for attacks of pustular eruptions about the scalp and ears. Iodide of potassium generally relieved the symptoms; and he married in 1864. For the next eight years nothing of importance occurred, save osteitis about the maxilla followed by a certain amount of necrosis. Five children were born up to the present date; in none did any symptom of syphilis appear, the mother also remaining perfectly well.

She was doomed, however, to suffer from the disease by a mechanism which is not usual.

The husband, ten days after impure intercourse, not seeing anything wrong, approached his wife, and two days afterwards noticed a little irritation of the prepuce, but (to use his own words) "neglected to examine it and forgot all about it." In a few days, however, he discovered an ulcer on the mucous aspect of the prepuce; this soon took all the characters of sloughing phagedæna; and in that state he called upon me. I found the sore of the size of a cherry-stone, situated in the coronal groove, and treated it energetically by applications of nitric acid. Tonics were freely administered, and in twenty-two days the chancre was healed. Six weeks afterwards the wife presented a general eruption of large and small scaly papules, with complete loss of health, swelling of glands all around the neck, with severe pains in that region. The mouth and ostium vaginæ were highly inflamed; she had a profuse vaginal discharge; but no speculum was used, owing to the tender state of the parts. The pains at night in the lower limbs were excruciating. A mercurial treatment was begun, and the most powerful sedatives were used to moderate the pains. Deep tubercles now showed themselves about the tibiæ; the nights were very distressing, so that I combined iodide of potassium with the mercury. The papules now passed into tubercles all over the frame, the face being considerably disfigured by them. In about twenty days some improvement took place; but in another fortnight the disease broke out again in the shape of large raised blotches covering the whole body, and giving the face the appearance of elephantiasis Grœcorum. I made her now rub in mercury, and we at last obtained some improvement. The treatment lasted altogether eleven weeks; and it should be noted that the husband, during the same period, had a very severe relapse of the old complaint in the shape of mucous tubercles about the glans, and pustulo-crustaceous eruption on the abdomen and hairy scalp.

Now, the first circumstance worthy of note is the health of the children and the mother through a series of nine years. I am anxious to state that this is not uncommon; and I always gladly quote such cases when patients who have had syphilis express great apprehension respecting the health of their offspring. The case also proves that the mother is very likely to escape when the children are not contaminated *in utero*. But she fell victim to the disease at last, and how? By the secretion, however slight, of a non-infecting sore caught by an individual who had taken syphilis fourteen years before, and who, all through this period, had had several relapses. Of course, this man, according to present theories, could not have contracted a hard or infecting chancre, as his frame is saturated with syphilis. We are, therefore, driven to the conclusion that the secretions of a soft or non-infecting sore undergo a modification when implanted upon a syphilitic subject, and are capable of transmitting the disease.* If this be true, we shall begin to suspect that the pus from tertiary ulcers, or from *any ulcer* affecting a syphilitic person, may generate syphilis. It should, however, be noticed that an ulcer on the parts of generation is more likely to contaminate under the circumstances recited in the account of the case, than an ulcer situated elsewhere. If such inoculations were allowable, the capabilities of the purulent matter of tertiary ulcers could easily be ascertained in using it upon healthy persons. Actual tangible purulent matter there was none in this case. The husband never noticed anything wrong; though, of course, there must have been a secreting follicle concealed under the prepuce, which, to my knowledge, the patient seldom retracts. Hence is explained the frequency of syphilis amongst us, as very slight lesions of the organ of generation can propagate the disease. The principal circumstance of this case should be recollected, viz., the contaminating power of a soft sore, caught by a syphilitic individual, however small and insignificant that sore may be.

The second case I have to relate proves, on the other hand, that an infecting sore in its very infancy, presenting probably only a somewhat red and resisting oozing spot, may convey the disease.

On March 27th, 1870, I was consulted by a gentleman, aged about 32. He showed me an indurated chancre on the reflexion of the prepuce, a few lines from its extremity, and two enlarged and hard glands in the right groin. His wife was four months pregnant with her second child. I was anxious to get precise dates in this case, and learnt that he had gone astray on the 9th of February, and had intercourse with his wife on the 16th of the same month, and repeatedly up to the 17th of March, on which day he felt pain *in coitu*, and saw the sore. Reckoning from the 9th of February to the 17th of March, the incubation would be thirty-six days. But, supposing a certain degree of inattention, we will take off the six days, and this would still leave thirty days' incubation. I told the patient the nature of the complaint, and he thereupon expressed much alarm touching the state of his wife. I advised him to wait until she made some complaint, and forthwith directed for himself a mercurial treatment, which was carried out with perseverance. He had no general eruption; but suffered principally in the isthmus faucium, the inside of the cheeks, and the tongue. Mercury was introduced into the economy by frictions, and after about nine months he was well.

I advised the husband to apprise the accoucheur of the circumstances, and I heard from the latter that he had examined the lady both before and after her confinement, and had found the labia considerably swollen, with a row of mucous tubercles on their inner aspect. The child was born at the full period, and presented all the symptoms of syphilis. A striking peculiarity in the case of the child, and one which I have noticed in two or three other cases, was very severe periostitis of the left forearm. The mother, exactly like the father, suffered much about the cavity of the mouth; and was greatly benefited, as well as the child, by a mercurial treatment. The little patient is now three years old, and in good condition. Another child has been born since which has suffered from the same complaint, but has done well, up to this time, having completed her seventh month.

The chancrous erosion must in this case have been very slight to allow the husband to look upon himself as perfectly sound, and it is unfortunate that pain does not set in earlier. We notice here an illustration of the almost certain contamination of the child when both parents are affected. This has been frequently observed.

We now pass on to another peculiar mode of transmission of syphilis in married life; but here the husband was contaminated by the wife.

The case refers to a gentleman, about 36 years of age, who had been under my care, on various occasions, for a series of years. He had never suffered from syphilis. I was requested, now about ten years ago, to examine a lady with whom he was on friendly terms. She suffered from severe uterine inflammation; and, on making the necessary examination, I found traces of secondary syphilis. I had then a full confession of former accidents, not of a very severe kind, though there had been gestation, and a child dying with symptoms of syphilis. She remained under my care for a short time, and improved much by the use of iodide of potassium, though the mucous patches about the tonsils and velum proved somewhat obstinate. The gentleman had not the slightest sign of lues venerea about him, though the intimacy had lasted two or three years. At last marriage took place, and about twelve months afterwards the husband complained of considerable swelling of the cervical glands on the left side, with difficulty of swallowing. On examination, I found the left tonsil swollen and hard, and the whole isthmus highly inflamed. The diagnosis was obscure, and ordinary means were used. When some relief had been obtained the patient showed me, one morning, a general eruption of roseola, and complained of lassitude and wandering pains. The nature of the case became clear; I ordered mercurial fumigations, and, after some months, the patient was restored to health. I managed, in the meantime, to leave the real cause in the dark. Children were born, two or three in number, but no trace of the specific disease was noticed in them. We have here an example of the influence of actual matrimonial life on the transmission of disease. Of course, I subjected the husband to the closest examination. The parts of generation were perfectly healthy, and I was quite certain that he would not conceal from me any circumstances connected with the case. It is worthy of remark that, contrary to the rule, the children were born healthy, and have remained so to this time. It is very likely also, that this case verifies the belief that the disease, though originating from contact with secondary symptoms, generally begins by a primary lesion. I suspect that the hard, red, glossy tonsil, with its accompanying enlarged and indurated cervical glands were primarily affected.

In this case, as I said before, the children escaped, although both parents had suffered from syphilis; and we find that they escape more frequently when the father alone has had syphilis. This I have seen in several instances, especially in a family whose father had been under my care for that complaint before his marriage. Five children were born in good condition, and have remained so, though the father is often troubled with syphilitic angina, and slight eruptions. No sign of specific disease ever appeared in the mother. But wives do not always escape unpleasant circumstances. I have noticed several cases of sterility where the husband had had syphilis. It also occurs that the wives fall into a bad state of health, present anomalous symptoms, and become weak, fretful, and desponding. I have seen several cases of this kind, which I shall bring forward on another occasion, confining myself at present to the peculiar modes of transmission of syphilis in married life.

OBSTETRIC MEMORANDA.

TWO CASES OF TRIPLETS.

THE following two cases of triplets may be interesting to the readers of the BRITISH MEDICAL JOURNAL.

Case 1. I was sent for on the morning of April 2nd, 1873, to attend Mrs. F., aged 28, in her third pregnancy. She had been in labour since four A.M. On my arrival, I found the os fully dilated, and the vertex presenting. On rupturing the membranes, the first child, a female, was born at half-past eight A.M., naturally. On examination, the feet of a second child were found presenting, and, on their being brought down, a second female was delivered at forty-five minutes past eight A.M. A third, likewise a female, was born at ten minutes past nine A.M.; the vertex presenting. This child was completely enveloped in the membranes at its birth. There was one placenta which was large, and the umbilical cords were thick and short. On December 29th, the children were all alive and well. The mother made a good recovery.

Case 2. I was sent for on October 19th, 1873, to attend Mrs. B., aged 31, the wife of a labourer, in her second confinement. She had been delivered on August 17th, 1872, of a still-born male child, after a very tedious labour by myself. When I arrived at one P.M., I found the os about the size of a florin, and the vertex presenting; there were very weak pains. The os dilated slowly; and at five P.M., the patient having been in labour since three A.M., I applied the forceps, and delivered her of a living male child. The pains became stronger, but again died away. The head of a second child having come well down, I applied the forceps at half-past six P.M., and delivered her of a second living male child. I then examined and found the right arm of a third child presenting. I then turned and delivered the patient of a third male child, this time still-born, at seven P.M. The body of this child was greatly decomposed. There was only one large placenta. The mother and children did well and are still alive.

GEORGE ST. GEORGE, L.K.Q.C.P.I., L.R.C.S.Ed.
Lisburne, Co. Antrim.

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* Several French authors, especially Clerc, have published cases in support of this view.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. MARY'S HOSPITAL.

CASE OF CÆSAREAN SECTION.

(Under the care of Dr. A. MEADOWS.)

ON Tuesday, January 6th, Dr. Meadows performed the Cæsarean operation at St. Mary's Hospital. The patient, a diminutive but healthy-looking young woman, twenty-one years of age, and just over four feet high, had applied to Dr. Staples of Burwood Place, respecting attendance in her approaching confinement. Seeing from her walk that she had been the subject of confirmed rickets in childhood, he at once made a careful examination of the pelvis, and, finding it greatly deformed, sent the patient to consult Dr. Meadows at the hospital. Just before the operation, the patient seemed in excellent health and spirits; the effects of the infantile disease seemed to be almost confined to the lower limbs and pelvis. The latter was altogether small, flattened antero-posteriorly, and somewhat rostrated in front. On vaginal examination, the sacrum was found to be very prominent; and careful measurements of the conjugate diameter varied from 1⅝ to 1⅞ inch; both legs and thighs were bowed and twisted in the most extraordinary manner. This was her first pregnancy, and she was about seven and a half months gone.

By an incision about six inches long, through the middle line of the abdomen, Dr. Meadows exposed the upper part of the uterus, partially covered by the omentum. The latter was turned upwards; and having first ascertained, by palpation, that the placenta was out of the way, he cautiously cut through the uterus until the fœtal membranes were reached, and then extended the incision vertically to about four inches. Dr. Wiltshire, meanwhile, kept the lips of the abdominal wound closely applied to the sides of the uterus. Having ruptured the membranes, Dr. Meadows removed the child, and then the placenta and clots. An elastic bougie was next passed through the os into the vagina, to make sure that there was free vent for the discharges. The uterine incision was neatly closed by four interrupted sutures of carbolised catgut, most carefully and, apparently, firmly tied; the abdominal wound was closed by deep and superficial sutures of silk.

There was, during the operation, but little hæmorrhage. Firm contraction of the uterus was secured, by the application of faradisation, directly the placenta was removed, and was maintained until the operation had been completed, and while the patient was recovering from the chloroform, by keeping one pole of the battery in the vagina, and the other on the abdomen over the fundus. Altogether the operation appeared a very successful one, and the patient seemed to have a fair chance of escaping from the very serious misfortune which she had unwittingly brought upon herself.

Unfortunately, this expectation was not realised. The patient rallied pretty well from the immediate effects of the operation, but relapsed and sank very rapidly on Wednesday evening, January 7th, thirty-two hours after delivery.

The necropsy was made on the 9th. On opening the abdomen, the peritoneum was found injected, and there were here and there a few small flakes of recent lymph; there was a small quantity of turbid reddish fluid in the cavity of the pelvis. The uterus was fairly contracted; the incision in the anterior wall was gaping; the catgut sutures were in place—had not cut out—but the ends were free; all four knots had disappeared. The available space at the pelvic brim, between the soft parts, was just 1⅝ inch.

This case is an instructive one, and the lesson is evident. Catgut is always somewhat stiff and difficult to tie; in this case, the constant working of the uterus, added to the usual swelling of the gut from imbibition of moisture, caused the knots to slip, though they appeared perfectly secure at the time of operation, and the patient died from the shock caused by the reopening of the uterine incision. Pure undressed silk is scarcely more irritating than catgut, it is almost as readily absorbed or encapsuled, and there is no chance of its slipping when once firmly tied; there can be little doubt that, for this operation at least, it is the preferable material for sutures.

When last heard of, the child was doing well.

MANCHESTER ROYAL INFIRMARY.

SIMULTANEOUS DISLOCATION OF BOTH ENDS OF RIGHT CLAVICLE.

(Under the care of Mr. LUND).

[Communicated by Mr. JONES, Pathological Registrar].

J. D., aged 32, coachman, was admitted on February 7th, 1873. On the morning of admission, he was driving a cart along the road; he hastened forwards to open a gate, but, before he could get clear, the shaft struck him at the back of the right shoulder, whilst his left was fixed against the gate-post.

The diagnosis was quite apparent by inspection alone. The two ends of the clavicle occupied abnormal positions; the sternal projected forwards, and rendered tense the skin on the anterior surface of the chest; the acromial was carried backwards and upwards; so that the bone in its new situation rested obliquely on the line of its natural position. The shoulder was flattened, depressed, and approximated to the side; the arm was rendered quite useless. The anterior edge of the trapezius was very tense, and the head was drawn down to the injured side.

The dislocation could be partly reduced by elevating the shoulder, pressing the sternal end backwards, and the acromial forwards; but, on removing the pressure, the bone immediately regained its abnormal position. Chloroform was administered, and, by means of applying a well adjusted pad on the sternal end, and bandaging the arm to the side with a pad on the axilla, the bone was brought into fair position. The patient was kept in bed for ten days, and, by the end of that time, the two ends of the displaced bone had become firmly fixed in their new position. The patient was then allowed to get up; and, in about four days afterwards, he was permitted to use the limb gently. On February 24th, he was discharged; he could use his arm very fairly. From that date he continued to improve; but was unable to resume his work as coachman, in consequence of the injury to the left arm, which he sustained at the same time as the dislocation. On November 18th, he reported himself as being able to use his arm as well as ever he could.

This accident is one of extreme rarity, there being perhaps not more than four or five cases on record. Hamilton, in his work on *Fractures and Dislocations*, mentions one that occurred in the practice of Dr. North of Brooklyn. In Gross's *System of Surgery* two cases are mentioned: both happened in France. One was recorded by Morel Lavellée in 1859; the other was under the care of Gerdy, at St. Louis Hospital, in Paris. The two cases alluded to in Holmes's *System of Surgery* were also reported from France. As far as I am aware, no case has hitherto been recorded in England.

REVIEWS AND NOTICES.

THE STRUCTURE OF SEROUS MEMBRANES.*

THE valuable and original work before us is, we believe, intended to be the first of a series giving the results of investigations upon the distribution of the lymphatic system in some of the more important organs and structures, more especially with reference to the pathology of tubercle, according to a plan originally conceived by Dr. Burdon Sanderson.

The book is divided into two sections, of which the first, by far the larger and more important, treats of the serous membranes (chiefly peritoneum and pleura) under normal conditions; the second, of these structures when affected with acute or chronic inflammation. The method of preparation has been principally that of staining with nitrate of silver, aided by the examination of the fresh tissue.

The first chapter of the book is devoted to the consideration of the Endothelium of the free surface of the Serous Membranes. And here we have the important fact brought forward that, even in the healthy animal, marked evidences of proliferation are frequently to be found in the surface epithelium (or *endothelium*, as Dr. Klein prefers to call it) of the serous membranes, varying in extent from a cell containing a divided nucleus, to a considerable patch of young cells, produced by the proliferation of the ordinary flattened elements, and differing from these in their smaller size, their more rounded form, and granular appearance, and frequently in being raised up above the level of the general surface by means of a protoplasmic stalk. Similar, but much larger cells, are sometimes found, containing several nuclei (giant-cells, myeloplaxes). In the frog, the young cells which are produced by proliferation of the endothelium, are frequently provided with cilia; others may exhibit amœboid movements. The author here shortly discusses the cause of the silver lines; maintaining, in opposition to the views of Schweigger-Seidel and others, the now commonly received opinion, that the lines are due to a staining of an intercellular substance. The small irregular brownish patches which are occasionally seen, interrupting the silver lines, are referred to the presence of branched corpuscles, which, at these places, send up processes to the surface which extend between the cells.

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* *The Anatomy of the Lymphatic System.* By E. Klein, M.D., Assistant Professor at the Laboratory of the Brown Institution. I. The Serous Membranes. Smith, Elder, and Co.

The second chapter treats of the Cellular Elements of the Ground Substance, or, in other words, the corpuscles of the connective tissue subjacent to the endothelium. Ever since Von Recklinghausen demonstrated, by aid of the method of staining with nitrate of silver, the existence, in the connective tissue of the serous membranes, of intercommunicating branched spaces scattered throughout a "ground-substance," the question has frequently been discussed as to whether they are to be regarded as actual channels dug out in the tissue, and employed chiefly or solely for the conveyance of lymph, as the name, *Saftkanälchen*, would seem to imply; or whether they are merely *potential*, being exactly filled by the cellular elements of the tissue, which remain unstained by the reagent, and thus leave apparent gaps in its continuity. With regard to this question, the author gives in his adherence to the latter view, having occasionally succeeded in obtaining, besides silver preparations of the ordinary kind, showing the so-called lymph-canalicular (*Saftkanälchen*) system as clear, more or less branched, and intercommunicating spaces upon a brown ground (negative image), other preparations in which, on the contrary, the cells themselves have become stained by the reagent, the ground-substance remaining more or less colourless (positive image); and from a comparison of the two kinds, he believes himself justified in asserting that the *Saftkanälchen* system corresponds exactly in the normal condition with the branched and flattened cells of the tissue. He admits, however, that in an œdematous state of the tissue the spaces may become distended by serous fluid and migratory cells; which latter, it may here be remarked, he describes as budding from the fixed tissue-cells.

The flattened cells of the tissue are more closely accumulated at some parts so as to form distinct "nodules" in the membrane; in these cases the cells in the centre of the nodule lose their processes, and come in contact with neighbouring ones; negative silver preparations show, at such places, the characteristic lines. Other nodules (those described some years ago in the omentum by Dr. Burdon Sanderson) are similar in structure to the tissue of a lymphatic gland, consisting of a framework of branched cells, the meshes of which are filled either by lymphoid corpuscles or by fluid containing perhaps a few corpuscles. The nodules last mentioned are distinguished by the fact that they develope in lymphatic vessels (endolymphangeal); whereas those formed by accumulations of flattened cells, originate in the neighbourhood of lymphatics (perilymphangeal). Perilymphangeal nodules have a special importance, from the fact that they are exceedingly apt, especially in the mesentery, to become converted into adipose tissue.

The relations of the lymphatic vessels to these so-called nodules, as well as to their blood-vessels, present points of considerable interest. The larger nodules commonly possess an afferent artery and efferent veins with connecting capillaries. The lymphatics may run either singly or in pairs by the side of each blood-vessel; or the latter may be actually invaginated into a lymphatic. In the case of the perilymphangeal nodules, the lymphatic ceases to exist as such, but its epithelial (endothelial) cells come into contact with, and are continued by the flattened cells of the nodule. On the other hand, in cases where a vein is invaginated into a lymphatic vessel, the system of capillaries belonging to it hangs freely in a dilated continuation of the lymphatic. From the epithelium of this vessel a network of branched cells may arise, transforming the dilatation into a cavernous structure; and, from this network, lymph-corpuscles originate and become accumulated in the meshes of the reticulum, forming thus an endolymphangeal nodule.

The author describes two methods of communication (stomata vera) between the cavity of the serous membrane and the lymphatics. In the one case there is merely an aperture left between the epithelial cells of the membrane, opening directly into a simple lymphatic sinus immediately below; in the other, the aperture is surrounded with small polyhedral cells, and opens into a lymphatic vessel through the medium of a straight canal, which is itself lined by similar polyhedral cells. The latter arrangement is most common in the diaphragm, a communication being thus established between the peritoneal cavity and the straight vessels which run between the tendon bundles, and, since the last-mentioned vessels communicate with others, both anteriorly and posteriorly, a free outlet from the serous cavity is insured. The communications described by Dogiel and Schweigger-Seidel, between the peritoneal cavity and the cisterna lymphatica magna of frogs, are found by Klein also to occur by the medium of canals such as have just been described; in female frogs, the lining cells are ciliated.

It has been already remarked that the flattened cells below the epithelium, in some cases, send up branches which insert themselves between the superficial cells. They are termed by the author pseudo-stomata, and not unfrequently bud out from the surface, as distinct cells. The pseudo-stomata are especially abundant over the perilymphangeal nodules. The author has observed the development of lymphatic capillaries, both in the normal omentum of the rabbit (in the perilymphangeal patches) and in other serous membranes when chronically inflamed. In every case one of the flattened cells of the tissue becomes vacuolated; the cavity thus formed becomes lined with flattened (epithelial) cells (the nucleus having previously divided), and finally opens either into a similar one in its neighbourhood, or into a lymphatic vessel; or, again, it may open upon the surface as a true stoma. The development is thus seen to be quite similar to that of the blood capillaries, as described by the author, in the embryo chick; and, indeed, a like mode of development obtains for the blood-capillaries here also, the only difference being that the differentiation of the wall into epithelial (endothelial) cells is much longer deferred.

For the detailed description of the pathological changes which occur in acute and chronic inflammatory conditions, the reader is referred to the original memoir. Suffice it to say that, in all cases, marked indications of proliferation were obtained both in the cells of the formed substance (especially those of the lymphangeal nodules) and in the epithelial cells of the surface; the changes in the latter case being always earlier and most marked in the neighbourhood of the stomata, both true and false. It is hardly necessary to point out the important influence which the blocking up of the stomata vera undoubtedly must have in obstructing the escape of effused serous fluid from the peritoneal cavity in chronically inflamed conditions.

It is impossible to bestow too high praise upon the illustrations which accompany the volume, and which have been beautifully executed by Bach of Leipzig, from the author's own drawings, with the aid of a grant from the Royal Society. Taking into consideration the handsome way in which the book is got up, and the importance of its contents, it is the more to be regretted that the author has not entrusted the revision of his text to some one possessing a thorough acquaintance with the language, for, by errors of construction, the meaning of some passages is rendered obscure. If to this we add a tendency to the introduction of new words and expressions, not always happily chosen, and a slightly dogmatic tone which pervades the whole book, we shall probably have enumerated all the faults of a work which will no doubt tend largely to complete our knowledge of the anatomy of serous membranes, so far as the lymphatic system is concerned, and which is a solid contribution to knowledge.

LESSONS IN LARYNGOSCOPY. By PROSSER JAMES, M.D., M.R.C.P., Lecturer on Materia Medica and Therapeutics at the London Hospital, etc. Pp. 176. Baillière and Co. 1873.

THIS small volume is a reprint of several articles which have appeared in the pages of a contemporary. If the author does not teach us very much that is absolutely new, he shows a facility for reproducing in a somewhat familiar, not to say popular manner, directions and observations which have been published from time to time by the best workers with the laryngoscope. The illustrations are numerous, and as varied in their character as in the processes of their production. The coloured plates are striking, and their descriptions well illustrate the different inferences practitioners may derive from observation of the same image. For example, Figure 2, Plate 3, shows to us an epiglottis partially destroyed by some previous ulceration, but not now actively diseased. There is a small red polypus on the left vocal cord, and thickening of the arytenoid cartilages, indicating a not very early stage of laryngeal phthisis. The following is the author's description of the figure. "Consumption. The epiglottis is ulcerated at the edge, and has the appearance of a saw, or of being worm-eaten." (In the plate, it has the saw-like edge characteristic of syphilis, but not the worm-eaten appearance, not the thickening, of phthisis.) "The swollen condition of the arytenoids is also seen, and they are less congested than in the previous figure. There is also an ulcer on the left vocal cord." (In the plate, this ulcer is a well defined raised elevation, of bright red colour, on a white vocal cord; whereas, according to our experience, ulcerations of the vocal cord are seen as white, yellow, or grey indentations, on a red or congested surface.) "This was healed, and the case is a most satisfactory instance of arrested consumption. It is so often stated that such cases are hopeless, that it is a delightful duty to depict this and report the recovery." We greatly regret that the case has not been given in detail.

The rhinoscopic image is very good, and the directions for examination of the posterior nares by far the best in the volume. There is no index, and the work lacks the care in typographical correctness which we should expect from the literary experience of the author; and in a reprint there can be no excuse for errors of the sort. The mechanical execution of the book, with the exception of the coloured drawings, is far from creditable to the publishers.

REPORTS OF SOCIETIES.

HUNTERIAN SOCIETY OF LONDON.

Thursday, January 8th, 1874.

Thomas Bryant, F.R.C.S., President, in the Chair.

WHEN AND HOW TO USE MERCURY IN SYPHILIS. BY JONATHAN HUTCHINSON, F.R.C.S.

The author said the object of the paper was not to bring forward any new doctrine, but rather to express his own opinion, and, if possible, to elicit that of others, respecting the employment of an old-established remedy for the treatment of syphilis, which, amidst friends and foes, and with somewhat varying reputation, had held its place amongst us for several centuries. His main wish was to bear an earnest and hearty protest against the lukewarmness and uncertainty which seemed to pervade the opinions of a large section of the profession in the present day as regards the usefulness of mercury in syphilis. He did not speak so much of the active opponents of the drug under all conditions, who were few in number, and had not, as yet, exercised any material influence, but referred rather to what he believed almost all who had had opportunities for observation would confirm, a wide-spread tendency amongst those who still believed in mercury to employ it too seldom, too late, too sparingly, and altogether in a cowardly and inefficient manner. Although it was by no means difficult to trace the manner in which the present opinions, or rather, perhaps, want of opinions, had gained foothold, yet they were, nevertheless, much to be regretted, since they imperilled every year the happiness and health of a large number of individuals, to say nothing of the danger to future generations. The author then discussed the cause leading to the present state of opinion, or rather want of opinion. Amongst these were the abuse of mercury in former times, the fact that the early stages of syphilis admitted of spontaneous cure, and the introduction of iodide of potassium. He gave his reasons for not dealing with the literature of the subject, and then passed on to say that he presumed that it might be taken as a fact which no one doubted, that mercury possesses a remarkable power over certain syphilitic manifestations. No one who could trust the evidence of his senses dare disbelieve that mercury could make an indurated chancre melt away, or that it could procure with wonderful rapidity the disappearance of many forms of secondary rash. The question under debate was whether, in accomplishing these feats, it did anything really for the benefit of the subjects of the malady. This doubt, however, did not quite cover all the ground; for, if it were admitted that in some cases it was really and permanently beneficial, it might still be questioned whether, in the long run, and taking the average of cases, it did not do more harm than good. Now, to discuss, first, the question as to whether a mercurial cure of local symptoms was, or was not, an advantage to the patient, he would at once express his belief that the drug was a real antidote for the poison; that, if carefully and fully employed, it was capable of procuring the complete extinction of the malady. By an antidote was meant something which not merely concealed, but which counteracted and neutralised. A chemical antidote effected a combination and produced a harmless compound; a vital or physiological antidote in all probability killed. It was in this sense that he wished to use the term as applicable to mercury in its relation to the living syphilitic virus. The facts which were possessed seemed to warrant a belief that it really destroyed it, that it prevented its breeding in the blood, if that process had not already taken place; and, if it had, cut short its life in the tissues. He adduced some of these considerations which seemed to lead to this conclusion. 1. "If mercury be given when a chancre is just beginning to show specific induration, it almost invariably puts a stop to it." After illustrating this somewhat, the author passed on to—2. "If mercury be given after a sore has attained its full development, it is slow in proving its power, but scarcely less sure. No induration will resist it. Apparent resistance is probably due to the fact, that the patient is difficult to influence by mercury. No signs of the drug having undergone tissue-assimilation become evident. It should not be abandoned, but some other form of administration tried." 3. If mercury be given to a patient who has an undoubted indurated chancre, but in whom, as yet, no other constitutional symptoms are present, there is a "fair amount of hope that it will prevent their occurrence." The author quoted his experience of late years in support of this, and the cases of vaccinal syphilis brought under the notice of the Royal Medical and Chirurgical Society. The first series of cases taught a most important lesson. Mercurial treatment was begun in eleven individuals during the sixth week after contagion, and within a fortnight of the appearance of specific induration. All these patients had, at the time, well-marked chancres, and about half had hard glands in the axillæ. So definite was the antidotal value of the remedy, that all the patients recovered, and for a considerable period many surgeons who had not seen the chancres doubted the correctness of the diagnosis. Ultimately, however, after the treatment had ceased, about half of them showed some slight but indisputable secondary symptoms. In not a single one, however, was the rash copious, or any of the symptoms troublesome; and his belief was that, if the mercury had been used longer than it was, the cure might not improbably have been still more satisfactory. It was difficult to make patients who seemed to ail nothing, and who were not aware of the kind of risk that they had gone through, continue treatment long enough. It was otherwise with most persons who had had syphilis in the ordinary way, and who usually were willing to persevere for any length of time that might be advised. This series contrasted strongly with the three others brought forward. In all these, the symptoms had developed without their nature being suspected and without being interfered with in any way. 4. "In cases in which an indurated chancre is treated by mercury, if constitutional symptoms follow, they will usually be in ratio with the character of the treatment, and with the early date at which it was begun." This was discussed more at length. 5. "In cases in which no mercury is given, the disease often rises to exceptional severity." This, to some extent the converse of the preceding, was mentioned in order to remark that the cases of unusually severe secondary syphilis which he had lately seen had all been, for some reason, not treated by mercury. Some of the worst were cases in which the chancre was non-venereal. 6. Another argument in favour of the belief that the relationship between the syphilitic virus and mercury is really that of a poison and its antidote, may be taken from the circumstance that the drug invariably produces some influence. It may not cure, but it always changes. This point having been further discussed and a summary of the arguments given, the author passed on to some objections which might be alleged; for instance, that mercury delayed the symptoms rather than cured. He admitted the delay, and to this attributed the fact that syphilis was regarded as having stages of uncertain length. If the disease were left without treatment, the stages would be sufficiently uniform, as might be seen in the cases which did come under observation, in which no treatment had been adopted. The delay without cure depended on imperfect administration of the antidote. The very rare instances in which the disease flourished, in spite of profuse salivation, depended probably on the fact that the salivation was premature. "The secret of success is to avoid any interruption of this kind." With regard to the so-called tertiary symptoms, it was said that they do not constitute a necesssary stage, and are rather to be regarded in the light of sequelæ, which may, or may not, show themselves and the question of treatment was a more difficult one.

"The question to be answered may be put thus—Is a patient who has been cured by mercury in the early stages more or less like to suffer from tertiaries than one in whom the disease has been allowed to develope itself without interference? "It seems to the author hopeless to try to find an answer to it by appealing to statistics; for the fallacies were such that it would be easy to make them tell either way. He would content himself then by appealing, first, to theory, and, secondly, to his individual experience. "The secondary stage is equivalent to the eruptive stage of exanthems. The longer the blood and tissues are allowed to be saturated with the syphilitic virus, the greater the tissue-changes which will result. Hence, if mercury shorten the early stages, it ought to diminish the risk of tertiaries. In many of the worst cases of tertiary syphilis, no mercury has been given, and such facts are valuable evidence; but, the converse, cases in which chancres have been treated by mercury and no secondaries, etc., have followed, are of little value, though they have a certain weight." An elderly member of the medical profession, since dead, once said to Mr. Hutchinson during a consultation conference: 'I hope, Mr. Hutchinson, that you believe in mercury; I do, for it cured me. When a young fellow, I had syphilis badly; was covered with it. They wouldn't give me mercury till, getting very bad, I consulted Sir Astley Cooper, who made me keep my room and be salivated. I was well very quickly, and have been so ever since. Here I am at near seventy, without ache or pain.' He believed that the number of those who could bear similar testimony to the permanent good effects of the drug were very large.

The author then quoted instances showing the results of the use of mercury in certain rare cases in which the disease had assumed unusual features, and had been protracted to an unusual extent, or had resisted in a remarkable manner other remedies. "In some of these, the proof of curative power is very strong indeed." The case of Mr. S. (seen with Mr. Mundie, of Dalston) illustrated several points. He had a very severe attack of secondary syphilis of a rupial character with ulceration. He had had no mercury, but had had iodide of potassium given him. He had had two previous attacks of syphilis. In each the chancre was believed to be a hard one, and in each he had taken mercury. The iodide was continued for a month, but, as no improvement resulted, small doses of mercury were given, and the patient rapidly recovered. This case showed that syphilis may so completely pass away under mercurial treatment that the patient not only loses all symptoms, but becomes again susceptible to contagion. This liability forms the best proof of real cure that we have. In the second attack, though bullous and ulcerating, mercury was well borne. Then there was an interval of eight years before the third attack. Lastly, the third attack resisted iodide of potassium. In a second case, a rupial eruption resisted iodide of potassium, but yielded quickly to mercury. In a third case, mercurial vapour baths quickly cured a patient whose symptoms had resisted the iodide for nearly three years. The author's opinions had somewhat altered as to the advantage of iodide of potassium and the disadvantages of mercury in ulcerating syphilitic affections. Certain points in connection with phagedænic chancres; various objections to the use of mercury, the mode of administration, etc., having been discussed, the author summed up in the following conclusions.

1. Mercury is probably a true vital antidote against the syphilitic virus, and it is capable of bringing about a real cure. 2. In practice a good many cases are really cured by mercury, the cure being really proved by the restoration to good health, and in some cases by renewed susceptibility to contagion. 3. The probability of cure depends upon the stage of development attained by the disease when the remedy is resorted to, and upon the perseverance with which it is used. 4. In order to secure the antidotal efficacy of mercury against syphilis, it is desirable to introduce a considerable quantity into the system, and to protract its use over a very long time. 5. Ptyalism and other evidences of the physiological action of mercury, so far from being beneficial, are, if possible, to be carefully avoided, since they prevent the sufficiently prolonged use of the remedy. 6. In cases in which the patient shows an idiosyncracy peculiarly susceptible to mercury, the indication is to reduce the dose rather than to omit the drug. 7. It is impossible to begin the administration of mercury too soon; and it should be resorted to without loss of time in all cases in which a chancre shows a tendency to indurate. 8. Many cases of indurated chancre treated early by mercury never show any of the characteristic symptoms of the secondary stage. 9. In other cases of mercurial cure of the chancre in which secondary symptoms do yet occur, they are usually milder than if allowed to develope without specific treatment. 10. When mercury does not wholly abrogate the secondary stage, it possesses a remarkable power of delaying it. 11. Delayed outbreaks of secondary syphilis are to be regarded rather as proof that the administration has not been sufficiently persevering than that the remedy was not efficient. 12. It is probable that the risk of tertiary symptoms is in ratio with the severity and prolonged duration of the secondary stage. 13. There are some grounds for believing that the tertiary symptoms of syphilis are both less frequent and less severe in those who have been efficiently treated by mercury than in others. 14. Mercury cautiously given does not in a great majority of instances do any injury to the general health, and its local inconveniences may usually be prevented. 15. The doctrine of the real antidotal character of mercury in respect to syphilis ought to lead to much more prolonged administration of it, with the hope of destroying utterly all lingering germs of the malady. 16. Most collected statistics as to duration of treatment and freedom from relapse are misleading and worse than useless, because usually the treatment has been far too short to be effectual. 17. It has not yet been proved that there are any special forms of syphilitic disease in which mercury ought to be avoided, although, as a general rule, it is acknowledged that it must be used with more caution in all forms which are attended by ulceration than in others. 18. Iodide of potassium possesses little or no efficacy against either the primary or the secondary forms of syphilis. 19. The efficacy of mercury is often most signally proved in cases which have utterly resisted the action of iodide of potassium. 20. It does not much matter whether mercury is given by the mouth, by inunction, or by the vapour-bath, provided that, whichever method be selected, care be taken to avoid salivation, purging, etc. 21. The doses usually resorted to for internal administration are, for the most part, too large, and thus often necessitate a premature discontinuance of the remedy. 22. If one method of administration do not succeed satisfactorily, another should be tried, and that in no case of difficulty should the vapour-bath be forgotten.

Mr. De Berdt Hovell thought that mercury was the true remedy for syphilis. It was a mistake to produce ptyalism. The dose should be proportioned to the state of the patient. He had treated an old gentleman, aged 70, for a Hunterian chancre, by five grains of blue pill every night. At the end of six weeks, the chancre was healed. The mercury was continued a few weeks longer. No symptoms whatever followed.

Mr. Kisch asked how long the mercury should be continued.

Dr. Drysdale had not used mercury in any case of syphilis for some years. He mentioned the case of a man and his wife, who were both affected with primary and secondary syphilis, and whom he had treated with iodide of potassium. They got quite well, and remained so now after the lapse of more than a year. He referred to the use of mercury in the treatment of infantile syphilis, and stated that it was well known that cases of this kind usually ended fatally, whether it was given or withheld. He had, however, seen cases do very well without it. He expressed his fears that Mr. Hutchinson's advocacy would do something to restore the reputation of mercury and increase its use; but said that he trusted it was too late in the day for him to accomplish this to any large extent. He alluded to Dr. Fournier's statistics of the treatment of syphilis in Paris by mercury. He thought it necessary to continue its administration for as long a period as two years. He also referred to the statistics published in detail by Professor Boeck, of Christiania, which afforded, he thought, strong testimony against the use of mercury.

Dr. Ziemssen (of Aix-la-Chapelle) said that, the sulphurous springs of Aix-la-Chapelle and other places having been often quoted as remedies against constitutional syphilis, he was glad of having the opportunity of stating that the disease was almost never cured by means of the sulphurous springs alone, and that one-half of the reputed good effects of these springs ought to be referred to the mercury given at the same time in almost every case of real developed constitutional syphilis. His own experience was founded upon a yearly average of two hundred cases of old syphilis in the higher classes. He would only refer to three cases of pregnant women. The first, having had abortion five times, came to Aix-la-Chapelle in the fourth month of her sixth pregnancy, with syphilitic sores on the larynx. She not only recovered, but her child, a boy, now a year and a half old, was in splendid health. The second had had abortion twice, and had syphilitic exanthem on both arms. She also recovered, and was confined of a strong healthy child eight months ago. The third had one abortion, and was in the third month of pregnancy, with necrosis of the left superior maxilla and palate bone. Having been under strong mercurial treatment before, she lost all appetite and grew weaker from day to day. Dr. Ziemssen ordered her to take the sulphurous baths and waters, and at the same time he put her under slight mercurial treatment by inunction. She recovered; but had not yet been confined. This last case showed him more than any other how dangerous mercury could be, if not well applied, and how valuable a remedy it was, given in right proportion to the constitution and with necessary precaution. He wished Mr. Hutchinson had brought this important point into the discussion, as the result of the treatment depended mostly on the manner in which it was applied. He had seen many cases which had become worse under mercurial treatment, but which, under the combined treatment of mercury and sulphurous baths, were rapidly cured at Aix-la-Chapelle. Regarding the iodide of potassium, he could not say that he had seen much benefit from it alone in cases of tertiary syphilis. For the moment, it seemed to bring help, but relapses appeared immediately after the patients had ceased to take it; and at last he was obliged to return altogether to mercury, or, at least, to combine iodide of potassium with mercury. He remembered a Russian gentleman who was in a most horrible state; the nose was gone; the voice was scarcely heard, as the greatest part of the membranes of the larynx were hard scars; he had taken iodide of potassium regularly for months before Dr. Ziemssen saw him, to the amount of eighteen pounds. Nevertheless, the relapse appeared three days after he ceased to take it. He was cured by the mercurial treatment, and called upon Dr. Ziemssen in good health three years afterwards.

Mr. de Méric said that this paper was one of the boldest he had heard of late, as it dealt with the subject in a comprehensive and decided manner. Those who believed in the beneficial effects of mercury in syphilis must be highly gratified to find themselves so eloquently supported by Mr. Hutchinson. The author, in dealing with the members of the profession who systematically opposed the use of mercury in syphilis, refrained, with his accustomed kindly disposition and good taste, from ascribing any unworthy motives; but he (Mr. de Méric) would respectfully observe that these gentlemen did infinite harm. By their speeches and writings, the public were struck with terror; and when mercury, in appropriate cases, was proposed, patients would express the greatest apprehensions, and sometimes positively refuse to submit to a mercurial treatment. This terror was taking such root among the population, that, to recommend a powder to clean plate, the vendors were careful to state, in their advertisements, that it contained no mercury. Mr. Hutchinson, in his powerful advocacy of mercury, had stated that the drug was an *antidote* of syphilis. Such an assertion might, perhaps, be deemed somewhat too absolute; for the notion of an antidote always supposed a power decidedly antagonistic with a given poison. Mercury certainly possessed such a power, but not sufficiently decided and direct as to deserve the name of an antidote. Mr. de Méric thought that we were as yet so much in the dark as to the nature of the syphilitic virus, that we were hardly justified in ascribing to any drug the actual virtue of an antidote. He was happy, at the same time, to testify to the power of mercury in controling the symptoms of syphilis; a power which he had successfully used through a series of years. He was extremely glad to find that Mr. Hutchinson did not withhold the mercury in the treatment of syphilis when the disease had reached its so-called tertiary stage. He had long followed this practice, as it was plain that, whether the ulcerative period had been reached or not, we had always the same poison to deal with. This position was beautifully illustrated by the case of tertiary syphilis at Dalston, concerning which Mr. Hutchinson had been called in consultation. Mr. de Méric regretted that the time allowed for remarks prevented his taking Mr. Hutchinson's conclusions *seriatim*, and offering some observations upon them. They were all of the highest theoretical and practical value, though some might, as being too sweeping, offer an opportunity for some controversy; but he was happy to congratulate the Society on having been favoured by the reading of a paper so well calculated to strengthen a good cause.

Mr. Berkeley Hill said that the profession were under a deep obligation to Mr. Hutchinson for his decided opinion on the extreme importance of employing mercury in the treatment of syphilis. If he were permitted to answer the questions already put concerning the length of time that syphilis ought to be treated by mercury when commenced at the beginning of the disease, he thought Fournier's dictum the correct one, notwithstanding it had been mentioned as most dangerous to follow. Fournier said that mercury should be administered with short intervals for two years after the development of the indurated sore, which he took to be as much an integral a part of the disease as the cutaneous rashes. Mr. Hill quite agreed with this, and habitually told his patients that their malady would probably, not certainly, but as a rule, last two years; during which time they would have to take medicine, with occasional breaks of short duration. Mercury formed the principal part of that medicine. Mr. Hill much regretted the uncertainty prevailing among young men who had recently left the schools on the advisability of using mercury, and pointed out that such men as Paget, or Luke, or South were the most decided on the importance of using mercury in treating syphilis. For his part, Mr. Hill said, the more his experience increased, the more convinced he was that mercury should be employed in syphilis. On looking over his case-book that afternoon, he was surprised to see how habitually the disease had lasted a year and a half to two years; and of those whose health he had been able to observe during several years subsequently to their syphilitic disease, they who had obstinate relapses were just those who had been least persevering in carrying out their treatment. He believed now, far more than he used to do, that syphilis was a controllable disease, and should in no case be left to "simple" treatment. Dr. Drysdale quoted the statistics of Boeck of Christiania, as to the duration and severity of syphilis, to show that the patients of the Christiania Hospital suffered more severely from the sequelæ of syphilis years ago when mercury was given, than they had latterly since that remedy had been discontinued. Mr. Hill would remind Dr. Drysdale, that when the Christiania patients were treated with mercury, they were lodged in a building, very old and unsuitable for a hospital, and the mercury was given in the old-fashioned manner, namely, in copious doses, long continued; whereas those treated without mercury were well housed in a new building thoroughly adapted to its purpose. This difference might fairly be charged with some of the former ill-success, and the indiscriminate mercurialisation with the rest. At all events, the comparison was not trustworthy.

Mr. Lucas said he thought that mercury attacked only the effects of the syphilitic virus, and, therefore, ought not to be considered as an antidote in the strict sense of the term.

Mr. Hutchinson, in reply, said that he claimed the character of an antidote for mercury, because he held that it did really prevent the evolution of syphilis. If this were proved, there could be no doubt about the appropriateness of the term. In reference to the precise length of time during which it was advisable to prolong an antidotal course, experience was, as yet, very defective. His own plan had usually been to continue it for one or two months after the complete disappearance of every symptom. He thought it very probable, however, that future experience might show that the risk of relapses was much diminished by yet more prolonged administration. As regards dose, he held that it must be small enough to avoid any risk of ptyalism. Thus, it would vary much with the individual. He usually gave from one to three grains of grey powder three times a day. In allusion to the cases quoted by Dr. Drysdale, he said that they proved nothing more than that the primary and secondary stages of syphilis would pass away spontaneously—a fact which everyone admitted. The real question at issue was—Is the patient's system better rid of the virus when this stage is shortened by the use of mercury, or when it is left to nature? For himself, he held strongly it was far better to abridge it. He thanked Mr. de Méric, Mr. Berkeley Hill, and Dr. Ziemssen for the support which they had given to the main argument of his paper.

MANCHESTER MEDICAL SOCIETY.

Wednesday, October 1, 1873.

Lloyd Roberts, M.D., President, in the Chair.

Removal of the Vermiform Appendix.—Mr. Bradley related the case of a man, age 73, whom he had been called to see at the Manchester Infirmary, with strangulated inguinal hernia. On opening the sac, the bowel looked very little the worse for wear, but the vermiform appendix lay in the opening, perfectly black and apparently lifeless. A catgut ligature was placed around its base, and the organ cut off close to the bowel. The old man promised to make an excellent recovery. The sickness was at once arrested, and there were no symptoms of peritonitis; his bowels acted naturally; the external wound healed; and in a week he appeared tolerably well. Unfortunately, however, some injudicious friend smuggled into the hospital some cakes and fruit, which the patient ate. The consequence was that sickness returned; and, though it was never stercoraceous, resisted treatment, and the old man died exhausted, thirty-six hours after committing his indiscretion. As far as it was possible to judge, the death was not in any way attributable to the loss of the cæcal diverticulum.

Successful Colotomy in the Infant.—Mr. Bradley related the case of an infant, now three months old, on whom he had performed colotomy two days after birth. From the close approximation of the ischial tuberosities, and the entire absence of perineal bulging, he had opened the colon in the left lumbar region, without making an exploratory incision in search of the rectum. This, he argued, was the best course in such cases, as the almost invariable fatality of colotomy in the infant he believed to be largely due to the loss of blood which generally attended the exploratory incisions, which moreover were very often unsuccessful. During the operation, the kidney was wounded; but from this no evil effects appeared to have flowed. The bowel was eventually reached in a situation anterior to that generally occupied by the colon. He considered that, as a rule, the incision should be more to the front, or rather more in the side, than is generally recommended. The operator was not more likely to find the bowel by Littre's plan than by that of Amussat; while it appeared to him that, if life were ever tolerable with an anus in any situation but the natural one, it was desirable to have it as much towards the back as possible.

Bronchocele successfully treated by Phosphorus.—Mr. Bradley showed a girl, aged 20, who had an increasing goître for six years. She came under his care seven months since, at the Manchester Royal Infirmary, when she went through the usual iodine treatment, taking five drops of the tincture of iodine and ten grains of the iodide of potassium three times a day for six weeks, without the slightest benefit. She was then lost sight of for a time, but reappeared a month ago, with a neck bigger than ever, measuring twenty inches in circumference. She was at once treated with phosphorus, and in a week the bronchocele began to go, becoming small by degrees; and, three weeks after commencing the treatment, it was found to measure eighteen inches in circumference, showing a diminution of two inches. Mr. Bradley had not had any further experience of the value of phosphorus in the treatment of bronchocele; but Dr. Leech stated that he had found it much more efficacious than iodine in reducing glandular enlargements in the neck.

Poisoning by Carbolic Acid.—Mr. Stocks exhibited a piece of the small intestine, showing the corrosive effects of a dose of strong carbolic acid (impure). The woman, aged 39, lived four hours after drinking the acid. The mucous membrane was absent in the mouth and upper part of the œsophagus; and in the lower end it was of a whitish colour. In the stomach it lay in wreaths, apparently from the contraction of the muscular coat. The duodenum was filled with the *débris* of the mucous membrane of the stomach; and the valvulæ conniventes of the small intestines were rugged and disorganised, and of a brownish colour.

Hydatid Cyst in the Brain.—Mr. STOCKS showed a hydatid cyst removed from the left lateral ventricle of a lad 22 years old. The first sign appeared three months prior to his death, after he had received a severe blow upon the head. The symptoms were intense pain shooting through the head, slight giddiness, irritability of temper, occasional tremors as if he had some "terror on him," slightly dilated pupils, diplopia, and loss of memory, but no impairment of intellect. The convolutions of the left hemisphere were obliterated. The hydatid displaced five ounces of water, and had produced an opening through the brain-substance into the longitudinal fissure. He had no convulsions, and conversed rationally two hours before his death, which came on quietly, apparently from coma.

Amputation at the Hip-Joint.—Mr. LUND made some remarks on a case of amputation at the hip-joint, in a young man aged 18, for an immense tumour involving the left knee and the lower two-thirds of the femur. The operation was done on November 1st, 1872, and the patient left the hospital on December 28th, with only a small sinus from one of the sutures unhealed. He can now walk well by help of an excellent artificial limb, which seems almost to possess the power of flexion at the hip, but this is due to a movement in the lumbar vertebræ. The case was shown at the meeting, and the ease with which the man walked was very remarkable. Mr. Lund was of opinion that four circumstances rendered this a very successful case. Not more than two ounces of blood were lost from the cut surfaces of the stump at the time of the operation. Lister's abdominal clamp was used, with certain improvements in the form of the pad, etc., which Mr. Lund explained in the Museum Catalogue of the London meeting. Secondly, at the time of the operation, the patient was so placed on the table, close to the edge, that the assistant who held the limb could freely carry it backward and rotate it outward, so as to make the front of the capsule tense, and facilitate its division, without coming into contact with a leg of the table or any part of the framework. Thirdly, in closing the wound, the whole length of it was carefully adjusted, except at the centre, where a drainage-tube was placed, thus following out Mr. Lister's system of dressing, which in this case was done most carefully. The portion of the wound which was the last to heal was kept well beneath the middle of the dressings. Lastly, to disturb the patient as little as possible, in changing and renewing the dressings, Mr. Lund employed a peculiar form of "many-tailed bandage," in which one portion was securely fixed round the waist as a sort of belt, and the looser pieces, connected to it, were drawn up in succession at various angles, so as to support the part, and these attached by safety-pins. In this way, at any time, the stump could be got at easily.

Tumour of Eyelid.—Dr. SAMELSON showed a case of vascular tumour of the eyelid, of traumatic origin, which had resisted various methods of treatment.

Fungous Tumour of the Dura Mater.—Dr. HARDIE presented a female patient, aged 52, the subject of the affection described by Louis under this name. It was situated over the left temple; and, under the impression that it was a cirsoid aneurism, an operation for its removal was undertaken six months ago. It was then found to consist of brain-substance protruding through an aperture in the frontal bone. The mass was removed, and the flaps drawn together. No foreign tumour was found. The affection had existed six months, and there had been no symptoms whatever referable to the nervous system. The patient recovered, but the tumour at once began to grow again, protruding in a fungating manner through the incisions before they had cicatrised. It was now of the size of a fist. The differential pathology of these tumours was not well understood; and, in this case at least, the name was a bad one.

Enchondroma of the Hands.—Dr. HARDIE showed a specimen. The subject was a woman about 50 at the time of death. One hand weighed two and a quarter pounds, and the other one and a half pounds. On the latter there were also numerous lobulated vascular tumours, from the size of a marble to an orange, and in these, as well as in the veins of the arms, numbers of phleboliths were found. The bones of the forearms and legs were stunted and bulbous at the distal extremities.

Thoracic Aneurism.—Dr. LEECH showed the heart, aorta, and left lung of a man who died at the Chorlton Union Hospital, from rupture of an aneurism of the thoracic aorta into the left pleural cavity. The aneurism was situated on the posterior part of the aorta, at the juncture of the descending arch with the thoracic aorta. It had caused absorption of the bodies of the third, fourth, and fifth dorsal vertebræ, and of the fourth and fifth ribs. The duration of the disease, dating from the commencement of the symptoms, was about two years. Only on one occasion was murmur heard over the aneurismal tumour, which, during the last twelve months of the man's life, could be felt pulsating in the left interscapular region. The left lung was compressed by the aneurism, and also by effusion into the left pleural cavity. The patient did not die suddenly; though the left pleural cavity contained much blood, the hæmorrhage into it seems to have been gradual.

Disease of Kidney.—Dr. BARLOW made some remarks on a case of granular contracted kidney.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, NOVEMBER 22ND, 1873.

EVORY KENNEDY, M.D., President, in the Chair.

Report of the Thirty-fifth Session.—Dr. J. R. KIRKPATRICK, Honorary Secretary, read the Report of the past session. The members numbered 154, including 12 Honorary Members; and there were 10 Associates. Owing to non-payment of subscriptions, there was a small deficit in the financial statement, and the reserve funds had to be drawn upon for the amount. The second volume of the *Proceedings* was ready, and would be placed in the hands of the Members without delay.—Dr. CRONYN proposed, and Dr. MACSWINEY seconded, a motion for the adoption of the Report. This was carried unanimously.

President's Introductory Address.—Dr. EVORY KENNEDY delivered an introductory address. He stated that he had addressed the Society in the capacity of President on two previous occasions; the first, at its foundation in 1839; the second, at the beginning of the session of 1849. He alluded to the high status which obstetrical medicine had now taken—a result in great measure due to the influence for good of the Dublin Obstetrical Society, and other kindred institutions. The jealousy of other branches of the profession had been lived down, and great strides had been made in the knowledge and treatment of female diseases. The more immediate subject of his discourse was announced to be "Specific Diseases of the Female Organs of Generation." First in order came *gout*. Uterine ulcerations were often due to this cause, and speedily yielded to suitable, constitutional, combined with topical, treatment. Some clinical illustrations of this were brought forward. *Rheumatism* in connection with the uterus and its appendages was not easily diagnosed: but pain in the uterine region, more distressing in bed, non-periodic, in a patient of markedly rheumatic habits, should excite suspicion as to its probable cause. Warm hip-baths, counter-irritation, the external application of belladonna and chloroform, the adminstration of colchicum, quinine, and Dover's powder, and sometimes change of climate, were measures to be resorted to. This affection was likely to be confounded with (1) uterine neuralgia, (2) irritable uterus. *Essential Diseases*, such as typhoid fever and scarlatina, sometimes determined uterine or vaginal inflammations. Vaginitis and endometritis arising in this way might lead to adhesion of the walls and consequent closing of these canals. A remarkable case of occlusion of the vagina with retention of the menstrual fluid, in which relief was afforded by operation, although there was ultimate rectal menstruation, was detailed. *Syphilis* was *par excellence* the specific affection to which these structures were liable. The true Hunterian chancre was seldom observed in the uterus, most likely because the ulcerations there were seldom seen in the early stages. A case was given in which a primary chancre appeared on the nipple of a healthy woman as the result of suckling the syphilitic child of a friend. True venereal warts were generally situated in the vagina, where they occurred in bunches and might be mistaken for cauliflower excrescence. Bubo did not seem to be so common in women as in men; but it occurs, and was apt to pass into phagedænic slough. Dr. Kennedy then gave a series of axioms relating to the hereditary nature of syphilis, after which he considered at length the effect of the virus on the fœtus; miscarriages happening at any time from the second to the ninth month of gestation. In congenital taint, as in syphilis generally, the sheet-anchor was mercury, but the iodides of potassium and of iron were also very valuable. Sensitive papillæ and warts of a non-syphilitic nature were next described. *Scrofula* might result from an excess, or inappropriate supply of food of a too stimulating quality, in the children of the wealthy. The affection was essentially one of growth or development. It showed itself in the genital organs under the form of unhealthy ulceration of the labia, nymphæ, and vagina of children; but it was not till puberty, when the uterus, hitherto a rudimentary structure, became an excretory gland or organ, that scrofula was fully called out. So we could understand the influence of this diathesis in causing anæmia, amenorrhœa, and so on. In tracing the strumous habit to defective nutrition, it was necessary to notice the influence, in its hereditary development, produced by the practice of confining the reproduction to the same stock. There could be little doubt that the theory of evolution was to a large extent true, and the negative results consequent on a neglect of attention to hereditary selection, were especially observable in the case of scrofula. The remaining strumous affections of the uterine structures were acute and chronic ovarian inflammation (ending in abscess, or hydatid degeneration), pelvic abscess, the result of inflammation in the broad ligament; abrasions and ulcerations of the uterus itself; and uterine catarrh. The enlargement of the uterus frequently observed in these cases, was caused by inflammation, congestion, or subinvolution. The treatment of all these affections was of course to be topical, but it was more especially to be constitutional by cod-liver oil, iodide of iron, nutritive food, change of air to the sea-side, and very sparse and judicious administration of stimulants.—Dr. RINGLAND proposed, and Dr. SIBTHORPE seconded a motion,—"That the thanks of the Society be given to the President for his address, and that it be printed in the Society's *Proceedings*."

Election of Officers.—The President announced that the result of the ballot for the election of officers for the session 1873-4 was as follows:—*President*: Evory Kennedy, M.D. *Vice-Presidents*: Lombe Atthill, M.D.; Thomas Darby, F.R.C.S.I. *Committee*: F. Churchill, M.D.; John Denham, M.D.; G. H. Kidd, M.D.; G. Johnston, M.D.; A. H. McClintock, M.D. *Treasurer*: H. S. Halahan, L.K.Q.C.P.I. *Honorary Secretary*: J. Rutherford Kirkpatrick, M.B.

Vote of Thanks.—Dr. KIDD, proposed, and Dr. J. H. BYRNE seconded, a vote of thanks to the visitors. This was responded to by Dr. Duncan, President of the King and Queen's College of Physicians; Dr. Denham, President of the Royal College of Surgeons; and Dr. J. O'Neil, Governor of the Apothecaries' Hall. The Vice-Presidents of the two Colleges, Surgeon-General MacIlree, and several army surgeons were also present.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, DECEMBER 6TH, 1873.

ROBERT D. LYONS, M.D., President, in the Chair

Fracture of the Patella.—Dr. T. EVELYN LITTLE showed a specimen. There was no clinical history, but that the injury was produced by direct violence was evident from the existence of a scar. A vertical fracture divided the bone into two parts, the inner of which was subdivided into three pieces by horizontal fissures. Between these latter fragments fibrous union existed; whereas between the two larger fragments the attachment was membranous or ligamentous. Distinct evidences of chronic rheumatic arthritis were present in and about the neighbouring joints, but not in any of the other joints. This was in accordance with Mr. Robert Adams's remarks as to the influence of injury in predisposing to the local occurrence of chronic rheumatic arthritis.

Strumous Disease of Knee-joint and neighbouring Bones.—Dr. BARTON exhibited the left leg of a middle-aged woman, which he had amputated a few days before. The patient was married, and the mother of several children. After each confinement she suffered from strumous glandular abscesses. About a year ago, a few months after the birth of her last child, the left knee-joint became diseased, the joint being destroyed and the bony structures involved. On examination, a pultaceous lymphy effusion was found to have taken the place of the cartilages. Evidences of ostitis were apparent. In the lower part of the femur and the upper fourth of the tibia, the cancellated tissue was softened and infiltrated with a bloody fluid. External abscesses on the leg communicated with the interior of the shaft of the tibia, although the bone was not diseased, except in its upper part.

Incised Wound of the Abdomen.—Dr. E. H. BENNETT said that a short time since a man was stabbed in the abdomen by some Greek sailors. When admitted to Sir P. Dun's hospital shortly afterwards, he was drunk, and in a state of collapse, cold, and almost pulseless. Above the crest of the left ilium an incised wound was found, from which there was scarcely any bleeding. Pain was complained of only in the immediate neighbourhood of the umbilicus. Shortly after admission, the man vomited about a quart of porter and whiskey mixed, without any trace of blood. Incessant and uncontrollable vomiting ensued, resembling the vomiting of strangulated hernia, and continued up to the time of death, five days afterwards. Decubitus in the meantime was always on the right side; the patient constantly complained of being hungry; and he twice vomited a quantity of dark fluid blood. No fæces or flatus passed from the bowels at any time; there was no tympanites or extensive tenderness, and nutrient enemata were always retained. There was never any distress in passing urine; no hæmaturia or albuminuria. The collapse persisted more or less until death. The colon was wounded in two places, corresponding to the entrance and exit of the knife, which afterwards passed along the track of the left colic vessels (without wounding any large branch), through the posterior wall of the stomach, near its great curvature. The mucous membrane was everted through the opening, the calibre of which was consequently lessened on the visceral side. The knife then passed through the front wall of the stomach, in which the opening through the mucous membrane was larger than that through the serous coat, and penetrated the sheath of the left rectus muscle. The eversion of the mucous membrane through the first wound in the stomach of course took place when the knife was withdrawn. At the necropsy, where the peritoneal cavity was opened, intestinal gas escaped. The sac of the great omentum was distended with a large coagulum of dark blood, and there was a good deal of fluid blood. There were signs of low inflammation in the wounded rectus muscle, and this had been set up apparently by the escape into the sheath of the muscle of the contents of the stomach or intestines.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

SESSION 53.—MEETING II.

G. W. BALFOUR, M.D., and for a time, ARGYLL ROBERTSON, M.D., in the Chair.

Pedunculated Tumour of Eye.—Dr. ARGYLL ROBERTSON exhibited a pedunculated tumour, about two inches in diameter, which he had recently removed, with the eyeball, from a woman aged 50. The eye had been useless for about twenty years; but no tumour was seen till about five months ago, when a yellowish spot appeared on the sclerotic, which rapidly increased. At first, Dr. Robertson hoped that the eyeball only was involved, and simply enucleated it; but, finding, after a day or two, that small nodules appeared in the conjunctival cicatrix, he then cleared out the whole contents of the orbit, applying chloride of zinc to the parts. The tumour was a "soft spindle-celled sarcoma."

Various Tumours.—Mr. ANNANDALE showed a fibro-cellular tumour, which he had successfully removed from the region of the left tonsil, after cutting through the angle of the jaw; also a neuroma from the axilla; a glandular tumour from the mammary region; a lymphoma from the neck, which required section of the sterno-mastoid muscle; and a specimen of epithelial cancer of the scrotum and penis, which he had lately successfully removed; also a partridge-bone which he had removed from the œsophagus.

Large Gall-stones.—Dr. CARMICHAEL showed two gall-stones, one of very considerable size, and weighing 164 grains, which had been passed by an old lady, after very slight symptoms, little pain, and no jaundice.

Urethral Calculus.—Dr. CUTHBERT showed an urethral calculus, which had caused retention for twenty-four hours in a child.

Aneurism Treated by Iodide of Potassium.—Dr. G. W. BALFOUR, having left the chair, showed the parts concerned in the disease of two of his patients, who had been under observation for nearly seven years, and who had been treated for large aneurisms by iodide of potassium in large doses. Six or seven years ago, both patients had been apparently moribund, and both had recovered sufficiently to work for their living for years. CASE I.—Rice, seven years ago, had a pulsating tumour in his neck as large as a tumbler-mouth. This had disappeared under treatment, and, only a few months ago, he died suddenly, when working as a gardener, by a rupture into the pericardium. The aneurism was found to be contracted, thickened, and hardened, but not filled with any dense coagulum. CASE II.—Wilson had two aneurisms, one in the neck, the other in the abdominal aorta. He was observed for six years; and the latter seemed to be quite cured for three years; but it recurred, and he died after some suffering of gradual subperitoneal rupture of it. In his case, no coagula were found in his aneurisms, which had simply contracted and become firmer, with ossification at parts. Both cases, Dr. Balfour said, illustrated the *modus operandi* of the drug. It did not cause coagulation, but first acted as a sedative on the heart's action, and thus allowed, as a secondary condition, the hardening and contraction of the wall of the aneurism. By these means, life might be much prolonged, if the patient got a fair chance, by rest and quiet. The issue of these cases had only intensified Dr. Balfour's belief in the value of the drug as a palliative in cases of aneurism. Even in cases where the patient would not or could not rest, it did good. Dr. Balfour reported two interesting cases which were still under treatment.

Uræmia.—A paper by Dr. T. J. MACLAGAN of Dundee, on uræmia and the nervous symptoms of fever, was read by Dr. Muirhead, the secretary, in the absence of the author.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 24TH, 1874.

THE EVIDENCE IN THE WEST HADDON TRAGEDY.

WE have before us two comments upon our review of the evidence of the chemical expert, upon which the verdict of death from poison was delivered by the West Haddon jury at the inquest on the body of Mrs. Gulliver. On the one hand, we have comments with which we have been favoured by the most eminent British authorities—Christison, Taylor, Wilks, and Moxon; and, on the other hand, we have the published reply to our remarks of last week from the pen of Mr. Rodgers.

It will be seen, on reference to the columns in which we print these communications, that our judgment is sanctioned and enforced by the whole weight of the knowledge and authority of these most experienced men, and that the pernicious and reckless hypotheses which the expert substituted for evidence are not only in direct contradiction, so far as they relate to facts, to their whole experience, but must be condemned in that they violate the first principles of duty on the part of an expert, and threaten the security and peace of mind of all who are concerned in the nursing or care of the sick. Mr. Rodgers has thought proper to answer our arraignment of his evidence, by drawing up afresh an indictment against the woman whom his evidence drove to suicide, and has framed it on the state of the doors and windows, on the use of eau de Cologne, and on the general basis of moral evidence, all of which are wide of the mark.

His evidence bore on none of these points, and we are little concerned with any of them. We hold Mrs. Waters's statement on these points—which was not given at the inquest, but which we reproduced in the posthumous document which she had drawn up after the inquest—to be satisfactory. But, in any case, this is a matter for a policeman or for a prosecuting attorney to urge. The evidence of poison being administered, which caused death, is that for which he is responsible. His statements were definite, and he must justify them if he can.

They were categorical. First, he declared that a high temperature after death is incompatible with death from syncope; secondly, he asserted that it led him to the conclusion that death had occurred from the administration of a volatile poison immediately before death; thirdly, he arrived at this conclusion, and submitted it to the jury as explaining the cause of death, although he had found no traces of such poison, nor had any one else. He stated also that he had found unweighable traces of morphia in the contents of the stomach; and he intimates that morphia cannot be detected in the stomach after twenty-four hours. We shall deal briefly with the question of the morphia, because that is a secondary question. As to how the morphia got there, is a question with which neither he nor we are much concerned. It becomes an expert to remember that he is not a counsel for the prosecution, and must deal only with the scientific facts before him. Had that part of the question been fully investigated, it could, as we have intimated, have received, we believe, a satisfactory explanation in the use of cough-lozenges. But, so far as the morphia is concerned, we shall content ourselves with pointing out—1, that, as these traces of morphia were "not weighable, and certainly not sufficient to cause death," they do not enter into the immediate issue of death by poison; 2, that the detection of unweighable traces of morphia is among the most delicate, dubious, and unreliable of chemical operations. On this part of Mr. Rodgers's evidence, Professor Alfred Swaine Taylor writes to us: "Morphia may be weighed from the five-hundredth to the thousandth of a grain. On what quantity, then, did Mr. Rodgers operate? How did he separate this minute unweighable quantity from the contents of the stomach? and on what tests did he rely? As these matters were not given in evidence, I decline to accept the statement. There are no reliable, conclusive, or satisfactory tests for imponderable quantities of morphia; and I believe there is no medical jurist having any respect for his character who would, in a case involving life, swear to the presence of a quantity which he could neither weigh nor see."

We come now, however, to that part of Mr. Rodgers's evidence on which the charge of poisoning and the verdict of the coroner's jury were really founded.

Mrs. Gulliver was proved by *post mortem* examination to have suffered from excessive fatty degeneration of the heart, and her death had been certified to have been caused by the fatal syncope which is the common cause of death in such cases. Mr. Rodgers at the inquest rejected this as a cause of death, and substituted for it an allegation of death from a volatile noxious substance unknown, on the ground that there was a high temperature of the body after death. At this evidence we stand aghast, and we protest against it with stern indignation. Fortified by the experience and the opinions of the most eminent authorities, we once more declare it to be without foundation in fact, and without justification even as a suggestion. Regarded as a statement produced on oath before an ignorant rural jury in a case involving life, and looking to the consequences to which it led, we find it difficult to characterise such evidence as it deserves.

No statement whatever as to temperature after death can have any real value, unless the circumstances under which the body was placed be carefully noted, such as the surrounding temperature, the amount of clothing, and the period which had elapsed since death; unless the thermometer be used; and unless the internal temperature of the body be noted as well as the surface-temperature. The whole subject of temperature after death is one of much difficulty and uncertainty; and any conclusions which may be drawn from it must, as competent men have pointed out, be deduced with great caution, and must be regarded with doubt and suspicion. It will be seen with what caution Sir Robert Christison, after a vast and lifelong experience, states his opinions, and how entirely subversive that experience is of the theories which Mr. Rodgers, whose anatomico-pathological experience must of necessity be very limited, ventured upon oath boldly to affirm as facts. Professor Taylor and Dr. Wilks subjected this matter to extensive investigation a few years ago, and recorded the results of their investigation in the *Guy's Hospital Reports*. Professor Taylor now communicates to us his opinion of the statements made before the West Haddon jury as follows.

> The retention of heat in a dead body, even supposing this had been properly determined by a thermometer, is a condition depending on many accidental circumstances. Dr. Wilks and I performed many (100) experiments on dead bodies, and found that sometimes the body cooled rapidly and sometimes slowly. In death from syncope, as the result of sudden hæmorrhage, we found the heat retained for some time after death, even where the conditions were favourable to rapid cooling (*Medical Jurisprudence*, 2nd edition, vol. i, p. 49).
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> It is untrue that the retention of heat abnormally, admitting this as a fact, in any way negatives death from syncope. It is quite consistent with death from syncope, as a result of advanced fatty degeneration of the heart, that a high temperature of the body may be retained after death.

Dr. Wilks's letter, which we also publish, confirms this view. Thus all shadow of foundation disappears for framing an hypothesis such as Mr. Rodgers put forward. But what can we say of an expert who not only frames an hypothesis without scientific foundation, but deliberately places it before a jury on an inquest involving a charge for murder, as a proved basis for their verdict, and who makes this his ground for inventing a monstrous theory of death from an imaginary noxious volatile substance? The jury found no moral proof of the guilt of any individual, and left their verdict open in that respect. The chemical expert assumes the guilt of the individual, and invents a poison, of which he finds no traces, as the probable agent of her guilt. So monstrous a perversion of reason, and so wild and mischievous a misuse of "the scientific imagination", were surely never before seen in a British court of justice, or what claimed to be such.

OFFICIAL CHOLERA THEORIES.

DR. J. M. CUNINGHAM'S views on the spread of cholera, which are founded on the circumstances of the epidemic in 1872 in Northern India, and to which we have recently drawn attention, formed the subject of a paper and a debate at the last meeting of the Epidemiological Society; Dr. Cuningham, who has recently returned to England, himself taking part in the discussion. The views concerning cholera, which Dr. Cuningham has embodied in his official report, as Sanitary Commissioner with the Government in India, involve a denial that it is a disease communicable from person to person, or that it is ever spread by means of either water or air poisoned by choleraic discharges, or that human intercourse is the great means by which the poison is borne from its home and spread over the earth; and it is further evident, although Dr. Cuningham avoids saying it in so many words, that he favours the air-borne theory of the disease. That the conditions favouring the spread of cholera in India and in this country are not precisely similar, is highly probable; in India the disease finds a settled abode, and a soil—we use the term figuratively—congenial to its growth; in our own country, on the contrary, it has only prevailed when it has been brought to us from infected localities at a distance, and though it has on several occasions become fatally epidemic, it has as yet never been able to engraft itself permanently amongst us. But, if the poison of cholera has in one climate been unmistakably traced to the evacuations of persons suffering from the disease, and has hence, through the agency of specifically polluted water, been communicated to other people, those same evacuations can surely not be harmless elsewhere; neither is it likely that the specific poison should in one country travel by means of so definite a channel as human agency, and yet be entirely independent of that means of communication in another country.

The water-theory is especially obnoxious to Dr. Cuningham, and he is of opinion that no known outbreak of cholera in India has ever been fairly traced to a polluted water-supply; an opinion which is entirely at variance with the views expressed by nearly all Indian medical officers. There are cases referred to in Dr. Cuningham's report in which water certainly does not appear to have been the means of spreading the disease, as, for example, at Kussowlie, where a detachment entirely shook off an outbreak by a change of locality, notwithstanding the continued use of the same water. But it has never been suggested that water is the only vehicle through which the cholera-poison may be spread, and it is quite possible that, under certain climatic, and other conditions, water may not even be the principal means; indeed, it is highly probable that in India the specifically diseased bowel-discharges may have a greater influence in polluting the immediately surrounding atmosphere than they have in a climate like our own, and we cannot help regarding the marked beneficial results which followed upon the movements of affected troops to short distances or to neighbouring barracks, as instanced in the report, as having in reality been largely due to removal from a soil, and consequently an atmosphere, loaded with the poison emanating from diseased bowel discharges. On no theory of general aërial poisoning over an "epidemic area" could these limited removals, or the remarkable immunity of prisoners, on which such stress is laid, be explained. The jails in which the prisoners were confined were situated in the epidemic area, but whilst the prisoners were, to a great extent, if not entirely, isolated, the outside population who suffered from the disease enjoyed no such protection. And here we would refer to the frequency with which Dr. Cuningham alleges, that as regards first cases, there was no evidence of importation.

That he has, in many instances, arrived at this conclusion on grounds which must fail to satisfy others, his own report, we think, suffices to show; but even admitting that in many others his statement as to the absence of immediate infection is correct, we would submit that this by no means proves that the poison had been conveyed by means of some generally prevailing atmospheric conditions. In the case of scarlet fever we are all ready to admit that the poison will lurk about premises and clothes for an almost indefinite period, until at last, under circumstances of which we unfortunately are ignorant, it suddenly becomes again potent for harm. In like manner it is possible that some of those almost inexplicable outbreaks of enteric fever which occur suddenly over wide areas may be due, not to the spontaneous origin of the poison, but to the fact that the specific disease elements have, under circumstances favourable to their vitality, been hidden away, awaiting those conditions necessary for a renewed manifestation of their zymotic influence. At Terling for example, in 1868, this disease appeared almost simultaneously in nearly every portion of a scattered parish; but the district was one in which the same disease had frequently prevailed before, and in which the specific poison had had opportunities of accumulating in an excrementally polluted soil, the filth from which was so suddenly washed into the wells.

Cholera is, we believe, as regards the conditions affecting its spread, allied to enteric fever, and it is extremely probable that in India the specific poison, after for a time lying dormant, does again become powerful to spread infection. Interpreted by the aid of the ordinarily received theory which attaches to the bowel discharges a specifically poisonous character, it becomes easy to account for the reappearance of cholera in places where it has formerly been present, and to explain what Dr. Cuningham terms the "remarkable" manner in which cholera localises itself "in particular quarters of a place and even in particular buildings". Indeed, many of the characteristics of the epidemic of 1872, which in this report are deemed "remarkable", are no longer so when the attempt to explain them by means of the views which Dr. Cuningham has adopted, is relinquished. Another point to which prominence is given, is the general immunity from the disease which was enjoyed by the hospital attendants. At Benares, "none of the attendants on the sick were attacked"; at Allahabad, "of sixteen persons employed to attend the sick in hospital, none suffered"; at Chuckrata, "none of the hospital attendants, either Europeans or natives, suffered in any way"; and this experience is interpreted by Dr. Cuningham as strongly favouring his conclusions. Indeed, holding it in view, he asks whether the causes which have come under observation afford any evidence that the persons attacked have multiplied a poison which produced in others the same deadly symptoms from which they themselves suffered. We in turn would ask how it is that attendants in hospitals which were situated within the infected area exhibited such freedom from the disease which was prevailing around them, if that disease was due to any general conditions of atmosphere, and we would point out that, in the case of a disease which spreads essentially by means of infected discharges from the alimentary canal, a properly administered hospital is of all places the very one where the poison should be stamped out, and we would refer to the general experience which we have that enteric fever does not, like typhus or scarlatina, spread in hospital wards. We see no reason to alter our opinion as to the infectious nature of cholera, because, in certain instances, apparent contact with the poison has not been followed by symptoms of the disease, and we would point out that any views to the contrary which rely for support on such experience as that recorded in the report, to the effect that "the clothes and bedding of some of those who died from cholera, and which were much soiled with the cholera discharges, were sold by auction and distributed among the residents", and yet "no evil results followed", rest upon purely negative evidence, which, however abundant, cannot be compared with the clear positive evidence of infection which we hold has been afforded in other instances.

Reading those portions of Dr. Cuningham's report which relate to "importation and communication" in conjunction with the observations he made before the Epidemiological Society, it is impossible not to observe how rigidly all evidence which was apparently opposed to the author's views was sifted, and how it was discarded if it was not clearly supported by the facts elicited. Such a course was unquestionaby the right one to adopt, but it is just to remember that, according to Dr. Cuningham's own statement, it is most difficult in prosecuting inquiries of this nature in India, to attain to even an approximation of the truth, especially where native officials are concerned; and we cannot help still further adding our opinion, that, if the same rigid rules had been adopted in accepting evidence on the other side of the argument, this report, to which Dr. Cuningham's name and position lends so much weight, would not have contained some of the conclusions on which it is evidently based.

REGISTRATION OF BIRTHS AND DEATHS IN DUBLIN.

A CONSIDERABLE amount of alarm has recently been excited in Dublin by a report that 25 per cent. of the deaths which occur to the Dublin registration district are not registered, and therefore that the death-rate of Dublin, which already reaches the high figure of 26 per 1,000, is considerably higher, say 32 per 1,000. We believe that this alarm has been unnecessary, and that the deaths in Dublin are by no means so badly registered as some believe. In fact, we do not think that, under the present system, such could be the case, as a large number (last year 31 per cent. of the whole) occurred in public institutions, and therefore cannot escape registration; a considerable number more are known to the medical officers of the dispensaries, and therefore can scarcely escape. We must also remember that, except in the case of children, and these are not always exceptional, certificates are required to obtain money either from burial or from benefit societies. There are two grounds for believing that many of the deaths which occur are not registered. 1. The population of the Dublin registration district has been practically stationary for the last ten years. In 1861, the population was 314,409; in 1871, 314,666; the increase being but 257; but, as we shall presently see, there is another method of accounting for this stationary state of population without an excessive death-rate. 2. More bodies are buried in the Dublin cemeteries than can be accounted for by the deaths registered in the Dublin registration district; but we must remember that the Dublin registration district does not include a considerable portion of the suburbs of the city, the dead from which are buried in the Dublin cemeteries. Besides, a number of people who die in the country properly so called are buried in the City cemeteries. It is therefore necessary, in making speculations of this sort, to take into consideration the vital statistics of the whole county and city. Not only are those who die buried in the city cemeteries, but those who die in public institutions are, to a great extent, derived from the rural or suburban districts.

The population of the county and city of Dublin in the year 1861 was 410,252; in 1871, 405,262; showing a decrease of 4,990 for the whole county and city. Of the 405,262, there were, in the Dublin registration district, 314,666, leaving a balance outside the district of 90,596; of these, about 30,000 belong to the Dublin suburbs: viz., 2,747 in Clontarf; 4,985 in Drumcondra; 2,144 in Finglas; 4,304 in Glasnevin; 7,241 in Rathfarnham; 6,744 in Palmerstown; leaving only about 60,000 of a rural population, and many of these are in small towns. We have thus, as a population of Dublin and its suburbs, about 345,000.

Now, let us consider what are the gains and losses of the Dublin population, city and county taken together. This is by no means an easy problem, and is subject to a very remarkable disturbing cause, not of constant action—namely, emigration. The gains to the Dublin population consist of births and persons who have migrated into Dublin from other parts of Ireland and the sister countries. The number of persons not born in the county and city of Dublin who were living therein at the time of the census of 1871 in excess of the same class in 1861 was 11,986; this, or at least a considerable portion of it, must be considered as a gain to the Dublin population—we may say 11,000. The number of births registered during the nine years, 1864 to 1872 inclusive, was 98,143, or 10,905 each year—about 109,048 for ten years; so that the gain to the Dublin population during that period would be 120,048.

The loss to the Dublin population during the same period must consist of deaths *plus* emigration. The emigration during the nine years amounted to 27,869, at the rate of 3,095 *per annum*, or about 30,964 in ten years. The deaths registered in the county and city during the same period amounted to 90,485, or 10,054 *per annum*—equal to about 100,539 for ten years. The total loss, then, to the Dublin population for ten years should be 131,503. The estimated diminution of the Dublin population (county and city) for ten years should be 11,455, or in round numbers 11,000; but the real loss between the census of 1861 and 1871 is but 4,990, or in round numbers 5,000; so that, assuming that all the births and deaths were registered, and the emigrants properly enumerated, we have a less loss in round numbers of 6,000 in the ten years than we should have had. If the deaths had not been registered, say to the extent of but 10 per cent., we should have a greater loss by 10 per cent. of all the deaths registered, or a loss of about 10,000 in addition to the estimated loss, or a total estimated loss of about 21,000 of the population, instead of 11,000; but we find the real loss is but 5,000, instead of 11,000. This can only be accounted for in one of three ways: either the emigrants were over-estimated, which is improbable; the settlers in Dublin were under-estimated, which we feel sure is not the case; or the births were badly registered, which last seems the most likely way of accounting for the discrepancy. That the registration of deaths is not very imperfectly carried out, may, we think, be concluded with a good deal of certainty from the preceding observations.

Dr. J. BRAXTON HICKS has lately been elected an honorary member of the Obstetrical Society of Philadelphia.

A NEW French dental journal—*Le Progrès Dentaire*, edited by Mr. Mordaunt Stevens, M.R.C.S.—appears this month in Paris.

THE municipal council of Vienna has resolved to confer the honorary freedom of the city on Professor Rokitansky, on the occasion of his attaining his seventieth birthday.

DR. BUCHANAN, senior medical inspector on Mr. Simon's staff, is now prosecuting, by direction of the Medical Department of the Local Government Board, an inquiry into the sanitary state of the town and University of Cambridge.

PROFESSOR RINDFLEISCH of Bonn, the author of the well known excellent work on pathological anatomy, has been offered and has accepted the chair of Pathological Anatomy in the University of Würzburg, in the room of Professor Klebs, who has received an appointment in the University of Prague.

THE case of an humble imitator of Louise Lateau is reported from San Francisco. The stigmata were present in the signs of intense agony, and there were many believers, but the stigmata were ascertained by Dr. Short to be produced by the nails of Miss Collins herself. The story is instructive and interesting enough; but it comes from afar, and will probably not produce much impression in Belgium.

DEPUTY SURGEON-GENERAL HOME, V.C.

OUR readers will regret to learn that Deputy Surgeon-General Home has been invalided from the Gold Coast. An attack of African fever has compelled him to seek repose from his exhausting duties; and in the course of a week or ten days he will arrive in England. The great energy and unremitting labour which this officer has devoted to the task of organising and superintending the successful medical arrangements at the seat of war have proved too much for a delicate constitution; and we see that in this, as in too many other instances of late, the sword has worn out the scabbard. It is fortunate that Surgeon-Major

Mackinnon has recently arrived at Ashantee, and is therefore able at once to fill up the vacancy created by the indisposition of Dr. Home. We were enabled to state some time ago, that such an arrangement was probable in case of the unfortunate occurrence we now record.

TYPHOID FEVER IN CAMBRIDGE.

THE Special Committee appointed to consider and report upon the recent occurrence of typhoid fever in Cambridge do not appear to have found out much that was not known before. They are prepared to defend well-made brick sewers, with, as far as may be, water-tight inverts; and, so far as large mains are concerned, we certainly agree with them. We are told that, "during the investigation, it was discovered that some few lateral drains had become defective and in unsafe condition." It had been pointed out some years ago by the British Association Sewage Committee, that many of the wells were polluted by soakage from defective drains; and, if the Special Committee mean to defend the construction of small sewers of brickwork instead of impervious pipes, we must join issue with them at once. It is admitted that the main outlets are under the surface of the water of the river; but we are informed that "in each case the mouth is turned down with a very sharp curve, so that the sewage-matter, being discharged under water, has not caused it to be backed up and choke the sewers as stated." Now this is not the point; for, as the sewers end under water, it is clear that the sewer-air has no outlet at the outfall, and must be forced backwards into the town. As to the defence of the ventilation of the sewers set up on the ground that "many lateral drains from the rain-water pipes act as conductors for ventilation," it has been so often shown by competent authorities that, even if rain-water pipes be connected directly with the sewers at all (which is itself a questionable practice), they ought not to be trusted for ventilating purposes, that we cannot consider such a statement as an answer to the charge. The Special Committee do not appear to have been able to assign any cause for the outbreak of fever, and content themselves with a very poor defence of sewerage arrangements which have been condemned by those who have studied the subject, both generally and as regards Cambridge in particular.

THE BROWN INSITUTION.

AN effort was made in Convocation of the University of London this week to array the prejudices which were shown in the recent public attack on Schiff against the Brown Institution. The occasion was found in a well deserved vote of thanks to those concerned in the labours which have resulted in the provision of this valuable institution in connection with the London University. The good sense of Convocation detected, however, the fallacy in the arguments of those who concur in sacrificing countless myriads of living animals for the gratification of the appetite and sustenance of the body, but who prohibit the dissection of a nerve or the exposure of a vein in a chloralised frog with the object of learning to comprehend the mysteries and alleviate the sufferings of animals and of living human beings.

THE ASHANTEE EXPEDITION: THE ALLEGED YELLOW FEVER.

MR. E. J. LLOYD, M.B., Surgeon of the *Volta*, which has this week arrived from Cape Coast Castle and other West African ports, favours us with some notes of interest concerning the cases of sickness on board that ship and on the coast which have been described (with some inaccuracy) as yellow fever. Mr. Lloyd writes:

"The *Volta* sailed from here on November 6th, 1873, with nineteen army officers and Army Hospital Corps men, etc., with myself as ship's surgeon. All arrived at Cape Coast Castle in high spirits and excellent health. There was a great deal of sickness reported on the Coast between Cape Coast and Old Calabar. Most of the white men I consulted (that had lived on the Coast some time) said they thought that the 'dry season' is the most unhealthy, and the 'wet season' the most healthy, for Europeans. Yellow fever was said to prevail at Bonny. There was no properly qualified medical man there, and I have reason to believe that cases of African bilious fevers are called yellow fevers because, in the bilious fevers, the European skin does become yellow from the colouring of the bile in the blood, just as it would from obstruction to the gall-duct. There was no distinct history of 'black vomit.' In one or two cases it was said to have occurred a few minutes before death, but we have seen blood turned black by gastric juice ejected shortly before death at home. We had four deaths on board between Bonny and Cape Palmas. One was from heart and liver disease; one from African bilious fever; one from sun-stroke; and one from pleuropneumonia. The pleuropneumonic patient was an African; and I learn that pleuropneumonia is a very common disease in Africa among the natives. The case of fever occurred to a man of very feeble constitution. It was a slow continued fever, lasting ten days; the patient dying on the tenth day exhausted, and without a trace of anything like black vomit. There were no remissions in this case, although they generally occur in African fever. We had a few other cases of fever which recovered, the fever lasting about four days and the patients becoming jaundiced. They were treated chiefly with cholagogue purgatives, with the object of diminishing the amount of bile. We were put in quarantine at Cape Coast Castle on the return voyage, and at Madeira and Lisbon, although I do not think we had an infectious disease on board; but the 'yellow fever report' was enough. It is certainly true that a large number of deaths have occurred in the homeward steamers lately; but the question is—Is it yellow fever that kills them?"

THE PRESERVATION OF INFANT LIFE.

DR. FRIEDINGER, the director of the Vienna Foundling Hospital, has lately shown how greatly the mortality of children within the first year may be influenced by the conduct of those who have the care of them. Until a few years ago, the Jewish infants were unwillingly received by the nurses; none but the most inferior would take charge of them, and the mortality among them was as high as 83 per cent. After consultation with the Jewish council, Dr. Friedinger offered a reward of five florins to each nurse who would take charge of a Jew child, and an additional five florins if it were alive at the end of a year. The result has been, that the mortality fell on the first year to 60 per cent., in the second to 43 per cent., and in the third to 29 per cent.

THE WESTMINSTER HOSPITAL.

A FEW weeks ago, in noticing the annual report of the Westminster Hospital, we drew attention to the earnest manner in which it spoke of the evils attending the present mode of out-patient practice; the report of the subcommittee appointed to inquire into the subject is now before us. A more valuable and important document upon these much debated questions has not appeared for a long time. The subcommittee addressed their inquiries mainly to four points:—"1. The objects contemplated by the founders of the hospital, as recorded in minutes made at the time; 2. The nature and extent of any existing abuses in the out-patient department; 3. The practice of other hospitals, as also of dispensaries in adjoining districts; 4. The practical measures best adapted to supply a remedy for any ascertained abuses, if possible, in concert with other hospitals in contiguous districts." Upon all these points, the report gives precise and detailed information. The conclusions arrived at are—that the hospital was intended for *relieving the sick and needy*; that there existed a certain measure of abuse; that the waiting-rooms were overcrowded by a class of applicants, many of whom would be better cared for if they were on the books of a provident dispensary, or of the Poor-law dispensary of the district. As the best means of meeting these evils, the report suggests the abolition of governors' letters as far as out-patients are concerned; the nomination of a "registrar of out-patients, to be appointed by the House Committee for that special duty, and to be held responsible for its faithful performance," with specific instructions not to place on the register-book any patient who, he has reason to believe, "can afford to pay for medical advice and medicines," or who is "in receipt of parish relief, and, therefore, already provided for by the institution of Poor-law dispensaries." "The only difficulty that has been suggested lies in the application of a rule to exclude all who are able to pay for advice, either at the rate of charge usual among the medical practitioners of the district, or the provident dispensaries. The mere receipt of a certain amount of wages or income is not always sufficient to determine the fact." To meet this difficulty, the registrar is to be desired to refer doubtful cases to the secretary, who will be authorised to employ the district office of the Charity Organisation Society for purposes of investigation. The subcommittee point out that, in order to effect these reforms, "it is not a new rule that is needed, or the introduction of a novel element, so much as the more strict application of a principle laid down from the beginning by the founders of the hospital." They mention that there are already two provident dispensaries in the neighbourhood, and that it is reported that the Western Dispensary is about to be reorganised "on the provident principle, as better adapted to meet the wants of the surrounding population, with a due regard to their means and their true interests." They conclude by expressing their belief that, if the measures they suggest were adopted, "any arbitrary limitation of numbers as to new cases will be unnecessary, while the existence of three provident dispensaries in the surrounding district will adequately supply the means (even to those of the working classes who are in the receipt of inferior wages) of obtaining advice and medicine in sickness. The small amount these require from their subscribers to secure prompt and continuous treatment from properly qualified medical men, with the additional advantage of attendance at their own homes when their cases are such as to make it necessary, is within the means of all but the absolutely destitute. The funds of the hospital will then no longer be misapplied by supplying relief to those who are not in need of charity. The medical staff will cease to be pressed beyond their power to meet the demands made upon them, and enabled to give that care and attention to the cases which is essential. The quantity of advice applied for may be largely diminished, but the quality will be improved, to the manifest advantage of the patients and the medical staff."

GOVERNORS' LETTERS.

THE paper by Sir Charles Trevelyan, which we noticed last week, brought together several valuable opinions upon the subject of governors' letters. The most weighty of these were gathered from the reports of the subcommittees, which were appointed in March 1870, by the meeting of the medical profession upon out-patient administration—a meeting which has hitherto borne but little fruit in comparison with what one might have expected from it. The verdict of the subcommittee on general hospitals was so strong, that we cannot but wonder that, after such an authoritative expression of opinion from those best able to judge, the Committee of the Hospital Sunday Fund should have given the weight of their sanction to the practice by asking for an equivalent in letters of recommendation for the sums paid to each hospital, and distributing them to the clergy in whose churches and chapels collections were made. Surely an independent and influential body, like the Committee of the Hospital Sunday Fund, might do a great deal to bring about a much needed reform by discouraging the system of admission by governors' letters, and by setting the example of asking no *quid pro quo* for the donations which the charity of the metropolis enables them to bestow upon the various hospitals and dispensaries. If this were done, the medical charities would soon abolish this obnoxious and unreasonable mode of admission. We trust, therefore, that before the next Hospital Sunday, the Committee will take this matter into their consideration, and determine to withdraw their countenance from a system which has been condemned by those who are the most competent to form a judgment upon it.

DR. MEYMOTT TIDY ON BUTTER.

AT a recent meeting of the Medical Officers of Health presided over by the Public Analyst for Paddington, and attended by the Professor of Chemistry in St. Thomas's Hospital, the Professor of Practical Chemistry in Guy's Hospital, and other public analysts, Dr. C. Meymott Tidy read a paper on the Adulteration of Butter; and, in the course of his paper, gave a very singular account of the chemical nature of butter. According to Dr. Tidy, butter contains no stearine, oleine, nor palmitine ("the amount of stearine, oleine, and palmitine, in the composition of butter is practically *nil*"), whilst dripping, lard, suet, and other fats, are distinguished from butter by containing much stearine, oleine, and palmitine. It does not appear from the report in the *Times* newspaper (which devoted about half of one of its columns to an account of the meeting) that any protest was entered by any public analyst against so outrageous a chemical blunder. As any one may learn, who will take the trouble to refer to any respectable handbook of Chemistry, there is no such difference in the constitution of butter and other common kinds of fat as Dr. Tidy represented. Butter and dripping resemble one another, much in the same way as a red silk handkerchief resembles a blue silk handkerchief. Like the handkerchiefs, both are mainly composed of the same chemical substances; and, as the handkerchiefs differ in being dyed with different dyes, so butter and dripping are flavoured with traces of different substances. We hope that Dr. Tidy has not yet fined any dairyman for selling butter containing palmitine.

PATHOLOGICAL SOCIETY OF LONDON.

WE understand that Mr. Campbell De Morgan, F.R.S., is to open a discussion on the nature of cancer at the meeting on March 3rd, when he will give the result of his experience on this subject, and will, we trust, elicit much valuable information from other members of the Society.

THE NEW DENTAL HOSPITAL.

THE new dental hospital in Leicester Square will be ready for occupation in March. It is a building of ample frontage, and has been carefully adapted for dental operations. It will include a large and lofty meeting room, with a gallery round it, for the purposes of the meetings and museum of the Odontological Society. The larger proportion of the funds for its erection have been provided by members of the dental profession. Mr. Edwin Saunders headed the list with a donation of £500, and has been active in obtaining contributions and superintending the carrying out of the plans. A special room for the administration of anæsthetics is provided on the ground-floor; it contains a large gasometer for nitrous oxide. On the third floor is a room for "stopping" purposes, capable of holding thirty chairs. The institution will be a very complete one of its kind, and is highly creditable to the liberality and public spirit of the dental profession in this country.

DR. JOHN J. PHILLIPS.

IT is with great regret that we announce the death of this rising member of our profession, the assistant physician-accoucheur at Guy's Hospital, who had won the esteem and good opinion of all with whom he was brought into contact. He had latterly been overworked, although against the advice of his friends. He was taken during the night of Wednesday, January 21st, with apoplexy, and expired at three the following day.

DR. PETER ALLEN.

WE regret to hear of the death of Dr. Peter Allen, who has been favourably known during the last few years in the metropolis as aural surgeon to St. Mary's Hospital, and the author of a work on *Aural Catarrh*. Dr. Allen was a man of middle age, and of good health, and was in full professional activity until a few weeks before his death, when he was attacked with typhoid fever. The news of his premature death will be received with great regret by the many friends he had made in the course of a short metropolitan career. Before coming to London, Dr. Allen had been engaged successfully in general practice in Yorkshire. He was attracted to London by the desire to practise aural surgery, and in the belief that circumstances afforded a favourable opportunity for fulfilling that wish. The result, we believe, proved his anticipation of success to be well founded. Death has been very busy of late in the consulting ranks of the profession in London; and this is one of the instances in which the stroke has been most unexpected, and will be most regretted.

THE CHEMICAL ACTION OF MUSCLE.

AT a recent meeting of the Silesian Scientific Society, Dr. Gscheidlen described some experiments which showed that muscle in a state of activity has a reducing power on substances rich in oxygen. Solutions of an alkaline nitrate (from 1 to 10 per cent.) were injected under the skin of the back or thighs of frogs. One of the sciatic nerves was then cut through; and tetanus was induced by means of strychnia. After this had lasted from one to six hours, the thighs were separately broken up into small pieces and rubbed up with water. The resulting extract of the muscles which had been in a state of activity, in the course of a time varying from half an hour to two hours, sometimes still later, on being treated with iodide of potassium and starch slightly acidulated with sulphuric acid, showed, by the formation of a blue colour, the presence of nitrites; while in the muscles that had remained quiescent, this reaction did not occur till the end of twenty-four or thirty-six hours, or even later. The formation of nitrites is not hindered by covering the skin with oil or by preventing pulmonary respiration. The reducing action of muscles may also be shown by the following experiment. If the muscles of a frog that has been tetanised be rubbed with an equal quantity of water, and placed in small flasks which are then filled with a weak alkaline solution of indigo, the contents of the flask in which the extract of the muscle which has been in a state of activity has been placed will be coloured in a quarter or half an hour; while, in the flask containing the extract from the quiescent muscle, the colouring does not appear till the end of twenty-four hours.

IRELAND.

HOSPITAL SUNDAY FOR DUBLIN.

THE Hospital Sunday movement has been launched, though under somewhat disadvantageous circumstances. A public meeting was held in Molesworth Hall, on the 16th instant, under the presidency of the Earl of Meath; whose son, Lord Brabazon, may be considered as the soul of the present movement. The meeting was well attended, and, but for the absence of the Roman Catholic clergy, would have been as thoroughly representative as any we have seen in Dublin, It included several of the noblemen resident in Dublin, the Archbishop of the Irish Protestant Church, with many leading clergy of the same; ministers of all the Nonconformist bodies, many members of the city corporation, and we need scarcely add nearly all the leading members of our own profession, including the Presidents of the Colleges of Physicians and Surgeons. The College of Physicians, which had a meeting for the same day and hour as that appointed for the Hospital Sunday meeting, adjourned theirs, and proceeded *en masse* to the Molesworth Hall. The proceedings were of a very satisfactory character, able speeches being delivered by the Chairman, the Archbishop, Lords Brabazon and Monck, Sir J. Napier (ex-Lord Chancellor of Ireland), Colonel Taylor, M.P. for the county Dublin, Mr. Justice Lawson, the Revs. Dr. Kirkpatrick, Dr. Neligan, F. Stevenson, J. G. Scott (Rector of Bray), and Drs. Churchill, Evory Kennedy, Jenner, Little, and Heming. Many of the speakers, especially Lord Brabazon, put the case strongly and well from all political, religious, and Christian points of view. Unfortunately, it was the Chairman's duty to read a letter from his Eminence Cardinal Cullen, stating that he did not see his way to join in the movement, because he thought the two hospitals (Mater Misericordiæ and St. Vincent's) in which he was interested, were likely to suffer. We are sorry to say that space will not permit the publication of all the Cardinal's statements, but we do not see that they in any way justify his refusal to join in a common movement on behalf of Christian charity. We believe that this is the first movement ever attempted in Dublin, in which it was proposed that all sects should unite for a common Christian object. We wish Dublin every success in its Hospital Sunday, and hope soon to hear that the Cardinal has changed his mind, and followed the example of the English bishops of his own Church.

THE APOTHECARIES AND CHEMISTS OF IRELAND.

A JOINT deputation from the Apothecaries' Company and the Chemists and Druggists' Society has waited on Lord Hartington, to solicit him to bring in a Pharmaceutical Bill, similar to the Act pased for England. A considerable number of statements were made on behalf of the two bodies going in the deputation, complaining of the want of *Pharmaceutists* in Ireland—a want which we know is much felt in the smaller provincial towns, where, in fact, it is almost impossible to get a physician's prescription compounded. It appears that the Irish apothecaries want, in addition to their present extensive powers, to be empowered to issue a purely pharmaceutical license, but entitling the holder to practise medicine, which the present Irish apothecaries' license seems to do; at least, so it is interpreted by the Local Government and other public boards, although the original intention of the qualification was similar to that issued to English chemists and druggists, and was merely, we believe, to entitle the holder to open shop and compound prescriptions. Under this belief, the Irish College of Physicians abandoned their practice of superintending Irish apothecaries. We think that neither of the Irish Colleges will consent without a struggle to allow the Apothecaries' Company more extensive power than they already possess; and we think that the Irish Apothecaries' Company should show that they have already fulfilled the intention of their founder, by providing proper pharmaceutists for Ireland, instead of abdicating their normal functions, and entering into an abortive competition with the Irish Colleges of Physicians and Surgeons, before any further powers are conferred upon them by the State. We believe the question will shortly be brought under the notice of the College of Physicians. Sir D. Corrigan, whose name seems to have been rather unwarrantably made use of at the Apothecaries' deputation, writes to the Dublin morning journals, denying that he had approved of the measures proposed by the deputation. We are glad to find that the Chief Secretary's remarks pointed to his opinion that the question should be taken up by Sir Dominic, if by any one. This shows an admirable disposition in the Irish Government to refer such matters to skilled opinion before acting thereon.

SUGGESTIONS REGARDING MEDICAL EDUCATION.

AT the present time the following suggestions, by Mr. B. Wills Richardson, an examiner in the Royal College of Surgeons, Ireland, may be considered worth perusal by those who take an interest in this important subject. 1. Each student should pass the entrance examination of an university; but should the English language not form part of the entrance curriculum, then each candidate should be required to pass an examination in English grammar, and writing from dictation, in whatever licensing institution he might intend to register. 2. There should be periodical examinations in anatomy, physiology, medicine, and surgery, so that the student would have to commence the studying of the practical duties of his profession from the period of his registration. The licensing bodies should also establish a college course, composed of standard medical, surgical, and physiological works, out of which students should only be questioned. 3. In order to carry out these suggestions, and insure practical study, the examination should be held at the end of each session, or of each student year, or of both. The first examination should be practical; the second, literary. *First Year* (April practical examination, demonstrative by the student).—Anatomy: The bones, excluding those of head, hand and foot. Surgery: Dressing, bandaging, and splints. (September literary examination).—A standard work on the rudiments of medicine, of surgery, of physiology. *Second Year* (Practical).—Anatomy: Bones of head, hand and foot. Surgery: Minor operations. (Literary).—Part of standard works on medicine, surgery, and materia medica; with the physiology of absorption and digestion. *Third Year* (Practical.)—Anatomy: Arteries and their relative anatomy, deligation of arteries; on drugs. (Literary).—A standard work on medicine, on surgery, on medical jurisprudence, on materia medica, and on physiology. *Fourth Year* (Practical).—Anatomy: Nervous system, contents of thorax and abdomen, genera-organs of male and female; operative surgery. (Literary).—Special work on some important medical and surgical subject, and a work on diseases and surgery of the eye. 4. When these examinations have been passed, the degree should be conferred. 5. An examination must be passed before the student can enter his name for a subsequent examination.

REPORTS
ON
SANITARY ENGINEERING IN HOUSES, HOSPITALS, AND PUBLIC INSTITUTIONS.

By WILLIAM EASSIE, C.E.

IX.—Warming and Ventilation.

The ordinary fireplace of the present day is a disgrace to our community, for it permits fully three-fourths of the fuel consumed in the grate to be completely wasted. The objections to be urged against it are many. Besides those of waste and incomplete and unequal heating, are the draughts of cold air which flow firewards, to the great inconvenience of the occupants of the room; the insufficient ventilation of the apartment, the aptitude to smoke, and the prevalence of dust; the cost of frequent chimney-sweeping which it necessitates, the labour of having continually to supply fuel for combustion, and the risk of fire to person and to property which it always renders possible.

The use of objectionable grates is still persisted in, it would seem, because they are cheap, and because the commonest workman can fix them. It is in the cottages of our artisans that the worst specimens are to be found; but many patterns nearly as bad are foisted into the drawing and other rooms of the upper classes.

A good fireplace admits of a steady consumption of fuel, and does not waste it. All the heat produced by combustion is realised in the room; the fire needs little attention, and no poking to keep it from forming black cinders; and, whilst the room is sufficiently warmed at the expense of a minimum amount of firing, a thorough ventilation is secured.

The majority of the best residences are now supplied with register-stoves, and fitted up with fire-clay lumps. Compared with the older patterns in use before Count Rumford's time, these have done excellent work. When fresh air is led from the exterior atmosphere to these and all other grates, a considerable improvement is added. It will not be necessary in a journal like this, however, to point out what doubtless every reader knows by experience: I shall, therefore, now describe a few of the best grates which combine warming with ventilation, then give a description of smokeless and slow combustion grates, and conclude this paper with a notice of several of the best kinds of stoves.

Open Ventilating Grates.—This is the name now given to those grates and stoves which are immediately connected with chambers into which fresh air from the outside is led and heated, and out of which such warmed air is passed into the room. They are destined soon to replace all the more old-fashioned articles, not only because by their adoption the heat is utilised, draughts rendered impossible, and due ventilation secured, but because they offer facilities for heating adjoining rooms, or rooms in the upper stories, from one and the same fire, simply by leading tubes to these places from the warm air chambers. It may, therefore, be as well to describe a few of the more important kinds.

Fig. 97 gives a view of the Galton ventilating fireplace. The grate is fitted with iron gills at the back (see plan A), which gills are heated by the burning material in the grate; and as fresh air passes through the grating at the back into the chamber formed by this gill-surface and the brickwork recess, it is warmed, rises up the hot-air flue leading out of the top of the chamber, and finds a passage into the room near the ceiling. In some cases the warmed air passes into the room near the top of the chimney breast through a louvre ventilator, and it is also frequently led into the room from behind a perforated metal plate in the coving of the cornice. The inside of the grate is lined with fire-clay lumps, and a half-inch space between the *back* lump and the iron back of the grate admits a supply of air to the fuel and secures a more perfect combustion of the gases. The smoke passes up the chimney-flue in the usual manner, in a separate iron pipe, having no connection with the hot-air flue, as will be noticed in the elevation B and section C. This system of fireplace works admirably, provided the smoke-flue be properly attached to the grate. Despite all precautions there is frequently a slight escape of smoke, which is indicated by a blackness round the inlet near the ceiling. This, however, may arise from the smuts with which the cold air entering from the outside is loaded; and in both cases I should recommend a filter of cotton-wool, to be placed, if possible, at the fresh-air inlet outside, and a second one at the warm-air inlet into the room.

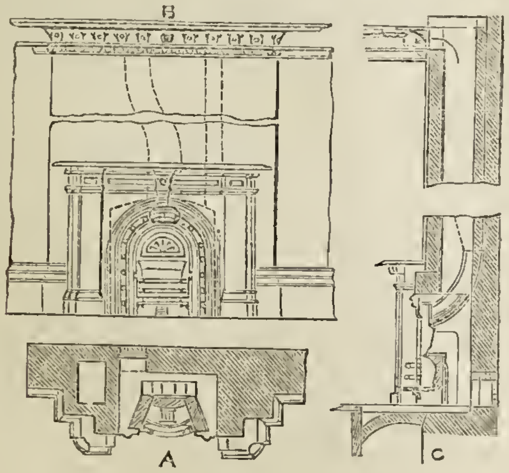


Fig. 97.

A ventilating fireplace which differs from the foregoing, inasmuch as the air-chamber is attached to and forms part of the fireplace, is that known as the London school-grate. The objection to adopting most ventilating grates, on account of the cost and trouble of building brick air-chambers and flues—whatever that objection is worth—is thus avoided. Another peculiarity of this grate is the adoption of a syphon-pipe, which withdraws the vitiated air from the ceiling level down to the ashpit, and assists combustion.

A grate of this ventilating order, which *projects* some six inches below the chimney-piece, has lately been introduced; and here the smoke and heat rise to the top of the grate, and, being arrested there by the grate-roof, descend until they reach the side flues, whence they find their way up the chimney. Hot-air chambers are variously arranged in the front, back, and sides of the fire-flue. A ventilating grate is also in use at Charing Cross Hospital, which not only acts as a medium for the circulation of warm air into the room, but also as a hot closet. The bottom of the grate is of solid iron, the sides of fire-clay, and the smoke is withdrawn through an aperture at the back. The hot closet is fitted up with sliding doors.

In choosing a ventilating grate for a house, I should give a preference to one which is constructed with shelves of fire-clay at the back, instead of iron, in order to retard the introduced fresh air in its passage to the outlet, until such air is well heated. A grate of this description is exhibited at fig. 98—*a* representing an elevation of the shelves at the back. The fresh-air duct will be noticed below, and also the warm-air outlets in the shoulders above. The space taken up by the hot-air chamber can be seen in plan at *c*, and in section at *d*. The number and size of these shelves or baffles should be determined by experience, and should afford a total of heating surface considerably beyond that exposed to the direct action of the fire inside the grate. In the sketch here given the warmed air is led into the room from the two circular orifices seen at *b*, but in some instances they are preferably placed at the sides of the chimney projection.

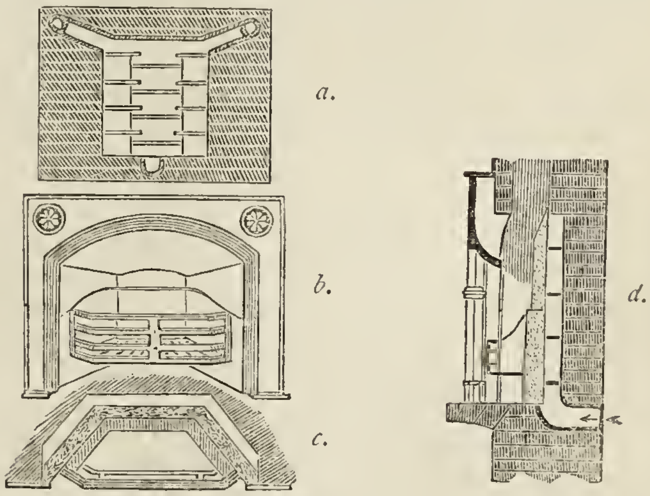


Fig. 98.

Fire-clay casings are objected to by some on the score that they are easily broken. If it were customary to put out the fire by drenching it with cold water, I could easily understand a consequent fracturing of the jambs and back; but this is an uncommon procedure, as is also a total removal of the heated fuel on retiring at night. Still, the fire-clay will suffer damage in time; and, in order to remedy this as readily as possible, supplementary and movable fire-clay back and side fittings, the same height as the fire-bars, are, as may be seen, provided to these grates. In this kind of grate I may mention that not only the fuel-containing portion of the grate, but the whole exposed surfaced of the sides and jambs as well, are made of fire-clay. Where ornament is desirable, it is secured by bevelling the front and attaching to this splayed surface a series of enamelled or painted tiles.

A grate such as this is to be recommended, inasmuch as it is impossible for the smoke to find its way into the air-chamber, as is sometimes the case with ventilating grates which are mainly constructed of iron, and only partially cased or backed with fire-clay. There is, then, a necessary junction between the iron and the clay, and here smoke is apt to find its way into the air-chamber when the fire is at first lighted, and before expansion has had due effect. In the grate now under review, the bolting of the bars can be done so as to avoid this danger, or they can be slid into grooves of fire-clay material. The mouths of the hot-air inlets are fitted up with either balancing, sliding, or turning valves, in order to assist in regulating the temperature of the room. Such valves should never be bedded in the walls, but screwed upon a frame or suitable grounds.

I have now given a short description of some of the best ventilating grates, and it will be noticed that they distribute the hot air and withdraw the respired air at various heights up the wall of the room. Provided that the fireplaces and flues are properly constructed, each system will satisfactorily heat and ventilate a room.

Open Ventilating Stoves.—A ventilating stove acts in the same manner as a ventilating grate—viz., by warming air introduced from without for distribution in a room, and for maintaining an equable temperature in such room, at the same time effecting a commensurate ventilation in a natural manner. As cases continually occur where the use of stoves prove preferable to grates, I will describe two kinds, which are very valuable in differing circumstances, and both of which preserve the open fireplace. It must be borne in mind that these ventilating stoves are not suitable for places where a fire is wanted to burn all night without attention, as this benefit can only be secured by the adoption of the gas-stove or calorigen, or by slow combustion stoves. Fig. 99 represents the pyro-pneumatic stove, the inner part of which is constructed of fire-clay lumps, and the outer casing generally of decorated iron. The lumps are constructed with vertical air-passages, the bases of which are connected with a channel communicating with the external air, and the warm air issues from the top of the stove into the apartment. A sketch of both an ascending and descending smoke-flue is here given; but a descending flue should only be resorted to in those exceptional cases when an upright flue is found a matter of impossibility. If a descending flue be found indispensable—as would be the case when the stove is to be fixed in the centre of the room—a large gas-burner or rarefying apparatus should be placed where the base of the upright chimney receives the end of the horizontal flue; and if this pilot-stove, or whatever it may be, be lighted a short time before the stove itself is kindled, all smoke will be satisfactorily withdrawn.

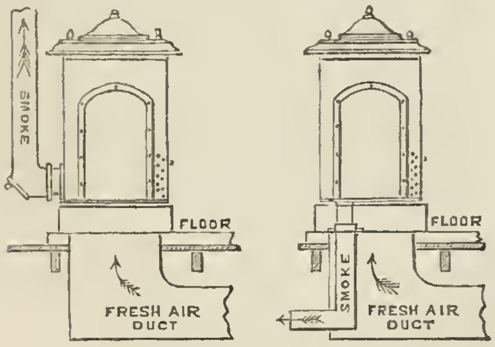


Fig. 99.

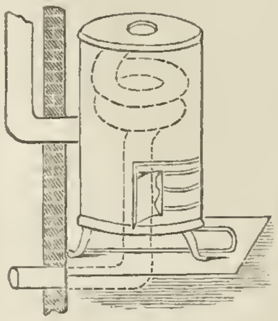


Fig. 100.

The most scientifically constructed coal-stove is the coal-calorigen, given at fig. 100. The stove body is constructed of thin rolled iron, and the front is generally fitted up with sliding-doors. Inside is a thin coil of wrought-iron, communicating at one end with the outer air, and as the fresh air enters, it is heated in its passage through this coil, and flows into the room through the aperture at the top of the stove. It is found in practice that the warmed air rises, diffuses itself over the ceiling, then slowly descends to the floor, and is drawn into the fire by way of the fire-box. A constant circulation is thus obtained. The coal-calorigen will be found extremely useful in the case of a damp house, as by its use a constant current of heated air is perpetually ascending to the highest part of the building. As for the cost of the coals consumed, it averages threepence daily.

Fresh-air Inlets for Ventilating Grates or Stoves.—The fresh-air ducts can be led to the backs of the fireplaces in many ways; but the directest route is the best, as, for instance, from the outside of the opposite wall, parallel between two joists, and through the trimmer to the air-chamber. It may occur, however, that the joists run in a contrary direction; and if so, and if the notching of the whole series would weaken the floor, the air-tube can be led along the ceiling of the room underneath; or, should the joists of the adjoining room run in the favourable direction, the air-duct can be led to its proper fireplace from behind. It may also be brought into the room along one of the recesses formed by the projecting chimney-jambs; and where two fireplaces exist back to back, only one room need be disfigured in this way. Where the tubing *must* cut away the trimmer, the latter can be strengthened by two pieces of iron bolted together through it. It may happen, too, that there is a lean-to building behind and a party-wall all round the room, and in such cases the air-duct can be led from the exterior wall between the joists of the room above and down the wall to the place where it is wanted. The same rule will hold good where the tube is wanted to supply a basement-fireplace. The only thing to avoid is the leading of air from too near the ground-line; and it would be wise to allow of no inlet closer than two feet from the ground. Inlets should also as much as possible be situated on the south or south-west aspects; and in no case should they be above or near the gulley-holes, dust-heaps, or other sources of contamination. To conclude, the mouths of the inlets should be protected by air-bricks, not only to break up the air, but to protect the tubes from the inroads of slugs and vermin. Cotton-wool filters may be attached to the inlet-gratings in cases where sooty smuts prevail.

These air-ducts can be constructed of various kinds of material—in fact, anything that can be made air-tight. Some architects bed pipes in the walls, and if this can be done it is the most economical system. If earthenware pipes are anywhere laid upon the ground, they should be of the socketed and glazed kinds, and the joints should be well luted with cement. Where they run between the joists, they can be made of zinc, with soldered longitudinal seams and close-fitting telescopic joints, and these may be made either round, square, or oblong, to suit the exigency of the case. The air-passages can also be made of wood; but in such instances the wood must be planed over inside, and tongued or dovetailed at the angles. An important matter to bear in mind, also, is to leave some means of cleaning out the dust which will be certain to lodge in these air-ducts; and, where such dust is not intended to be withdrawn by a fan or some similar contrivance, a portion of the wooden or zinc pipe can be made with a cover at some convenient place. Contrivances resembling soot-doors can also be made at the angles, if any exist. If drain-pipes form the media of conveyance, they can be occasionally varied by pipes affording means of access.

Smokeless Grates.—There is in this country an almost insurmountable dislike to firegrates which in any way hide the fire from view; but often, in order to obtain this open appearance, most objectionable grates are used, which send volumes of black smoke up the chimney at a ruinous waste of coals. It surely cannot be sufficiently known that grates can be purchased of the kind called *smokeless*, which heat the room for a considerable length of time without attention, and which entirely consume the smoke. Instead of throwing the coal on the top of the grate, it is stored in a chamber below the firebars, and a *lifting bottom* raises up the coal as it is consumed, torch-like, from above; or an ornamental *trough* is fixed to the lower portion of the grate-front, which trough is filled with coal, and, when the fire has to be fed, a right- and left-handed screw, in front of the trough, is turned by a ratchet-work, moved by the poker, the burning fuel being raised up and fresh coals deposited underneath. By either of these systems of feeding, the coal below is partially coked and prepared for burning: the whole of the gases evolved by the burning coal are also consumed in the top layer of incandescent fuel. Perhaps the greatest boon secured by this kind of grate is the increased vitality of the fire, which follows the closing of the bottom of the grate with iron so as to hold the fresh coals, and the consequent avoidance of too great a flow of oxygen to the under side of the grate. If a servant only take the trouble to light a fire in such a grate properly—at ten o'clock in the morning—it will be found to be still alive at ten o'clock at night. It frequently happens that a fire is required in a room where it cannot receive the ordinary attention necessary for replenishing it; or there may be a reception-room which is but occasionally used during the day, and yet which it would be unwise to leave without a fire. Perhaps it is a library or consulting-room, where an enforced absence is unavoidable at times, and the time of return equally unforeseen; or it may be a hall, a passage, or even a picture-gallery, where a steady genial warmth is desirable without much attention. In all such cases, and in numberless others, if the heating is to be performed by means of a fireplace and coal, the smokeless grates are very valuable.

Slow Combustion Grates and Stoves.—The slow combustion grates, for the most part, afford the advantages derived from the use of the smokeless grates; but their construction varies, inasmuch as the fire is not necessarily lighted from above. The space between the bottom bar of the grate and the hearth is filled up with a sheet of iron or other material, and perforations are made in it at intervals, so as to admit just sufficient air for combustion; and in this case the ash-pit is generally below the hearth. For the use of reception-rooms, these grates are now fitted up with ash-pans, which fill up the space before alluded to, and the fronts of which are ornamentally pierced.

The chief inducement to adopt grates of this description, and the main reason of their present popularity, is the saving of coal which they effect; but stoves on the slow combustion principle have long been favourably known. In places where fires are required to be kept going both day and night, the Arnott's stove and its congeners are well-nigh indispensable. Some of them are constructed with gills or projecting ribs around the exterior, and these serve to modify and dispense the heat equably. The Belfast stove of this description is made so as to accommodate any possible amount of ornament. The fuel burnt in such stoves is either coke or anthracite coal, which is placed at the top of the grate, and the ashes are removed at the bottom. Some require feeding only once, and others only twice, during the day. They can also be made to burn twenty-four and even thirty-six hours without attention, at a cost of about sixpence *per diem.* One objection made to their use —viz., that the fire is invisible—cannot be averted; another, that the air is apt to be burnt by their adoption, can be remedied by placing upon them a suitable dish containing water for evaporation.

The most recent of all the slow combustion stoves is the patent one drawn at fig. 101; and, since the rise in the price of coal, it has met with considerable patronage, from the fact that a fire once lighted in it can be maintained for twenty-four hours at a cost of twopence. It is cylindrical in shape; the body (C) having an exterior casing, which is perforated with holes to allow the escape of the heat, the jacketing or space between being filled up with powdered terra cotta. The top (D) is similarly constructed, and fits in an annular groove, which is kept filled with fine dry sand, to prevent the escape of smoke into the room. The products of combustion pass into the flue by means of the pipe leading out of the top of the receptacle, the nozzle (E) of which must be kept free from soot, in order to be efficient. It can be fixed before any fireplace, or iron pipes can be adopted, as in the case of an ordinary stove. The firebox (A), which should be kept in duplicate ready to replace the one in use, is first of all nearly filled with coal and coke, mixed with lumps about the size of a pigeon's egg. A piece of paper is next placed upon this, some small wood above that, and then a little coal upon the wood. It is then lighted and covered by the movable top (D). The damper (B) is partly closed after lighting, and the closing of this damper readily extinguishes the fire. It is best placed upon a sheet of non-conducting material, such as lead. The material introduced should be perfectly dry, and should also be free from dust. This stove is certainly a curiosity in its way, and gives off a genial heat, as I have frequently seen—its only fault being that it derives its supporting air from the room, and heats by radiation only.

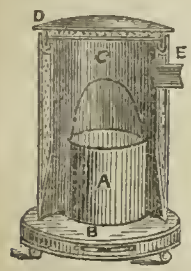


Fig. 101.

Heating by Means of Gas.—Gas is either employed *temporarily*, because of the promptitude with which its flame can be applied, as, for instance, in heating baths; or *permanently*, because of its cheapness, as in stoves and fires. Well applied, four cubic feet will boil a gallon of water in twenty minutes at a cost of .22 of a penny, which is about a third of the cost and time required by the use of coal. Numerous gas cooking and heating stoves have been introduced of late years, and that they have been greatly appreciated is beyond all doubt. It is not necessary here to enter upon a description of any of the numberless common patterns extant, but it might be well to record the opinion of the best engineers that the simplest gas-stove is the best. They should not be surrounded by a non-conducting material, as that affords no advantage, but the contrary. An Argand or fish-tail burner should also be used instead of rings pierced for so many separate jets, and, where practicable, the Bunsen burner should be employed, as the admixture of common air with the gas not only prevents the formation of soot, but also intensifies the heat.

It frequently occurs that firegrate-openings have been constructed in places where it proves inconvenient to burn coal, partly on account of the want of proper attendance, and partly because the fire is not constantly required. In such a case, it is customary to fit up a service-pipe under the grate, and to fill it with lumps of roughly pulled fireclay, in order that, when the gas is lighted, the flame shall impinge upon the lumps and cause them to become incandescent. Pumice stone, asbestos, peroxide of manganese, and metallic platinum are also burnt in this way, and in each case the result is a cheerful open fire, which gives off an excellent heat. All that is necessary is to take care that the grate is not choked with the material chosen, and that there is a commensurate ventilation.

Perhaps the best contrivance for heating and ventilating a room by means of gas is the gas calorigen, drawn at fig. 102, which consists of a cylinder of wrought iron, closed at top and bottom, in order that the burner in the interior should have no communication with the air of the room. Outside the wall is a small cylinder, open only at the top, and two tubes lead from this into the stove—the bottom one supplying the flame with the necessary air, and the top one carrying away the products of combustion. The fresh air which enters the stove interior comes into contact with the heated air which leaves it, thus regulating the flow, and also economising the heat. The combustion of the gas being thus provided for without permitting the fumes to enter the room, the next thing to ensure is a heating medium for the room itself, and this is secured by leading a tube from the exterior air to the under side of the stove, and carrying it through the same, with a retarding coil as shown. The fresh air from without is thus warmed in its passage to the orifice at the top, and the result is warmth and ventilation with an absence of all draughts. When the calorigen is required to be fitted to an open fireplace, the old grate is removed, and the front opening closed with a plate. The cross-tubes are then pushed through the plate, and in such cases the outside cylinder is not required. I have lately fitted up two of these joined together in the fireplace of a hall; and not only the hall, but the passages adjoining and the whole staircase, is now admirably warmed. They are also well adapted for maintaining an equable temperature in the bed-room. I have, moreover, known a gas calorigen to be persistently capable of registering fifteen deg. above the external temperature during a very severe winter, and that, too, in a room of over 1700 cubic feet, with the roof and three sides constructed of glass.

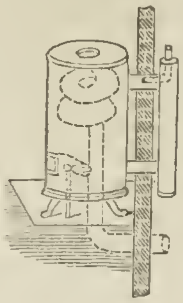


Fig. 102.

It may not be generally known that a jet of gas can be adopted for lighting ordinary coal fires, thus saving the cost of paper and wood, besides proving more cleanly. This kind of fire-lighter consists of a piece of copper pipe attached to an elastic tube which screws on the nearest gas-bracket; and, when the coal has been broken up and put in the grate, the end of the metal tube is inserted in the coal and the gas ignited. Two Bunsen burners are sometimes applied in a similar manner. This ease of application is a great boon, even apart from the fact that, at the cost of one-tenth of a penny, a bright fire can be produced in ten minutes.

THE ASHANTEE EXPEDITION.

[FROM OUR OWN CORRESPONDENT.]

Cape Coast, December 25th, 1873.

VERY few, if any, of the many correspondents from West Africa, have attempted to describe the fine old castle which strikes one so much on anchoring, and through which one passes to the mud houses of the town beyond. Yet it is a building of much interest, and one well-meriting a brief sketch, as having been for more than three hundred years the head-quarters of the English trade upon the Gold Coast.

Cape Coast Castle, the *Cabo Corso* of the earlier Portuguese navigators, was built towards the middle of the sixteenth century, when the rovers of old ruled the sea. At first, a mere trading station, it gradually became a fortress of some pretensions in those early days. From its construction, it is quite evident that the chief danger then to be apprehended was from the seaward, for in this direction are placed the strongest bastions and heaviest armaments. The foundations of the sea-front are placed upon a projecting rock, composed of a dark brown gneiss and granite, while the land side rests upon a loose conglomerate, gradually being washed away, and leaving the foundations exposed.

In its construction, three epochs are evident. The future occupant lands to the eastward of the long ledge of rocks upon which the greater portion of the foundations are laid. Watching the break of the rollers, a favourable opportunity is taken to be wafted in upon the summit of one of these to the shore; while doing so, the canoe-men work their paddles with desperate energy, the surf-boat touches the sand, half the crew jump out, run her up, and seizing the not unwilling passengers, who all this time have been sitting in the bows, land them in a moment, and before the succeeding wave has time to deluge them with its spray. A largess is immediately demanded by these never ending beggars, these valiant heroes, who are too brave to fight, too courageous to run away. Upon looking up, frowns to the left the ancient entrance or eastern gate of the fortress, a long stone archway, on the right hand side of which is the old guard-room or close dungeon, the rusty bars of which still remain in the ponderous door. Emerging from this long passage, the visitor enters the lower triangular courtyard; the oldest and first built portion of the castle. Upon the right are the ancient arched storehouses of the merchants, surmounted by the more modern buildings for the men and officers of the late garrison, the latter placed above those of the former. To the left is the sea battery, armed with twenty-four pounders; and facing you, the base of the triangle, a three stoned building, the lower rooms of which in ordinary times are occupied as soldiers' and married quarters; above these are the quarters of the European non-commissioned officers, orderly room, etc., topping all, the mess room, reached by a handsome stone staircase, and some officers' quarters. At the southern or sea extremity of this range of buildings is Dalzel's Tower, built by a former governor towards the close of the eighteenth century; and at the other or land side, Maclean's Turret, the scene of that mysterious catastrophe which ended the life of poor L. E. L., whose body lies mouldering in the dust some few yards below. Passing through an archway situated in the basement beneath the mess-room, the visitor enters the upper or western triangle, the two sides of which are formed of a series of arched rooms or storehouses, surmounted by the Spur battery to seaward, and a similar armament on the land side; underneath this is the entrance from the tower to another archway, defended by an ancient gate, beyond which is a small courtyard, having at either side the garrison cells and engineers' yard. In a word, Cape Coast Castle may be described as consisting of two triangles joined at the base, the eastern being the more ancient; one of those old irregular buildings so difficult to describe. Both courtyards are paved with large stones; the lower has been made the receptacle of several graves, numbering among them those of L. E. L., and a former governor, rescued from oblivion by Major-General O'Connor, when commandant many years since. A handsome marble tablet, inserted in the wall of the stone staircase, records, in a Latin description, the virtues of the fair poetess. Other graves have been made in the battlements at the apex of the western triangle, some of ancient date. This system of interment was evidently adopted to avoid the desecration of the graves by the then turbulent natives. In the several triangular courtyards were confined the slaves in olden times; the embrasures and loopholes in the walls of the battlements looking down upon them, evidently point to the occasional necessity for controlling measures. Here the slaves were collected previously to shipment, confined in the dungeons built in the ponderous walls, in which also were situated the storehouses of the merchants in olden times.

Seven tanks supply the inhabitants of this old castle with water, having a cubic capacity of about 111,000 gallons; six in the lower, and one in the upper yard; this last beneath the quadrangular guard-room. The rain water collected from the roofs is conveyed in pipes to these receptacles; the pipes are, however, defective, and thus a considerable quantity of this most valuable element is entirely lost. The leakage of the tanks is another defect. In consequence of these, it has become necessary to supplement the water supply by obtaining more from the Ristokrata wells, upon the northern confines of the town; from these it is rolled in in casks, and emptied into one or two of the lower tanks. The foregoing defects have been frequently represented, but, owing to the uncertain policy pursued during later years, as to the retention or otherwise of this African settlement, little has been done. Only those repairs absolutely necessary being carried out. At Fort William, an isolated hill about a mile distant, is another large tank, the water of which is kept in reserve; and upon Connor's Hill, a small iron one, for the use of that station. A very fine tank is constructed in the ground surrounding Government House, and others exist in the principal private houses. Several surface wells have been sunk by the natives in different parts of the town, and upon the banks of a small stream which meanders through it, but none are resorted to by Europeans. Two condensers were sent out at the beginning of the war, upon the recommendation of the Director-General of the Army Medical Department, one of which, constructed at the Salt Pond, a lagoon west of the castle about a mile, is working well, and yielding about 1,500 gallons of water daily. The other has been erected at Elmina. A Norton's tube pump was sunk upon the banks of the small rivulet; the water when brought up was found to be too brackish for use. A plunge bath and ablution room have been constructed outside the sea gateway, and the old latrines have been replaced by wooden constructions on the dry earth system; these are situated in the vicinity of the former ones upon the battlements. The older form of barrack kitchen is still in use, and the ventilation of the several rooms is chiefly by opposite doors and windows. Circular openings appear to have been made for this purpose in the walls of the arched rooms in the basement.

Palaver Hall, the present mess-room, was in older times the council chamber, in which native chiefs and envoys were received and listened to by the governors, who then, with the greater part of their civil staff, lived in the castle. Originally the castle consisted of nothing more than the present basement, the upper superstructures being added from time to time; the present officers' quarters, erected when the Gold Coast Artillery Corps were first formed, are the latest of these additions. The peculiar construction of the building, and these arrangements, impede much their proper ventilation; the transverse range, to a large extent, shutting off from the S.W. sea-breeze, those situated in the eastern triangle; in the rains they are also very damp, the spray beating right over the buildings, the reflection from which, and the subsequent radiating of the heat, add much to the oppressiveness felt at times.

In 1820, the garrison of Cape Coast Castle consisted of 30 civil and military officers, with 120 native privates, enlisted under the auspices of the African Company, then supreme upon this portion of the coast. Their uniform consisted of red tunics with yellow facings and white trousers; five surgeons constituted the medical staff; the whole kept up at an expense of £17,000 *per annum*. The Royal African Company had been established in the reign of Charles II, and granted an exclusive trade from Sallee to the Cape of Good Hope. The African committee who managed affairs were chosen from nine principal merchants in London, Liverpool, and Bristol, and were under the control of the Board of Trade from 1750 to 1819, when they were abolished by Act of Parliament; they had the appointment of all officers, civil and military. After the abolition of the Royal African Company, the settlements here were garrisoned by the Royal African Corps, a mixed force of Europeans and natives, the former of whom died in great numbers. During the reign of the Gold Coast Corps, the garrison of the castle rarely exceeded 120 non-commissioned officers and men. Since their being disbanded, it has seldom been more than 150, selected from one or other of the West Indian regiments. Previous to the outbreak of the present war, it was intended to gradually replace these by a native police and some companies of Houssas. Whether this idea will be entertained after the cessation of hostilities, remains to be seen.

Leaving the land or northern entrance of the castle, the visitor sees before him a long broad street terminating at the Wesleyan Church, a large building of some pretensions; right and left are European and native houses huddled together, the former built in the style of the Indian bungalow, with flat roofs and small courtyards; the latter, mud constructions of every shape and form, and also having flat roofs. Many are tumbled down, thus causing the town to appear, when looked at from the sea, as if it had just been bombarded. To the right of the castle entrance, as one leaves it, is the road leading to the wharf, encumbered by canoes and old carronades, the former armament of the castle walls, but now discarded for heavier ordnance. Many old Turkish, Spanish, and Portuguese brass guns may be seen lying about. To the left of the entrance is the road leading along the sea-front. Passing along, one reaches in succession the Episcopalian Church, now equipped as a hospital with twenty-two beds; a few tumble-down native houses, shops, and Marmori's House, also converted into an officers' hospital, and equipped for the reception of eight or ten officers. Immediately beyond is the garrison hospital, a private house, and never intended for the purpose which it is at present put to; there is a basement and upper storey, the latter consisting of six wards, including verandahs, a sergeant's room, and office; below is another ward, guard-room, dispensary, and medical store. On the west front is an open verandah; behind and to the south, the kitchens and other necessary buildings in an enclosed yard. Opposite windows and doors are the principal means of ventilation. Leaving the garrison hospital and proceeding further westward, the Colonial Office and the civil hospital, a building of little pretensions, and scarcely worthy of the name of an hospital. It seems extraordinary that no attempt has been made to construct a colonial hospital on a better site, and more in accordance with modern views on this subject. The civil small-pox hospital is away at the other or eastern end of Cape Coast. From here the road leads past the Wesleyan Mission and native market to the Salt Pond, before reaching which, a path branches off to the right leading to Napoleon, Rula, and the origin of the Sweet River; this straight road leads on, along the sea-beach, to Elmina, eight miles distant; a mile before this last town is reached, the traveller crosses the Sweet River as it empties itself into the sea. The portion of the beach up to the Salt Pond is the general *receptaculum vili* of the inhabitants of this end of the town.

The Salt Pond is a large saline lagoon, extending a long way inland, but separated from the sea by only a narrow ledge of sand. It is from this lagoon that the water for the condenser is obtained, engineering difficulties preventing any being drawn from the sea direct. Leaving this end of the town, and proceeding onwards from the castle-gate to the Wesleyan Church, the road to the left leads to Government House, a large white building; that to the left, to the principal streets of the town, which, winding round the foot of Connor's Hill, on the western side of the small rivulet which percolates beneath, finally ends in the road to Coomassie. This last passes through a series of undulating hills covered with a mass of thick brushwood. A more detailed description of this must be deferred; but the foregoing brief description is sufficient to give a general idea of our present *locale*.

Since my last letter, the *Dalmatian*, one of the Allan Line of steamers, arrived with the 42nd Highlanders on board. The regiment left on the 20th to join the *Tamar* and *Himalaya* at the general rendezvous, some two hundred miles south-west of Cape Coast, it having been recommended by the medical authorities that the troops should not be landed until everything was ready for them on the road to the Prah, and some difficulty being experienced in the transport arrangements. The men of the 42nd were dressed in light grey suits of serge, grey helmets surrounded by saffron-coloured puggaries, and the red regimental feather inserted between this last and the former. The inside of the helmet is lined with green, and well ventilated at the top and sides; it looks very well, and is a great improvement as a military head-dress to the shako. The men wear flannel shirts and white canvas trousers, with brown canvas leggings tightened by four leather straps and buckles on the outside, and held down to the blucher by a strap buttoning beneath. The accoutrements were the usual ones belong to the new valise equipment—rifle; Elcho sword-bayonet; white leather waist-belt, with pouches to contain sixty rounds of ammunition; new pattern Piedmontese water-bottle, slung across the left shoulder; haversack, containing charcoal-filter, etc.; clasp-knife; and cholera-belt. To every three men will be allowed a carrier for the remainder of the kit and *tent d'abri*. The three kits are neatly folded, and fastened to the poles of the small shelter-tent, which will afford protection against the heavy dews up country to three men. The field-kit consists of a waterproof sheet, great coat, serge trousers, flannel shirt, extra pair of socks, towel, blanket, and some soap, and other small necessaries. Razors are dispensed with. The three kits, made up in the manner described, weigh about fifty-seven pounds. A similar description applies to the other regiments. The 42nd have brought out their pipes; the Rifle Brigade, its bugle band; and the 23rd, its drums and fifes. The music will no doubt enliven the monotony of the march to the Prah. Surgeons-Major Clutterbuck, Alder, and Wiles, are in medical charge of the European regiments, each in addition being allowed four surgeons. The men arrived in good health and spirits.

It is intended to disembark each corps in half-battalion, the whole to be completed about the 7th proximo. The 17th will probably see all concentrated at the Prah. On the arrival of the 1st West, this regiment will be at once sent up country to garrison the various stations *en route*. Cape Coast is filling with medical officers. A large number of the sick have been evacuated on board the fleet; and several officers, who have suffered from the effects of the climate and hostilities during the first three months, have left for a cruise in various vessels—those not likely to benefit being invalided to England. A large number of invalids from West Indian regiments go to Sierra Leone shortly, as this climate is said to be hostile to their ultimate recovery. A private of this corps recently died of dysentery. I have heard that the whole of the large intestine was extensively thickened and ulcerated. The climate still continues favourable. There were heavy thunder-showers on the 1st, 15th, and 22nd—a downpour of rain only to be seen in the Tropics. Such showers would thoroughly drench any one.

The medical arrangements for the closing scene of the Ashantee war are nearly complete. I hope to send you all matters of interest in another letter. Sir Garnet Wolseley, in his printed instructions on the mode of warfare to be adopted against the enemy beyond the Prah, has, perhaps for the first time in military history, headed his memorandum by a few pertinent remarks upon the hygienic precautions necessary for health, and to be strictly adhered to by the troops on the march. These orders are to be read to the men on parade four several times, and thoroughly explained—an indication that in the army a great change of opinion has taken place, and that now the laws of health are thought to be essential to success in war. No doubt the teaching of the army medical professors has largely contributed to this most desirable change. Through their pupils, such teaching has been and is being disseminated throughout the army at large, who are as yet scarcely aware of what they owe to their medical comrades.

THE CASE OF MR. JACKMAN, OF SWYMBRIDGE.

We have received the further following subscriptions in response to the appeal which we last week published for assistance to Mr. Jackman, of Swymbridge. Mr. Jackman, a Licentiate of the Society of Apothecaries, has been discharged by his Board of Guardians, at the age of 73, after sixteen years of continuous service, on the ground that he has only one qualification, and that his contract is only annual. He is aged, without resources, and has a sick wife.

	£	s.	d.
Dr. Churchill, London	5	0	0
Dr. H. L. Harper, London	3	3	0
Dr. T. H. Lowry, West Malling	1	1	0
T. Bromly, Esq., Oldham	1	1	0
H. W. Harvey, Esq., London		10	6
N. D. C., London		10	0
W. B. K.		5	0

The sum acknowledged last week from Anonymous as £2 2s., should have been £3.

The following have been received by the Vicar and Curate of Swymbridge:—

	£	s.	d.
Amounts less than £1 received in the district	7	16	6
J. N. Pyke-Nott, Esq., Bydown House	3	3	0
Dr. Law, Barnstaple	3	3	0
H. T. Sylvester, M.D.	5	0	0
John Smyth, Esq.	2	2	0
The Rev. J. Russell, Vicar of Swymbridge	1	1	0
James Duncan, Esq.	1	1	0
Rev. R. K. Kertell-Cornish, Bishop-Elect of Madagascar	1	1	0
W. Mock, Esq.	1	0	0
Mrs. Barclay	3	3	0
J. Q. Tamlyn, Esq.	1	0	0
Sydney Ringer, Esq., London		10	0
T. Carr Jackson, Esq., London	1	1	0

Further contributions will be thankfully received by the Editor of the British Medical Journal, at the Office, 37, Great Queen Street; or by the Vicar of Swymbridge, Barnstaple, Devon.

ACTION FOR RECOVERY OF FEES.

At the Sheffield County Court, last week, before T. Ellison, Esq., judge, an action was heard, the object of which was to obtain a decision as to whether or not a person, who is only a member of the Royal College of Physicians, is entitled to charge for medicine supplied and for surgical attendance. In a similar case which came before the court a short time ago, his Honour answered the question in the negative, but offered to grant a case for an appeal. As counsel was not engaged, however, no further action was taken; and the present suit was formally brought in order that an appeal might be made.

Mr. Barker, barrister, said the action was brought by Mr. William Skinner, to recover the sum of £1 13s. 6d., the balance of an account due to him for medical and surgical attendance upon the defendant, and he included medicines supplied. Mr. Skinner had already been before his Honour in another case of a similar character, as a licentiate of the Royal College of Physicians, and that was the only qualification he held in respect of the claim he now made. On the previous occasion, when Mr. Skinner came before the court and made a similar claim, his Honour was of opinion that, as he was not registered under the Medical Act as having a licence from the Apothecaries' Society and Royal College of Surgeons, but only a licence for physic, he was entitled to charge for services only as a physician. Mr. Skinner had brought this action, expecting that his Honour would adhere to his former opinion, and would grant him the right to appeal. He wished to put in certain formal proofs, in order that they might be put on his Honour's notes and brought before the Superior Court. Mr. Barker produced the charter given by Henry VIII, in 1518, to the Royal College of Physicians, and quoted the more recent Acts confirming that charter. Having traced the other Acts of Parliament bearing upon the subject down to the Medical Act of 21 and 22 Vic., he said that, under the charter of Henry VIII, the College of Physicians were entitled to make certain bye-laws, and that right had never been taken away by any of the subsequent enactments. Under those bye-laws, it was necessary that the members of the society should be examined in medicine and surgery. Mr. William Skinner produced the *Medical Register* for 1871, and also the licence granted him by the Royal College of Physicians, and stated that, between October 25th, 1871, and December, 22nd, 1871, he attended the defendant, Mr. William Gregory. There was still a balance of his bill remaining unpaid, amounting to £1 13s. 6d. In that sum, he included his charge for medicines supplied and for services rendered as a surgeon. Dr. Pitman, registrar of the Royal College of Physicians of London, produced the original charter of the College, and also the bye-laws, under the seal of the corporation. One of the bye-laws stated that every candidate for the College licence, except in cases specially exempt, was obliged to produce evidence of having attended medical and surgical lectures, etc., at a recognised hospital, and studied the practice of pharmacy, the practice of medicine, and the practice of surgery, and having passed previous examinations. His Honour said he would give his decision on the 29th instant. Mr. Skinner is also qualified as a surgeon; but, for the purposes of the above action, he claimed only as a member of the Royal College of Physicians.

THE WEBB FUND.

THE contributions to this fund received up to the 21st instant amounted to £420 15s. A list will be published in next week's JOURNAL.

Contributions may to be paid to the St. James's Square Branch of the London and Westminster Bank; or to the Treasurer (Mr. Augustus Churchill, 11, New Burlington Street); or to either of the Secretaries (Dr. W. Cholmeley, 63, Grosvenor Street, and Dr. A. Silver, 2. Stafford Street, Bond Street).

Dr. J. G. Wakley has been added to the Committee.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Maison Municipale de Santé.—M. Demarquay and Esmarch's Method of Bloodless Operation.—M. Demarquay on the Regeneration of Tissues.—Mortality after Operations in the French Hospitals.—Hysterotomy and Ovariotomy.

I LATELY paid a visit to the Maison Municipale de Santé, a hospital destined for persons of both sexes, who, though not considered proper subjects for admission into the ordinary hospitals, cannot afford to have the necessary care and professional attendance in their own homes. The building and ground are very extensive, and the former, which is two storeys high, is capable of containing from three hundred to four hundred beds, arranged in separate rooms. Each room contains one or more beds; and the patients pay from four to seven francs (three to six shillings) a day, according to the accommodation required. For this trifling sum, the patients are boarded and lodged, and get the best medical and surgical advice. It was formerly a private institution, but is now under the direction of the "Assistance Publique." I was much struck with the clean appearance of the building, and the absence of the foul smell so common in the other hospitals; but, notwithstanding this, I was surprised to learn that the general mortality was not much diminished. Every variety of bath may be had on the premises, and the grounds are laid out in beautiful gardens. There are two physicians and only one surgeon attached to the hospital, though it struck me that there is ample work for two surgeons in it.

Dr. Demarquay, the present surgeon, is so well-known to your readers, that it would be almost superfluous to give a sketch of him here. I may, however, mention that he is one of the ablest surgeons in Paris. He is practically a man of the time, and is ever ready to adopt everything that is new and useful, whatever be its source or origin. He is just now the great vulgariser of Esmarch's method of "bloodless operation" in France. I have seen him remove a charge of powder and shot from the leg of a young man in the hospital without the loss of a single drop of blood; but, when the bandage was removed, about a table-spoonful escaped. A gentleman present asked Dr. Demarquay whether there was no danger in stopping the circulation in so effectual a way as is done by this method? To this, the reply was, that there was none, as long as the compression and constriction did not last more than a few minutes; but he was afraid that there was danger of reflux of the blood to the heart and central organs, and consequent rupture or other serious accidents. Experience alone can decide the question, as the method is as yet in its infancy; and, considering the other advantages, which, to my mind, are immense, I am only surprised that it is not more generally adopted in the Paris hospitals.

Àpropos of Dr. Demarquay, I find he has brought out a work entitled *De la Regénération des Organes et des Tissues en Physiologie et en Chirurgie*, which will add another wreath to the many laurels he has already won. Dr. Demarquay is not only known as an eminent surgeon, but he has distinguished himself by his researches in anatomy and physiology. Dr. Demarquay says, in his preface, that he first confined his studies to the regeneration of tendons; but he was soon induced to extend his researches to the regeneration of organs, tissues, bones, nerves, muscles, etc. Like all prudent experimenters, he tried experiments on the lower animals before applying his theories to the human body, and the work under notice gives a *résumé* of the results. There is a very good article on skin-grafting, and two long chapters are devoted to the regeneration and suture of nerves; and our author winds up by an *exposé* of the local influence of certain agents on the part in process of regeneration, such as air, light, cold, heat, etc.—conditions already much insisted on by Hunter and Jules Guérin. The work is much better got up than the generality of books in France, and contains, at the end, four beautifully coloured plates and sixteen lithographed and chromo-lithographed figures; also a copious bibliographical list and table of contents. The work will be found interesting, not only to the physiologist and to the pure surgeon, but to all engaged in the practice of the healing art.

It is now commonly known that, in the Paris hospitals, and, indeed, in all large French hospitals, operations in general, and capital operations in particular, do not succeed so well as on the other side of the Channel, and this is ascribed to the notoriously insanitary condition of these institutions, caused by overcrowding. Professor Richet, of the Hôtel Dieu, lately declared publicly, at a clinical lecture, that this state of things was much to be deplored, not only in the interest of the patients, but in that of the surgeons, whose time and efforts for the preservation of human life are thus entirely lost, as the most trivial operations are followed by death.

These remarks were made *àpropos* of an operation performed by M. Richet, which, however, from its serious character, was likely to prove fatal in any hospital or country. Hysterotomy is at any time a grave operation, ending nearly always fatally, but, when combined with ovariotomy, the prognosis must be infinitely more unfavourable. It was this latter operation (hystero-ovariotomy) that M. Richet performed, on a woman aged 39, nullipara, who was the subject of fibrous tumour of the uterus and an ovarian multilocular cyst of the left side. The uterus and ovarian mass were removed through an opening made in the abdominal wall, extending from a little above the umbilicus to the pubes, and the patient was doing apparently well until about the thirteenth day, when diarrhœa and symptoms of peritonitis set in, and were soon followed by those of purulent infection, which terminated fatally on the twentieth day after the operation.

M. Richet examined the question, whether hysterotomy and ovariotomy offered any points of comparison. He replied in the affirmative; but, he continued, there are such enormous differences between them, that, when we consider the question of lethality, it is impossible to compare them. The first difference is that, in hysterotomy, one has to deal with an irreducible tumour which necessitates an incision sufficiently large for its removal; whereas, in ovariotomy, where there are no adhesions, the cysts, previously emptied, are more easily removed. This, of course, constitutes a very serious item as to the success or failure of the operation; and, in order to obviate the risk of making a large opening into the abdomen, which sometimes extends to the ensiform cartilage to the pubes, it has been proposed to divide the uterine tumour into several portions before its extraction; but this, in M. Richet's opinion, would simply render the operation more difficult and dangerous. But a still more serious objection raised against hysterotomy is the difficulty of pediculising the tumour, as in ovariotomy; and the after-treatment is also much more complicated. Notwithstanding these disadvantages, M. Richet is of opinion that, if the operation can be performed under more favourable circumstances than obtain in the Paris hospitals, the chances of success would be comparatively greater; he, therefore, considers that the operation ought not to be rejected.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH.

AN ordinary meeting of this Branch will be held at 11, Chandos Street, Cavendish Square, on Friday, January 30th, at 8 P.M., when Mr. W. H. Michael will read a paper on "The Public Health Act (1872): its defects and suggested amendments."

A. P. STEWART, M.D.
ALEXANDER HENRY, M.D. } *Honorary Secretaries.*

London, January 13th, 1874.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Wednesday, the 4th day of February next, at a quarter past 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

37, Great Queen Street, London, Jan. 22nd, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE next meeting will be held at the Midland Institute, Birmingham, on Friday, January 30th, at three o'clock.

VINCENT JACKSON, }
ROBERT JOLLY, } *Honorary Secretaries.*

January 19th, 1874.

CORRESPONDENCE.

THE WEST HADDON TRAGEDY: TEMPERATURE OF THE BODY AFTER DEATH.

SIR,—In reply to your inquiries of yesterday's date, as to the maintenance of warmth in the human body after death, I give you my experience as follows.

1. When I was for many years engaged in pathological inquiries, as successively resident medical officer, ordinary physician, and clinical professor, in the Royal Infirmary here, I was much struck, and not very seldom, by the long maintenance, after death, of a degree of heat most sensible to the hand of others, as well as to my own, both on the external surface and in the cavities of the human body. Although I noticed this fact again and again, and although I always felt at a loss to account for it on the basis of the dominant theory of the source of animal heat, I never had the curiosity to ascertain what the actual temperature was. But as it is a peremptory rule here, which I never allowed to be violated, that no dead body shall be submitted to pathological examination till at least twenty-four hours after death, and as nevertheless the sensation communicated to the hand was that of decided warmth, I cannot entertain any doubt that the temperature must have been considerable. In truth, the sensation of warmth was sometimes so decided, that I had some apprehension in allowing the examination to go on.

2. These were all cases of natural disease. I never noticed the occurrence in the bodies of those emaciated by long disease; and, on the whole, my recollection is—but on this point I cannot be positive—that it did occur chiefly after death from diseases of the head, and in persons who retained a fair amount either of muscularity or of fat. At the same time, in by much the large proportion of such cases of head-disease in fairly lusty persons, the body has communicated after twenty-four hours the usual cold, chill sensation of death.

3. I have never had occasion to attend to the condition of the dead body, as to the maintenance of warmth, in any instance of poisoning: but, if such maintenance of warmth do occur after death from any species of poison, I cannot, in face of what is stated above, admit that such a phenomenon is any evidence of death by poison, or even a just ground of suspicion of poisoning.

In regard to the suspicion stated to have been expressed, that death in the case, described at page 289 of the BRITISH MEDICAL JOURNAL for the 19th current, might have arisen from hydrocyanic acid, I must say that, if the symptoms for some time before death be accurately given, I cannot recognise any resemblance to what are usually understood be those of poisoning with hydrocyanic acid. It may be added, that I have myself seen but one person poisoned by that poison, whose life, however, was saved in most unpromising circumstances; and I cannot imagine any symptoms more unlike what I witnessed on that occasion than those which preceded death in the case to which you have referred me.

I am, etc., R. CHRISTISON.

Edinburgh, January 20th, 1874.

SIR,—In the case of the West Haddon Tragedy, the jury appear to have been influenced in the determination of their verdict by a witness declaring that there was a high temperature after death, his statement being that "that would negative the idea that the deceased died from syncope. Further, I would state that, in consequence of this high temperature, I am of opinion that she died from some volatile noxious substance given to her immediately prior to death, but which I am unable to detect". It would be interesting to know on what grounds this statement was made, and what evidence the professor has to show that there are any volatile substances which sustain the temperature at the time of death. I know of no published observations to support such a view, nor, on the other hand, any to contradict it.

It is probable that this idea was suggested to the witness by an opinion once propagated, that a rapid cooling of the body takes place after death from hæmorrhage or from syncope, which is considered to be a temporary withdrawal of blood from the heart. If this were true, it might be imagined that some stimulant had been administered in a death from such a cause where the temperature had been sustained.

I write more especially to state that some observations made some years ago by Dr. Taylor and myself, and subsequently by Dr. Goodhart, published in *Guy's Hospital Reports*, clearly showed the error of the supposition that the body cooled more rapidly after sudden death—in fact, there were some reasons to suppose the contrary. It is true that a great rise of temperature occurred in persons suffering from acute or active disease, and that the low temperature at time of death was found in those who had long suffered from chronic disease; but in persons who had died from hæmorrhage, syncope, or other similar cause, no rapid fall of temperature was found.

I am, etc., SAMUEL WILKS, M.D.

SIR,—The professional evidence given as to the West Haddon tragedy appears to me to require more than a mere passing notice. As quoted in your issue of last week, the toxicologist says: "Mr. Walker tells me that there was a high temperature after death; and that would negative the idea that she died from syncope." I think the grounds for such a statement should be searched, and its validity examined. I believe that statement is directly contrary to the received views of the profession, as it certainly is to my own experience in the matter. I would first remark that the term syncope, though in very common use, is nevertheless by no means constant in its application. In a general way, syncope is held as equivalent to faintness; so that if a person is said to die through syncope, it would be understood that he had died through fainting, or, in other words, failure of the circulation. A little practical experience, however, soon shows us that an uncomplicated cessation of the action of the heart only occurs in theory; and that in those cases in which death takes place immediately by cessation of the heart, the attendant circumstances are so various as to give rise to great variety in the observed phenomena. Assuming that Mrs. Gulliver's case was one of those in which death takes place by syncope, I shall proceed presently to show that these are precisely the cases which would probably retain heat for an unusually long period after death. But at present I shall concern myself in proving that the quoted opinion is contrary to current teaching. I shall content myself with taking for this purpose some extracts from Dr. Aitken's *Practice of Medicine*, as it lies convenient to hand, though such evidence might be multiplied indefinitely. He says: "Persons whose death is by *anæmia* or *asthenia* are often spoken of as having died in a faint, or by syncope;" and "But another mode of death may be more immediately connected with the heart itself, and be independent of the supply of blood. In other words, the stimulus from blood may be sufficient, but the contractile power of the organ may fail. Such a mode of death is by *asthenia*. Many poisons act in this way, and many diseases which are due to morbid poisons in the blood tend to prove fatal by this mode of dying. Cases of extensive mortification of parts, of acute inflammation of the peritoneum, and of malignant cholera, die in this way" (page 151). Here we find one of our leading text-books teaching that in a number of diseases death is by syncope, and specifying *malignant cholera* as an instance, and this, no doubt, truly. Those who have witnessed death by cholera will bear out Dr. Aitken's view; and yet it is precisely in malignant cholera (in which people die of syncope) that the temperature rises remarkably after death. Again, take Trousseau's account of *syncopal intermittent fever;* he says: "It is the worst, in this sense, inasmuch as sometimes there is produced a state of apparent death, subjecting the patients to the risk of being left to die" (p. 19, vol. v, *Sydenham Society's Trans.*); and then he cites two cases, in one of which the patient was got ready for his *post mortem* examination, when he groaned, and thereupon the necroscopic attendant very properly had him put to bed and attended to, happily with successful result. If this poor fellow had not groaned in time, his inspectors would no doubt have found a very hot body; or if his groan had not been heard, so that he at last did actually die, he would probably have been surprisingly warm. The death would doubtless, in either of these cases, have been regarded as syncope. This leads us on to a number of similar cases very shocking to think of, wherein people have been nearly, and sometimes quite, buried alive. These make one shudder; but what I want to point to is that they are always of the nature of syncope, and yet, if inspected, they would be found very warm. Now if syncope can thus partially subdue life, and pass off perhaps too late for its restoration, who is to say that a state of syncope necessarily brings coldness? Life can a second time light its torch at it.

One may, indeed, ask how far death by syncope may be often a partial death for a while at least; and how far this may explain the mysterious and puzzling cases you may meet with which are thus alluded to by Dr. Delafield of New York. "There are also recorded a number of cases in which the body retained its heat for several days without known cause" (page 7, *Post Mortem Examinations*). I have on at least two occasions, when superintending the inspections at Guy's, seen the blood run so hot at the first incision that my own ran cold, until I turned the body up and saw the hypostasis and flattening which show life to be extinct; I always examined for *rigor mortis* before commencing. It does not appear from your quotations whether Mrs. Gulliver's inspectors observed these certain signs of death; indeed, it fills me with horror to think of all the hideous possibilities that creep around this lamentable tragedy. Thus it is certain that the first statement given in evidence before the jury is quite the opposite of fact; and it is most unfortunate that that statement should have been made.

Next as to the "opinion that she died from some volatile noxious substance given to her immediately prior to death." Pray what volatile noxious substance is there, which would not be detected, and yet would produce a high temperature after death? Surely this question needs a substantial answer. The number of volatile noxious substances is not so very large; most of them have strong odours; and it appears that the servant was in the room at the time of death. It is to be observed that the opinion is stated distinctly as having arisen as a conclusion from the high temperature after death. Surely any facts showing that volatile noxious matters produce a high temperature after death would be very important, and, I think, would be entirely novel additions to medico-legal knowledge. The evidence, as quoted, appears to me astounding. It recalls the time when vague suspicions of poisoning roused the jury-furnishing classes to ruthless mutual murder, and it cannot be surprising if it upset the balance of an overstrained mind.

It may be as well to review very shortly the little that is known about the cooling of the body after death. The number of accurate observations is small. Drs. Taylor and Wilks found that two or three hours after death the skin of the abdomen was 77 deg.; in four to six hours, 74 deg.; in six to eight hours, 70 deg.; at twelve hours, 69 deg.

As to the effects of modes of death, not a single statement is proved. Dr. Delafield, in an able summary of what is known (*Post Mortem Examinations*, page 7), says: "It is said that after sudden deaths from accidents, apoplexy, acute disease, asphyxia, the body retains its heat for an unusually long period." It is obvious to remark that the warmer the medium the body is in, and the less the power of conduction possessed by that medium, the less rapidly the body cools; so that the more a body in the air is covered up with clothing, etc., the slower is its cooling. It is also obvious to remark that the temperature of the frame at the time of death must make a great difference; this has been actually proved in the *hyperpyrexia* of rheumatism. Thus it has been shown by Dr. Davy that, after such death in acute rheumatism, the heart was 113 deg., and the liver 112 deg.

Perhaps the most important series of observations on this point are those of Dr. Goodhart, published in *Guy's Hospital Reports* for 1871, in which he ascertained the temperature just prior to death in a number of diseases; the general result being that there is rarely any important lowering of temperature before death. In the present case it is in point to notice that some of Dr. Goodhart's cases of Bright's disease showed high temperature before death. Mrs. Gulliver's symptoms correspond very much with renal disease, and a calculus was found in the kidney.

As to the "theory" of the matter, it appears to me that it would run thus. If a person die from syncope, *i.e.*, from failure of the heart's action, the blood would lie in the great vessels and other deep parts, and would recede (as we all observe in fainting) from the skin. This would place the blood away from the surface, and so far give its heat to the inner parts, while the anæmia and coldness of the surface would lessen the amount of heat which departed therefrom. So that after death by syncope the internal parts may be expected to show an increased amount of heat. Speaking from my own experience, I should say that this is what is generally observed, though I should hesitate to make any statement on a matter so little subjected to accurate observation, and as yet so little known. It is plainly time that some good knowledge on the subject should be caused to reach the advisers of juries. I cannot help thinking that the present case pointedly shows the necessity of having a competent and responsible Government officer who should supervise, examine, and estimate, the medical evidence offered in the courts. I am, etc., W. MOXON, M.D., F.R.C.P.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

RETURNS OF SICKNESS AND DEATHS.

SIR,—A recent minute of the Local Government Board requires, at the hands of medical officers of health, a quarterly return of sickness and deaths occurring in their respective districts. This is neither more nor less than a requisition on the medical profession, through the medical officers of health, for services which it is not intended to acknowledge or requite; and it remains to be seen what reply the profession, as a body, will make to a demand so unexpected and so unfair.

A recent writer, looking at the question from the health-officers' point of view, recommends those gentlemen not to trouble themselves greatly concerning the returns. I venture to think they should trouble themselves greatly, or not at all. The returns, if uniform and co-extensive with the whole of England, would be of inestimable value to the central authority, and would form the basis for important generalisations; if they fall short of this, as they must do on the proposed system, they will be a delusion and a snare, except as used by local knowledge for local purposes. Nothing could be more mischievous than throwing, as at present, the whole responsibility of collecting data on the health-officers, and leaving them to arrange as they can with the medical men around them, who alone possess the facts.

Love of duty and an honourable feeling of rivalry, common to Englishmen, will make them bring all their personal influence to bear upon the result, here and there with success, for personal appeals are hard indeed to resist; but what can be thought of a Government that would use the better feelings of human nature to attain results which they have not the honesty to acknowledge? Health-officers may ask in despair what they are to do; but officers of hospitals, dispensaries, asylums, and others, are asking everywhere the same question. Pressure is being brought to bear upon them, to fill up elaborate returns, and to spend valuable time in the service of Government; some few resist on public grounds, some yield willingly, others on persuasion, but none without comment on the injustice of the demand. It is time that the leading medical organ of provincial England should speak out, and give unity of purpose in a question of this kind, before it is irretrievably confused by individual and unconcerted action. The subject of sickness-returns is no new one; it has been thoroughly discussed and matured by sanitarians during many years; a former paper of my own in this JOURNAL (BRIT. MED. JOUR., April 8th, 1871, On the Registration of Sickness) will show how much; yet the results in Mr. Stansfeld's hands are, as I have stated, a demand through the health-officers on the medical profession of the country for gratuitous and unacknowledged service. Shall it be yielded, or shall it not? Whatever be the answer, it is important that it should be given with one voice, and on public, not on personal grounds.

I am, etc., EDWARD T. WILSON, M.B., F.R.C.P.,
Cheltenham, Jan. 14th, 1874.

SIR,—I shall be obliged if you or any of your correspondents will kindly inform me whether it is the duty of the district medical officers of health to procure, at his own expense, the statistics of births and deaths from the registrar; and whether it is the custom for this expense to be borne by the sanitary authority or by the medical officer. I am, etc., J. H. COVENEY.
Prestwich, January 12th, 1874.

⁂ It is no part of the duty of the medical officer to procure such statistics. It is of course necessary that they should be furnished to him; and in many places the local sanitary authorities have made arrangements for this purpose, by providing for the fees of the local registrars out of petty expenses.

BYE-LAWS OF SANITARY AUTHORITIES.

DR. J. J. MACKINTOSH of Caistor, Medical Officer of Health, asks:—Can you inform me how I can become possessed of a code of bye-laws for a Rural Sanitary Authority already approved of by the Local Government Board? We are about to frame a code in this district; and it would facilitate matters very much if we could have the assistance of one already approved of.

*** The only purposes for which bye-laws can be made by a Rural Sanitary Authority, are:—1. The cleansing of footways and pavements adjoining any premises. 2. The removal of refuse from any premises. 3. The cleansing of privies, ashpits, and cesspools. A form of all bye-laws that may be framed by sanitary authorities will be found in the third edition of *A Digest of the Statistics relating to Public Health*, by G. F. Chambers, This work will appear in a few days, The publishers are Stevens and Son, 119, Chancery Lane.

SIR,—I should like to know if a medical officer of health is entitled to the usual fees and charges when called upon to give evidence in Courts of Law; for instance, in a case of this kind. His attention is called to a quantity of meat exposed for sale, and he gives a certificate to the effect that it is unfit for human food; after which, he is subpœnaed to give evidence at a magistrates' meeting.

January 9th, 1874. I am, etc., J. T.

*** Mr. W. H. Michael writes in reply:—I do not understand what is meant by a magistrates' meeting. If the writer be subpœnaed to give evidence at petty or quarter sessions, he is entitled to his fee, precisely in the same manner as other scientific witnesses. The same would apply to coroners' inquests, attendance at assizes, etc.

MILITARY AND NAVAL MEDICAL SERVICES.

MR. CARDWELL'S INJUSTICE TO THE ARMY MEDICAL DEPARTMENT.

WE have received with much satisfaction letters from army medical correspondents, relating to our efforts in bringing to the notice of the authorities the great injustice done to the department by recent proceedings. Our correspondents may rest assured that those efforts will suffer no abatement till they have succeeded. Early means will now be taken to bring the subject under notice in Parliament, for which purpose we are now taking the necessary steps, and shall presently inform our military readers of the form which the matter is likely to take.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the Primary or Anatomical and Physiological Examination on January 13th, 36 candidates presented themselves for examination, of whom 25 passed; viz.:

W. L. Abbott, Leeds School of Medicine; A. H. Blake, Dublin and Middlesex Hospitals; W. G. Bott, St. Thomas's Hospital: J. Boughton, Guy's Hospital; R. H. Clarke, St. George's Hospital; H. Colborne, St. George's Hospital; T. K. Fell, Guy's Hospital; E. Ferrand, St. Bartholomew's Hospital; H. Flint, University College; J. G. S. Forrest, St. George's Hospital; A. H. Garrod, King's College; C. W. Godfrey, University College; E. T. Johnson, St. Mary's Hospital; W. A. Kidd, Guy's Hospital; Joseph Lewis, Guy's Hospital; T. G. Lithgow, St. Mary's Hospital; H. H. Murphy, Cambridge and St. George's Hospital; R. A. Oliver, Newcastle School of Medicine; S. P. Phillips, University College; T. L. Porter, Cambridge and Guy's Hospital; J. H. Pugh, St. Thomas's Hospital; A. G. Sandberg, Liverpool School of Medicine; F. S. Scovil, St. Mary's Hospital; E. G. C. Snell, London Hospital; L. H. Stevenson, Guy's Hospital.

On January 14th, 36 candidates presented themselves, of whom the following 21 passed.

R. G. Allen, Queen's College, Birmingham; T. W. Barron, Cambridge and University College; T. A. Bell, Guy's Hospital; H. R. Brown, King's College; W. S. Chadwick, Leeds School of Medicine; A. E. Dalton, King's College; Thomas Davies, King's College; S. T. Fairland, Guy's and Westminster Hospitals; J. G. Fitzgerald, Dublin; D. C. B. Griffith, St. George's Hospital; W. H. Hall, Guy's Hospital; F. G. Hayes, King's College; E. B. Holwell, Leeds School of Medicine; J. B. James, King's College; W. B. Johnson, London Hospital; F. D. Miller, King's College; J. P. Oliver, Dublin; W. R. Smith, King's College; A. L. Williams, St. George's Hospital; C. F. Willis, St. Thomas's Hospital; W. L. Winship, Newcastle School of Medicine.

On January 15th, 12 candidates presented themselves, and the following 5 passed.

E. Carcenac, St. Bartholomew's Hospital; E. W. Evans, King's College; J. R. Kemp, St. George's Hospital; C. Newland, St. Mary's Hospital; W. Roughton, St. Bartholomew's Hospital.

Mr. G. Greenslade, having previously passed in surgery, was admitted a member on January 13th.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, January 15th, 1874.

Elliott, William Hawes, Andover, Hants

The following gentleman also on the same day passed his primary professional examination.

Davey, William Thomas, St. Bartholomew's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Surgeon: £65 per hnnum. Applications, 13th February, to F. Barlow, Sec.

ARDNAMURCHAN, Argyleshire—Medical Officer for the Districts of Sunart, Ardnamurchan, and Moldart: £100 per annum, house, and garden. Applications, 2nd February, to Wm. Ralston, Inspector of Poor, Ardshealach, Strontian.

ARMY MEDICAL DEPARTMENT—Surgeons. Applications to T. G. Logan, Director-General.

BIDEFORD UNION—Medical Officer for the Clovelly District.

BIRMINGHAM GENERAL DISPENSARY—Resident Surgeon: £130 first year, £140 second, £150 per annum afterwards. £30 per annum for cab-hire, furnished rooms, etc. Applications, 28th instant, to Alexander Bottle, M.D., Secretary.

BOLTON (Borough)—Medical Officer of Health and Public Analyst: £400 per annum. Applications, 27th instant, to R. G. Hinnell, Town Clerk.

BRADFORD, Yorkshire—Public Analyst: £100 per annum, and the cost of necessary chemicals. Applications, 27th instant, to W. T. M'Gowen, Town Clerk.

BURTON-ON-TRENT, Lichfield, and Penkridge Rural, and Lichfield and Rugely Urban, Sanitary Districts—Medical Officer of Health: £600 per ann., for three years. Applications, 26th inst., to John Bown, The Close, Lichfield.

CALNE UNION—Medical Officer and Public Vaccinator for the whole Union: £200 per annum, and fees. Applications, 3rd February, to H. S. Heath, Clerk.

CALNE RURAL and URBAN SANITARY DISTRICTS--Medical Officer of Health: £50 per annum.

CAMBRIDGE UNION—Medical Officer for the Third District: £70 per annum, and fees. Applications, 27th instant, to J. Deacon Fetch, Clerk.

CAMELFORD UNION—Medical Officer for the Camelford District and the Workhouse: £45 and £10 per annum. Applications, 5th February, to C. C. Hawker, Clerk.

CHORLEY UNION, Lancashire—Medical Officer for the Rivington District.

CRANBROOK UNION, Kent—Medical Officer and Public Vaccinator for the Benenden District: £43 per annum, and fees. Applications, 26th instant, to H. J. Farrar, Clerk.

DERBYSHIRE GENERAL INFIRMARY, Derby—House-Surgeon: £100 per annum, increasing to £150, apartments, board, etc. Applications, 7th February, to Samuel Whitaker, Sec.

DOWNPATRICK UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Downpatrick Dispensary District: £100 per annum, and fees. Applications, 31st instant, to S. C. Nelson, Hon. Sec.

FEMALE LOCK HOSPITAL AND ASYLUM, Westbourne Green—House-Surgeon.

HOLLINGBOURN UNION, Kent—Medical Officer and Public Vaccinator for the Headcorn District: £44 per annum, and fees. Applications, 4th February, to Edward Hoar, Clerk, Maidstone.

HUDDERSFIELD INFIRMARY—Physician.

INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications to Major-General Pears.

LEITH HOSPITAL—Assistant-Surgeon. Applications, 31st instant, to A. Mann, Secretary.

LITCHURCH URBAN SANITARY DISTRICT—Medical Officer of Health: £25 for one year. Applications, 26th instant, to W. H. Whiston, Clerk to the Authority.

LIVERPOOL EYE AND EAR INFIRMARY.—Honorary Surgeon.

LLANFYLLIN UNION—Medical Officer for the Llanfair District: £65 per ann.

LLANFYLLIN RURAL SANITARY DISTRICT—Medical Officer of Health for the Llanfair Subdistrict

LONDON and SOUTH-WESTERN RAILWAY COMPANY—Medical Officer.

NAVAL MEDICAL SERVICE—Surgeons. Applications, 12th February, to A Armstrong, Director-General.

NEW ROSS UNION, co. Wexford—Medical Officer for the Templeudigan Dispensary District: £50 per annum. Applications, 29th instant, to Edward Kavanagh, Hon. Sec.

NORTHUMBERLAND PAUPER LUNATIC ASYLUM, Cottingham, Morpeth—Resident Medical Superintendent: £400 per annum, furnished house, etc. Applications, 9th February, to Wm. Dickson, Clerk to Committee.

NOTTINGHAM GENERAL HOSPITAL — Physician. Applications, 10th March, to E. M. Kidd, Sec.

PLYMOUTH URBAN SANITARY DISTRICT—Medical Officer of Health: £50 for one year.

PUBLIC DISPENSARY, Stanhope Street, Clare Market—Resident Medical Officer: £105 per annum, and furnished apartments. Applications, 26th inst., to J. S. Phillips, Hon. Sec.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN—Resident Medical Officer. Applications, 26th instant, to John Henry, Secretary, 20, St. Andrew Square, Edinburgh.

ROYAL HANTS COUNTY HOSPITAL, Winchester — House-Surgeon and Secretary: £100 per annum, board and lodging. Applications, 28th instant, to W. Allnutt, Secretary.

ROYSTON UNION—Medical Officer for the Fourth District.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

ST. MARY'S HOSPITAL—Aural Surgeon.

ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street—Physician and Surgeon.

SCARIFF UNION, co. Clare—Medical Officer for the Annacarriga Dispensary District: £100 per annum. Applications, 26th instant, to W. H. Mayne, Honorary Secretary.

SUNDERLAND EYE INFIRMARY—Surgeon. Applications, 26th instant, to Thomas Dixon, Honorary Secretary.

THETFORD UNION, Norfolk—Medical Officer for the Croxton District.

UNIVERSITY OF DUBLIN—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.

WARRINGTON DISPENSARY AND HATTON'S CHARITY—Resident Snrgeon-Apothecary: £180 per annum, £12 for servant's wages, furnished residence, fuel, and lighting.

WATERFORD UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilmeaden Dispensary District: £100 per annum, and fees. Applications, 30th instant, to Richard Gamble, Hon. Sec.

WESTERN GENERAL DISPENSARY, Marylebone Road—Resident Surgeon and Apothecary. Applications, 26th instant.

WESTMINSTER HOSPITAL—Assistant-Surgeon. Applications, 10th February, to F. J. Wilson, Sec.

WEST BROMWICH UNION—Medical Officer for the E. District, Oldbury: £65 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Chambers, Eber, M.B., appointed Visiting Surgeon to the Chester General Infirmary, *vice* Wm. J. Fleetwood, L.K.Q.C.P.I., appointed House-Surgeon.

Fleetwood, Wm. J., L.K.Q.C.P.I., appointed House-Surgeon to the Chester General Infirmary, *vice* *William Haining, M.B., resigned.

*Kirk-Duncanson, J. J., appointed Assistant-Surgeon to the Edinburgh Eye Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

Boggs.—At Paris, on January 20th, the wife of Alex. Boggs, M.D., late of Her Majesty's Indian Army, of a daughter.

Dolman.—On Saturday, January 10th, the wife of *A. H. Dolman, Esq., Surgeon, Derby, of a daughter.

DEATH.

Harris, Herbert Robey, Esq., at his residence, 52, Bolton Street, Bury, Lancashire, aged 42, on January 19th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY .St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Hughlings Jackson will exhibit a drawing of Optic Neuritis, with good sight; Mr. Spencer Watson, "Case of Neuro-paralytic Keratitis"; Mr. Sewill, "Case of Cleft-palate"; Mr. Pennefather will show "Aural Polypi". Communications by Mr. Bloxam and others.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Henry Lee, "Case of Primary Excision of the Ankle-joint"; Drs. Hennessey and MacLaren, "On Cholera (in India)": Mr. John Wood will show Two Cases of Ectopia Vesicæ: and Dr. John Harley will again bring forward his patients treated by Conium for disorders of Muscular Movement.

FRIDAY.—Quekett Microscopical Club (University College), 8 P.M. "Insect-mounting in Hot Climates."

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Authors desiring reprints of their articles published in the Journal, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

We cannot undertake to return Manuscripts not used.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

Communications respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

Kappa (Bath) wants a reference to Dr. Binz's experiments on alcohol.

Cramp in the Legs.

Sir,—I shall feel obliged by any of my fellow members informing me how to alleviate or cure cramp in the legs, occurring almost nightly, and interfering with sleep (age 50).
I am, etc., Ignoramus.
Manchester, January 18th, 1874.

Treatment of Hooping-Cough.

Sir,—In reply to "Inquirer", allow me to say that I have found the following mixture very serviceable in cases of hooping-cough; viz.: Bromide of potassium, 30 grains; dilute hydrocyanic acid, 5 minims; tincture of conium, 1 drachm: syrup of squills, 3 drachms; water, 2 ounces. Two teaspoonfuls to be taken every four hours.
I am, etc., Wilton Provis.
Bath, January 19th, 1874.

Sir,—During the last three months, we have had here a most severe epidemic of hooping-cough, and I have found the following mixture most invaluable in both mitigating the severity of the paroxysms and lessening the duration of the disease. Chloral hydrate, 12 grains; ipecacuanha wine, 1 drachm; syrup of orange, 2 drachms; peppermint water, 1½ ounce. To a child three years old, one teaspoonful of the above mixture should be given every four hours.
Lydney, January 20th, 1874. I am, etc. J. Gimblett, M.D.

Mr. Sanger (Alfriston).—Writers of this class are sufficiently aware that they have forfeited professional esteem, and deliberately choose their path to a dear-bought end. There is, however, always a certain large average of fools in the world, on whose suffrages writers of "popular treatises" gratuitously circulated by post can count. The subject might be brought under the notice of the Faculty; but we expect that little good would occur. Mr. Eldridge Spratt's book is professionally beneath contempt; but it is probably not for professional opinion that he cares.

Mr. Harday (West Haddon)—The point which is of capital importance to science and justice in the West Haddon case is, not the fringe of evidence as to motive, but the ground on which Mr. Rodgers inferred that death had occurred from the influence of a noxious volatile substance administered immediately before death, of which he found no trace.

Dr. Fox (Cockermouth).—If Dr. Fox wish publication for communications such as those with which he has favoured us, he must allow his name to be appended to them. His first letter avowed a belief of corrupt intention on the part of writers from whom he differs. He now charges them with unworthy subterfuge. If he really desire to make such charges, he must at least authenticate them and sign them. We must warn him that his charges are within our knowledge unfounded, and made under erroneous impressions.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal: The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail; The Blackburn Times: The Glasgow News; The Glasgow Herald; The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. George Johnson, London; Dr. Cobbold, London; Dr. Broadbent, London; Mr. Erichsen, London; Mr. Jonathan Hutchinson, London; Dr. Theodore Williams, London; Dr. Spencer, Clifton; Dr. Bond, Gloucester; Our Dublin Correspondent; Mr. Haviland, Northampton; Dr. Embleton, Newcastle-upon-Tyne; Dr. Lockhart Clarke, London; Mr. H. A. Reeves, London: Mr. Fairlie Clarke, London: Dr. Philipson, Newcastle-upon-Tyne; Dr. Vinen, London; An Associate; Mr. Parkinson, Wimborne; Mr. Lawson, Huddersfield; Mr. Eassie, Child's Hill; Mr. Eastes, London; Dr. Murray, London; The Secretary of the Pathological Society; Mr. Holmes, London; Dr Munro, Cupar-Fife; Dr. Robert Barnes, London; Mr. Fuller, London; Dr. Lipscomb, St. Albans; Dr. T. Snow Beck, London; Dr. Gardner, Box; Dr. J. M. Fothergill, London; M.R.C.S.E.; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Mr. Bartleet, Birmingham; Dr. Power, Prince Town: Mr. Waren Tay, London; Dr. Hughlings Jackson, London; Dr. Winn, London; Dr. Davey, Northwoods, Bristol: Mr. Vincent Jackson, Wolverhampton; Dr. B. W. Foster, Birmingham; Mr. Ingham, London; Mr. W. Provis, Bath; Mr. Blackett, London; Dr. Althaus, London; Dr. Waldenburg, Berlin; Dr. Woakes, Luton; The Secretary of the Pathological Society; Dr. D. Ferrier, London; Inquirer: Our Manchester Correspondent; Dr. Hamilton, Liverpool; Mr. H. Morgan, Lichfield; Mr. H. L. Harper, London; Mr. Noble Smith, Paddockhurst; Mr. Middlemore, Birmingham; Mr. Lennox Brown, London; Dr. Wilson, Cheltenham; Dr. Williamson, Ventnor; Mr. Harday, West Haddon: Dr. Dowse, Highgate; Dr. Kitching, Enfield; J. W. P.; Justice; Mr. James Cooper, Cromer; Rev. J. Russell, Dennington, Swimbridge; Dr. Silver, London; Mr. R. E. Gibson, Norwich; Dr. F. T. Bond, Gloucester; Mr. K. L. Morgan, London; Dr. M. G. Evans, Glastonbury; Dr. H. Jacob, Dublin; Dr. Lockhart Clarke, London; The Registrar of the Royal College of Physicians; Mr. Sanger, Alfriston; Dr. Haining, Chester; Dr. Gimblett, Lydney; Mr. P. B. Burgoyne, London; Dr. Malins, Birmingham; Mr. Bromley, Oldham; Mr. A. Prichard, Bristol; Our Dublin Correspondent; Dr. Egan, Dublin; Dr. Boggs, Paris; Mr. L. King, Bath; Dr. Hope, London; Surgeon-Major Ovens, Dundalk; Dr. Tripe, London: Dr. Dalby, London: Our Paris Correspondent; etc.

AN ADDRESS
ON
PYÆMIA IN PRIVATE PRACTICE.

Delivered before the Clinical Society of London.

BY PRESCOTT HEWETT, F.R.C.S.,
President of the Society; Senior Surgeon to St. George's Hospital; etc.

GENTLEMEN,—In taking the chair this evening, I cannot refrain from thanking you for the honour which you have been pleased again to confer on me. I confess that I had my misgivings as to my fitness when I took the chair last year; but, whatever may have been my shortcomings, thanks to the Council, and more especially to the unwearied zeal of our secretaries and of our treasurer, I am happy in being able to congratulate you upon the still increasing prosperity of the Clinical Society.

With these few but heartfelt words, I pass on to the more immediate business of this evening; and, in doing so, I shall follow out the course upon which I ventured to enter last year, and again give you some gleanings from private practice, the clinical results of which may be made valuable, and all the more so when contrasted with those of hospital practice: and the subject to which I shall direct your attention is that of Pyæmia, a subject than which none is more important, and the consideration of which, in some of its bearings, has of late years been largely occupying the attention of our profession. The few observations which I have now to offer you on this subject will be confined to cases occurring in private practice.

A young lady, aged 15, stoutish, but of good general health, came under my care for a congenital cystic tumour at the root of the neck. When an infant, an attempt had been made to remove this tumour, but a bit of it was left, as it was closely adherent to the large vessels. For several years after this operation nothing was noticed in relation to this tumour, but for two or three years previously to seeing my patient it had, without any apparent cause, taken to growing; and when I was consulted it occupied the whole of the lower part of the left side of the neck, and projected beyond the clavicle. At a consultation with the late Mr. Keate, who had performed the operation, it was determined that single-thread setons should now be used, and two of these were introduced into the tumour. In a few days intense inflammation set in, and suppuration followed; a quantity of matter was let out, the swelling subsided, and for some days everything appeared to be going on satisfactorily; then came rigors and sweating, but without any increase in the local trouble. After awhile it became evident that the patient was suffering from pyæmia, the mischief being in the left lung, and for several days the condition was most perilous; but one afternoon, after a violent fit of coughing, a large quantity of offensive matter was suddenly brought up, after which the more dangerous symptoms gradually subsided, and the patient ultimately recovered, and remained perfectly well, without any further trouble as to the tumour. In this case the patient's room—large, lofty, and well ventilated—was in a well found house in one of the best streets in town.

A hale old gentleman, close upon 80, who had long enjoyed most excellent health, had a small warty growth in the skin, just over the insertion of the tendo Achillis. This growth I removed, as it constantly became chafed, and troubled him much in walking. I made him lay himself up for a few days, and then, as the trifling wound was all but healed, he was allowed to go about a little, but, being of very active habits, he one day took a longer walk than usual. This was followed by some slight inflammation of the wound, which, however, soon subsided, and he was on the eve of returning to his usual avocations when rigors and sweating made their appearance; then came an immense deep-seated abscess in the thigh, under the constant draining of which he ultimately sank.

I was called in consultation to a gentleman who was suffering from pyæmia, and who a short time before had had a small wart removed from the scrotum. He died. Details of this case are given further on, as I had had to attend this gentleman between three and four years previously for a former attack of pyæmia.

Shortly after I had begun practice, I removed a small sebaceous tumour from the scalp of a lady. Everything went on well for the first few days; then came erysipelas of the scalp, which was subsequently followed by pyæmia and death. As far as one could judge, the conditions under which this trivial operation was performed were all favourable ones. The patient, middle-aged, and not stout, had some months previously undergone, without a bad symptom, a similar operation for the removal of three other sebaceous tumours. The bedroom, in a house in one of our most open and healthiest squares, was large and well ventilated; the weather was temperate, and the patient had remained in the house after the operation.

I operated upon a middle-aged lady, of good general health, for scirrhus of the breast, and for the first eight days everything looked promising; then came a rigor, followed by erysipelas around the wound, which for a few days went on slowly spreading; subsequently pyæmia made its appearance, and under this she gradually sank. The house in which the operation was performed was in one of the best streets in Pimlico. The bedroom was of good size, and well ventilated.

About a month afterwards I operated upon another lady for scirrhus of the breast. Middle-aged and slim, she was of a sallow complexion, but in good general health. In this case, too, everything promised well for the first few days; then came a severe rigor and sickness; erysipelas soon made its appearance around the wound, whence it gradually spread. Matters went on thus for a few days; then there was pyæmia, and in a few days more the patient was dead. In this case, the operation was performed a few miles out of town. The bedroom, very large and well ventilated, was in a large well-built house, with all modern appliances, and situated on a heath, on elevated ground, overlooking a wide expanse of country. As far as one could judge, no better or healthier situation could have been selected for an operation.

A lady, aged about 45, had a large sero-cystic tumour of the breast, some of the cysts of which occasionaly suppurated, and were, under such circumstances, sometimes opened and sometimes allowed to burst. Matters went on thus, as she would not hear of an operation, for between eight and nine years, the general health being as good as ever between the attacks. At this period a small cyst suppurated, and was allowed to burst, shortly after which erysipelas made its appearance round the edges of the little sore; then in a few days came rigors and sweating, with pain and great swelling of one of the knee-joints, and in a few days more this lady sank. At the time of the bursting of the cyst the patient was in her usual good health; her bedroom, fair sized and well ventilated, was in a house in a part of town generally considered to be one of the healthiest.

A young gentleman met with an accident to his shoulder, which led to inflammation of the joint, and for this he ultimately consulted me. After awhile the inflammation subsided, leaving the joint somewhat stiff. Then, persuaded by some friends, he went to a bone-setter, who pronounced that the bone was out, and proceeded to put it back, as he said. The manipulations gave him great pain, and were followed by a recurrence of inflammation in the joint, for which he once more fell under my care. Suppuration of the joint ensued, and abscesses burst in various directions. Thus matters went on for a time, then came rigors, profuse sweatings, and a sodden appearance of the skin, with an anxious countenance, a running pulse, and great loss of flesh—the joint itself and the parts around it being meanwhile without any increase of mischief. Although tall and slim, this gentleman, up to the time of going to the bone-setter, had been in good health, and his family was healthy. He remained in this perilous condition for some time, looking as if secondary abscesses might occur at any moment. All this time he lived out of town, in a good country house, well cared for, and with plenty of fresh air. With the winter coming on, I sent him to the South of France, where, after a residence of some months, the more threatening symptoms gradually subsided, and when he returned to this country there was a decided improvement in his general health; but he was still far from well, and he remained more or less ailing for between two and three years, at the end of which period he was in fair health, with a permanently stiff joint, the abscesses about the shoulder having gradually dried up.

A middle-aged lady, in fair health, was supposed to be suffering from a sharp attack of sciatica on the right side, and for this she was ultimately sent to Wiesbaden; but after a time, finding that there was no improvement as to the pain, she returned home, and for some months went on creeping about, under the supposition all the while that she was suffering from sciatica. It was at this period that I was consulted on account of a swelling which had been gradually making its appearance in the corresponding groin. The swelling proved to be an abscess which extended into the iliac fossa; and, on further investigation, the sacro-iliac joint was found to be the source of all the trouble. The abscess was allowed to burst, after which everything went on satisfactorily for some three weeks, when pyæmia made its appearance, and was followed by death in a week. This lady lived in a house on a hill, a few miles out of town. The house was in every respect well found, and her bedroom was airy and well ventilated.

I was telegraphed for a few miles out of town to a gentleman about thirty years of age, who was thought to be suffering from acute inflammation of both ankle-joints, and inflammation of the left lung. The case, on closer examination, proved to be one of pyæmia, in connection with suppuration about the tonsils. In a few days, the inflammation around the ankle-joints ended in the formation of matter, which was let out; after which this patient gradually recovered, and in a few weeks was restored to his usual good health. This case has already been alluded to as that of the gentleman who died of pyæmia after a trifling operation for the removal of a small wart from the scrotum. Between the two attacks of pyæmia in this case, there was an interval of between three and four years. The first attack occurred in the country, and the second in town.

Recently, too, I have seen another gentleman, who, in connection with suppuration about the tonsils, had symptoms of poisoned blood—rigors, profuse sweats, sodden skin—under which he sank.

A young gentleman, aged 18, had a severe attack of typhoid fever, from which, however, he was making a good recovery, when, about a fortnight after all symptoms had disappeared, he again became feverish, and soon afterwards, without having met with any accident, he complained of pain along the shin-bone; swellings, which were very painful, formed along the surface of this bone; suppuration followed; the abscesses were opened, and went on discharging for some time, after which they gradually dried up without further mischief.

A lady's maid, aged about 30, had a severe attack of typhoid fever in the country. She recovered, and, being considered convalescent, came up to town, shortly after which smart feverish symptoms made their appearance, and were soon followed by swelling, affecting principally the knee, and extending some distance down the front and inner side of the leg. For awhile the symptoms were very severe, and ended in extensive suppuration about the upper part of the tibia; the matter was let out, and the patient gradually recovered; but the free use of the limb was not regained for a couple of years, and during this period several bits of bone came away.

A delicate middle-aged lady had typhoid fever, which in due course passed away, leaving her weak and ailing, with now and then a recurrence of slight feverishness. After a time, this feverishness became more marked, and then she began to complain of very severe, deep-seated pains in various parts; first, at the upper and inner side of the tibia; then, at subsequent periods, over the lower part of the shoulder-blade, along the middle part of the spine, over the ribs, as well as over the crest of the haunch-bone. The pain in each of these parts was followed by swellings, and ultimately by abscesses, some of which were large and deep-seated. The abscesses were allowed to burst, and then, after the subsidence of the swelling, a probe was, in each instance, easily passed down to the periosteum, and in some parts the bone was found bare. The drain was great; hectic set in; and, after intense suffering, with occasional but limited mischief about the lungs, this lady sank.

A delicate-looking girl, aged 18, ran a needle into the fleshy part of the leg, where it broke off, but could be felt projecting slightly beyond the skin. It was pulled out, and she went about her work as usual; but in a few days the tiny wound festered, and in a few days more she was admitted into St. George's Hospital with symptoms of pyæmia, rigors, profuse sweatings, and swellings in various parts. Subsequently came evident signs of mischief about the lungs, and she sank within a month after the trifling injury. The needle, according to the patient's account, was quite clean; and she stated that she had never been laid up before, and had always had good health.

A young gentleman, aged 18, and apparently in good health, whilst bathing, ran a small splinter of wood into the fleshy part of the great toe. The splinter was immediately plucked out, and he went about as usual for several days, as if nothing had happened. Then the spot became painful, and a tiny abscess formed; it was attended to, but in a few days it was followed by urgent symptoms—severe rigors and most profuse sweatings; abscesses formed in the leg—one, a very large one, was deep-seated and in the calf; as they appeared they were dealt with, but for weeks the sweatings were so profuse that it was necessary to change the bed-linen several times in the twenty-four hours. Ultimately, however, the patient recovered, and he left his bed, a mere skeleton, between four and five months after the onset of the attack. His bedroom was fair-sized, well ventilated, with a large window looking over a wide expanse of country, the house, a recently built one, being on the outskirts of a town.

A gentleman, middle-aged, was tripped up in the street, and fell violently upon his elbow, the lower bones of which were thereby dislocated backwards, and partially thrust through the skin. The dislocation was easily reduced, and for a few days everything went on satisfactorily. Then came suppuration of the joint, followed in about a fortnight by severe rigors and profuse sweating, with swellings in various parts, and he died a month after the injury. His bedroom was a fair-sized one, well ventilated, and in a house in a good street on the north side of, and not far from, Hyde Park.

A little boy, aged 6, met with a slight accident to his foot, which was followed by acute periostitis of the bones of the tarsus; this ended in suppuration; some of the joints were destroyed; and, at different periods, several abscesses formed in various parts—over the great trochanter, over the crest of the ilium, and in the sacro-lumbar region, as well as over the bones of the skull in divers places. The suffering was intense, with low muttering delirium and rapid wasting, and to such an extent that the child was soon reduced to a mere skeleton. Thus matters went on for some weeks, after which the abscesses gradually dried up; ankylosis of the bones of the tarsus took place, and when last seen, about a couple of years after the attack, he was a strong, active lad. All this occurred some miles out of town, in a good house in a healthy part of the country.

I was summoned a long way into the country to a young lady labouring under symptoms of a typhoid character, the origin of which was obscure. It appeared, however, that she had recently had measles, which had been followed by a slight discharge from the left ear. The recovery from the measles had been good, and she was going about, when rigors and sweating occurred, and were followed by fever, a dry, brown tongue, and great prostration; and such were the more obvious symptoms when I first saw this young lady. On further inquiry, it was now found that the discharge from the ear had stopped; the intellect was quite clear; there was no pain in the head, no swelling in the neighbourhood of the ear, but there was pain upon pressure immediately below the mastoid process, and this tenderness existed also some way down the side of the neck, in the course of the internal jugular vein. From this it was inferred that inflammation had spread from the ear to the lateral sinus and internal jugular vein, and that, in all probability, secondary abscesses would follow. In a few days, a large abscess showed itself in the left sterno-clavicular articulation; then came pain and swelling about the left knee and ankle, and inflammation at the back and lower part of the left lung; and ultimately there was a large deep-seated abscess at the back of the left hip. The abscesses were opened in due course, but the mischief about the knee and ankle-joint, and in the lung, subsided; the patient gradually recovered, and in a few months was quite well again. The conditions under which this young lady was placed were unexceptionable—a large, airy, well ventilated room looking on to an open country.

A young lady had, after her confinement, severe symptoms of low peritonitis, and was in great peril for some days; she recovered, however, and appeared to be going on well for a time, when the left shoulder became very painful, and for this I was asked to see her. Examination proved that the joint itself was not affected, but the parts around were much swollen and very painful, and especially so in front of the joint. Ultimately, a large abscess formed in this situation; it was opened, and the patient got well and went into the country, where, some weeks afterwards, deep-seated matter formed in the pelvic region; this burst into the vagina, and after a time she recovered completely, and has remained in good health ever since.

An officer in one of our light cavalry regiments, aged 18, came under my care for gonorrhœa. The symptoms were severe, and so he remained at home, and was treated with opiates and demulcents. About a fortnight after he had been under treatment, symptoms of what appeared to be gonorrhœal rheumatism made their appearance. First, the left shoulder-joint was affected, but after awhile the symptoms subsided; then, without any apparent cause, came rigors, profuse sweatings, and a dusky appearance of the skin, with great disturbance of the general health. These symptoms were soon followed by intense pain in the left sterno-clavicular articulation, which became much swollen, and in a few days presented evident signs of fluctuation. A large quantity of matter was let out. Inflammation and suppuration in and about the right hip-joint, accompanied by most intense pain, followed. In due course the matter was let out; and subsequently numerous small abscesses formed in the skin over various parts of the body. The patient was reduced to a mere skeleton, and, notwithstanding all possible care, the whole sacrum became exposed. The more intense symptoms about the hip having subsided, the patient was now turned over to the left side; but in a few days the skin over the great trochanter gave way, and the bone became exposed. He was then propped up so as to rest mainly on the ischiatic tuberosities; and, as the skin here after awhile gave way, he was once more turned on to his back, the sacrum being by this time for the greater part covered over by healthy granulations; and whilst in this position the skin over the various spinous processes of the vertebræ which happened to touch the bed gave way. What with one thing and another, I never saw a patient suffer more intense agony, which was such, indeed, as to necessitate the full administration of chloroform fifty-five times consecutively for the dressing of the various sores; but, notwithstanding all this, he ultimately recovered with an ankylosed hip. The onset in this case was in the early part of the year; and the patient's room, large, lofty, and well ventilated, was in a house in one of our great squares. When this gentleman first came under my care, he was one of the healthiest-looking young men I ever saw, strongly built and most active; and he subsequently was one of the most dashing light cavalry officers in our central Indian campaign.

Some time after the occurrence of this case, the late Dr. Bence Jones happened to mention to me that he had been summoned into the country to a young gentleman, who was suffering from well-marked pyæmia, without, as far as could be ascertained, any previously existing suppurating surface. I then told Dr. Bence Jones of the above case of pyæmia after gonorrhœa, and begged of him to ascertain, if possible, if his patient was suffering from gonorrhœa. The patient died before Dr. Bence Jones saw him again, but, at the *post mortem* examination, the existence of gonorrhœa was clearly proved. A third case of a similar nature, and in a young gentleman, was also mentioned to me by Dr. Guéneau de Mussy.

Such, gentlemen, are the cases of pyæmia occurring in private practice, to which I wished to direct your attention. They are twenty-three in number, and twenty-one of them fell under my own notice; the remaining two, the last being well authenticated, have been alluded to simply on account of their extreme rarity.

And now, if we proceed to analyse the circumstances under which pyæmia occurred in these twenty-three cases, it will be found that an operation was performed in six instances only. In four of these, the first four, the operation was of the most trifling nature—a single-thread seton, a small wart on the heel, a small wart on the scrotum, a small sebaceous tumour of the scalp; and it was only in the remaining two that the operation was of a somewhat severe character—amputation of the breast. Moreover, the first four were all in different years, and not in the same locality; the last two were in the same year, and within a month of each other; but one was in town, and the other in the country. And here let me note, that the third case is also mentioned among those of recovery, this patient having had two attacks of pyæmia at several years' interval, and in different localities.

Of the remaining seventeen cases, in which no operation had been performed, there was a broken surface in eleven, and in six there was not even an abrasion. Of the eleven cases, in which there was a broken surface, it was but small in ten; ulceration of a small sero-cystic tumour of the breast in one, of abscesses in two, of tonsils in two, of bowel in typhoid fever in three, a needle broken in the leg, a small splinter of wood in the great toe. The eleventh case was the only severe one—compound dislocation of the elbow. The six cases in which there was no abrasion were—a slight injury to the foot followed by suppuration, inflammation of the lateral sinus and internal jugular vein in connexion with discharge from the ear after measles, abscess after parturition, and gonorrhœa in three. Of these seventeen cases, none occurred at the same period, or in the same locality.

As to locality, of the twenty-three cases, sixteen occurred in town and seven in the country. Of the sixteen in town, all, with one exception, that of the young girl who, after running a needle into her leg, was admitted with pyæmia into the hospital, were in the best parts of town, scattered about in good houses, and in good-sized, well-ventilated bedrooms, and well cared for; in fact, to all appearances, under most favourable conditions. The country cases, seven, were in different parts, and widely separated from each other; and their conditions, too, were in all respects apparently excellent.

As to age, the youngest patient was six, and the oldest close upon eighty. Of the remaining twenty-one, eleven were between fifteen and twenty-five and ten between thirty and fifty.

As to local treatment, it was out of the question in several of these cases, and in several cases, too, all possible care and supervision on the part of the surgeon would have been of no avail. Of the twenty-three cases, eleven were under such circumstances.

In conclusion, pyæmia, it has been said, is caused, for the most part, by hospital-air, by foul air consequent upon the aggregation of surgical cases in the wards of our large hospitals; but pyæmia occurs also in cases even when placed under the most favourable conditions—perfect isolation, large airy rooms in the country, with plenty of fresh air, and in every way well cared for. Pyæmia appears, too, at times to be connected with atmospheric conditions; several cases occurring without any apparent cause, at, or about, the same period in different places. The two cases of amputation of the breast, which were within a month of each other, followed exactly the same course; one, however, being in town, and one a few miles out of town. And at the same time that these cases were under my care, other cases of pyæmia, which occurred in private practice at the same period, subsequently came to my knowledge.

Moreover, cases occur in which patients are apparently prone to pyæmia; as in the case of a gentleman who recovered from an attack of pyæmia, and a few years afterwards died of another attack.

The truth is, the causes of pyæmia are still to be worked out; and this, gentlemen, is a problem the working out of which I would strongly urge upon the Clinical Society.

LECTURES
ON
HOSPITALISM: AND THE CAUSES OF DEATH AFTER OPERATIONS.

Delivered at University College Hospital, London.

By JOHN ERIC ERICHSEN, F.R.C.S.,
Holme Professor of Clinical Surgery in University College, and Senior Surgeon to University College Hospital.

LECTURE III.—ON THE MODE OF PRODUCTION OF SEPTIC DISEASES.

CONTENTS.—*Overcrowding.—Nature, not mere Number, of Cases.—Experience at University College Hospital.—Epidemic Influences.—Meteorological Conditions.—Tyndall's Lecture on Dust and Disease.—Organic Atmospheric Dust.—Parkes, Rattray, and Cunningham on Pollution of the Atmosphere by Organic Matters.—Air in Hospitals.—Ships and Towns.—Influence of Organic Matter in Air as developing Septic Diseases.—Hospital Gangrene.—Septicæmia.—Pyæmia.—Erysipelas.*

BY "overcrowding", a condition of atmosphere is induced which may, according to the condition of the individuals so congregated together, produce diseases of various types. The overcrowding of uninjured individuals will produce some variety of typhus: the "gaol-fever" of a past generation was an instance of this kind.

The overcrowding of wounded people—whether the wound be accidental or surgical matters not—will develope septic disease in one of four forms; viz., hospital gangrene, septicæmia, pyæmia, or erysipelas.

That the septic poison which, when once generated, impregnates a wound, and thus gives rise to hospital gangrene, pyæmia, or erysipelas, is capable of transmission through the medium of the atmosphere, is undoubted. That it may be generated in the air by "overcrowding" is equally certain. The results of the most extended and recent observations in the development of this scourge of hospitals in actual warfare, which have of late years been numerous, have left no doubt whatever on the minds of military surgeons that "overcrowding" is the direct occasioning cause of the whole class of surgical septic diseases. But the word "overcrowding" is liable to misconception, and requires explanation. It is very important to be clear on this point; for by it is not meant the mere heaping together of sick and wounded in one ward or building to an extent beyond what it is intended to hold, or only limited by its size; but by "overcrowding", in the sense in which it is here used as the cause of the generation of the septic poison, is meant the accumulation within one ward, or under one roof, of a greater number of patients than is compatible with such a degree of purity of air as to render it incapable of the development or transmission of the septic poison.

It would, in fact, appear that the air of a ward is capable of oxidising, destroying, or absorbing a certain amount of morbid emanations from the contained patients; but if these emanations be developed too rapidly or too abundantly, the air becomes overcharged with septic matter, and then all the ill effects of "overcrowding" at once develope themselves. The contamination of the air of a ward may thus take place even though the actual number of patients lying in it be below what it is constructed to hold, as readily as by the introduction of one single patient beyond the number that the ward is calculated to accommodate with safety. Thus it would be more correct to say that the special evil effects of overcrowding, and the special form they will assume, are rather dependent on the nature that on the actual number of the cases that are contained in any given ward or building at one time. There is no evidence that an accumulation of unwounded patients to any extent can develope hospital gangrene or pyæmia, whatever other diseases may thus be generated. Pyæmia could not have been generated in the "Black Hole" at Calcutta; but a very trifling excess in the number of open or suppurating wounds beyond what any given ward is capable of holding with safety, constitutes "overcrowding" in a surgical sense, and will infallibly generate septic disease.

I can illustrate this observation from what has happened in this hospital. Ward 1, my male accident-ward, contains a cubic space of 21,924 feet. It is intended to hold fourteen patients, giving a cubic space of 1,566 feet to each, or, if we deduct for space occupied by furniture, etc., about 1,500 cubic feet. But not only is the cubic space sufficient, the floor-space is also ample. There is a space of about six feet between each bed, and ten feet between the opposite rows; the ward being sixty-three feet long by twenty-four feet wide. It can be well ventilated by a row of windows on each side; a fireplace at one end and on one side; and a large door, with an open air-hole above communicating with the passages of the hospital, at one end. In this ward we have had many outbreaks of septic disease, pyæmia, and erysipelas, invariably the result of the accidental accumulation within it, not always of too large a number of patients, but of too many severe cases of operation and of injury with wounds in a state of suppuration. The average number of open wounds in this ward is about seven, or half the number of patients it contains; and, if these wounds be not severe, such a number can be contained in it with moderate safety. But if they rise above this in number, or if the majority be severe, then septic disease will certainly break out. The outbreak in Ward 1, in November 1872, which will be fully described hereafter, was thus produced, the ward containing at the time a remarkably severe set of cases; in fact, the conclusion at which we have arrived is this, that if Ward 1 contain nine or more cases with open wounds, at least three of which are severe, as amputations or similar cases, an outbreak of septicism in some form is imminent. Thus, then, it is the nature of the cases, and not their number merely, that constitutes the danger of the development of surgical septic disease by so-called overcrowding; and doubtless epidemic influences favour the development of those septic outbreaks that are directly produced by overcrowding.

In what these epidemic influences consist, I know not. So far as my experience and observation go, they are connected with very different meteorological conditions. In wet and dry weather, in heat and cold, during prevalence of easterly and westerly winds, they have equally manifested themselves. The existence of an epidemic condition, in addition to the influence of overcrowding, is evidenced by the admission from out of doors of erysipelas cases and allied diseases, or by their appearance amongst the out-patients in unusual numbers. But the influence of different meteorological conditions on the development of epidemic septic diseases has yet to be worked out. In reality, we know little or nothing that is positive about it.

The influence of season of year is, however, somewhat better ascertained. Thus the observations of Dr. Hewson of Philadelphia, that have already been referred to, point to the winter months as those in which pyæmia is most rife—an observation which has long been in accordance with my own experience at University College Hospital, where we have always suffered much from septic disease in the surgical wards during the winter and early spring months. This often appears to be owing, however, less to the direct influence of season of year than to its indirect effect in preventing ventilation; it being difficult, in wet or cold weather, to get the nurses or patients to submit to having the windows opened so as to allow an influx of fresh air in a constant current, and to prevent the ward from being ventilated wholly by air drawn from the hospital corridors. The air-supply that is thus admitted is, therefore, unfortunately already in a state of contamination, and liable to generate disease.

Now, what is this condition of contamination in hospital air that causes the development of septic disease in a ward the cubic and floor space of which are sufficient, and which is kept scrupulously clean? That is the next point for inquiry. In the well known, I may say celebrated, lecture of Professor Tyndall on *Dust and Disease*, that distinguished philosopher points out the important fact that the atmosphere under all circumstances contains floating particles of organic matter; that the motes which dance in the sunbeam are of this character. He states that the air of our London rooms is loaded with this organic dust, nor is the country air free from its pollution; and he goes on to observe that, however much it may disguise itself from ordinary observation, "a powerful beam of electric light causes the air in which the dust is suspended to appear as a semi-solid rather than as a gas. Nobody could in the first instance without repugnance place the mouth at the illuminated focus of the electric beam and inhale the dirt revealed there. Nor is the disgust abolished by the reflection that, although we do not see the nastiness, we are churning it in our lungs every hour and minute of our lives. There is no respite to this contact with dirt; and the wonder is, not that we should from time to time suffer from its presence, but that so small a portion of it would appear to be deadly to man."

Watts states that a minute quantity of organic matter—one grain in 200,000—is found in the purest mountain-air. This increases in the country at a lower level, and in large towns reaches the condition stated by Tyndall in the above extract. Even in sea-air, according to Dr. Rattray (*Medico-Chirurgical Transactions*, vol. lvi), it is not absent. This organic matter is the result, in all cases, of vegetable and animal emanations, and it necessarily varies in its composition, according to the source from which it is derived. Rattray, in a most interesting paper in the volume referred to, gives an analysis of ship-air; and, after pointing out a variety of impurities of a gaseous character, states that the more solid impurities are of animal, vegetable, and mineral origin, from the skin, lungs, etc., of the crew; from the ship, as minute particles of wood, paint, cordage, whitewash, leather, etc.; from the bilge, containing occasionally microscopical, animal, and vegetable organisms; from the stores, particles of bread, cotton, wool, etc.; and others which I need not mention. He states that it is the volatile organic matter thrown off by the skin which gives ship-air its close and often nauseous smell. Parkes, in his admirable work on *Practical Hygiene*, gives the following account of hospital-air. At page 88 he says: "I have examined the air of various barracks and military hospitals, and have detected large quantities of epithelium from the skin, and perhaps the mouth." And at page 99 he says: "The most important class of disease produced by impurities in the atmosphere is certainly caused by the presence of organic matters floating in the air, since under this heading come all the specific diseases. The exact condition of the organic matter is unknown; whether it is in the form of impalpable particles, or moist or dried epithelium and pus-cells, is a point for future inquiry." And again at page 106: "The air of a sick ward, containing as it does an immense quantity of organic matter, is well known to be most injurious. . . . At a certain point of impurity erysipelas and hospital gangrene appear. The occurrence of either disease is, in fact, a condemnation of the sanitary condition of the ward." And again at page 100 he states that—"Erysipelas and hospital gangrene in surgical wards are often carried by dirty sponges, dressings, etc. Another mode of transference is by the passage into the atmosphere of disintegrating pus-cells and putrefying organic particles; and hence the great effect of free ventilation in military ophthalmia, in erysipelas, and hospital gangrene." And, lastly, "Dr. Douglas Cunningham of Calcutta finds that the atmospheric dust largely consists of spores of fungi, and that the majority of these are living and capable of growth and development; and that bacterial matter exists also in dry dust. So that when this is added to putrescible fluids, a rapid development of fungi and bacteria occurs." Here, then, we find, on the combined authority of the most able and recent observers, abundant evidence not only of the existence in the atmosphere of large quantities of suspended organic matter, but of animal *débris* and exfoliations, and of other organic particles, capable, under favourable circumstances, of generating septic diseases. We are, however, still in complete ignorance as to the precise nature of the septic poison that produces those various forms of disease which we recognise as being due to its influence. We know it, in fact, by its effects, but are ignorant of what it essentially consists. That there are different forms of septic poison, appears more than probable. We find that the different varieties of septic disease are not interchangeable, but are as distinct in themselves—in the symptoms they present, in the course they run, in the pathological conditions that are found—as any of the other zymotic diseases. In whatever way originating, and in whatever it may essentially consist, there can be little doubt that this septic series is communicable from patient to patient through the medium of the organic particles of various kinds with which the atmosphere of any crowded building, be it hospital, barrack, or man-of-war, is invariably charged; and when we reflect on the exceedingly minute, infinitesimal—in fact, inappreciable—quantity of any animal virus, as that of cow-pock, syphilis, or small-pox, that is needed to communicate its own disease when applied to a fitting soil, we can easily understand how the virus of the septic diseases that occur in surgical wards may be transmitted from wound to wound even on so slight a vehicle as organic atmospheric dust.

There are four of these septic diseases universally recognised by surgeons—hospital gangrene, septicæmia, pyæmia, and erysipelas. Let us very briefly study the mode of development of these.

With regard to hospital gangrene, I need say but little. It is universally recognised by the concurrent testimonary of all military surgeons, that this disease originates in the first instance as a direct consequence of the overcrowding of the wounded in hospitals that are insufficiently ventilated. The experience of the Franco-German war added confirmation, if any were needed, to this view of the origin of this pestilence; which, however, when once generated, is capable of indefinite propagation by contact, through the medium of fingers, instruments, sponges, and surgical appliances. The occurrence of hospital gangrene in civil hospitals is now, fortunately, extremely rare; and its development in such institutions is of itself an evidence that the sanitary condition of the building is for the time at least in a bad state.

The repeated recurrence of hospital gangrene in a civil hospital would undoubtedly be discreditable to those who had the management of its sanitary arrangements. In University College Hospital, we have now had no outbreak of hospital gangrene for more than twenty years; and I trust never to see it here again, as having been developed within the walls of the hospital. It is altogether a preventable disease, and ought never to occur in an institution that is conducted on proper sanitary principles. The few cases that we have had of late years have been brought into the hospital from without; and, curiously enough, last summer two came to us—of a mild form, certainly—from a convalescent institution.

Septicæmia is not a very common occurrence, yet there is a certain proportion of deaths arising from it. In this hospital we have about one death in the year from this cause. Its influence on the general mortality after operations is therefore but trifling, but its existence is an indication of a septic influence, and I believe that a certain number of cases of low or irritative fever, following operations and injuries, partake of the septicæmic type; in fact, the gradation from traumatic fever into septicæmia is easy, and, I believe, not very unfrequent. Surgeons themselves suffer at times from small whiffs of this poison. Who that has been long connected with a hospital, has not at times, after the examination of a sloughing cancer or some other horribly putrescent case, felt feverish, depressed, prostrated for some hours, or a day or two, conscious of the absorption of a poisonous effluvium, which, after a period of febrile depression, eliminates itself from the system by an attack of offensive diarrhœa, the eruption of a pustule, or perhaps by some more distinctly localised inflammatory action, such as tonsillitis or a boil? The cause of septicæmia appears to me to be somewhat obscure. It does not appear to be distinctly connected with overcrowding, but rather with the development of putrescent discharges from unhealthy or malignant ulcers. The offensive discharge from ulcerated cancer uteri is supposed by some to tend very specially to its production, and it has been a cause of death in ovariotomy when practised in the same building in which a woman suffering from this disease was lying.

But the two most important of the septic diseases are undoubtedly Pyæmia and Erysipelas. These two diseases are commonly looked upon as being more or less allied, and they may be so, in so far as their etiology is concerned, in "over-crowding," and in epidemic influences that predispose to their occurrence is concerned, but in all other respects they differ widely.

Acute pyæmia is essentially a hospital disease. As has already been stated in the last lecture, it seldom occurs except in hospital practice, and perhaps the best proof that we have of the rarity of the occurrence of true pyæmia out of hospitals, exists in the rarity of the admission of a pyæmic patient into a hospital from without whilst labouring under the disease. Almost every case of pyæmia that I have seen in hospital practice has originated within the building itself. By a reference to Table B, it will be seen that the amount of pyæmia varies very greatly in different London hospitals, which is an additional proof of its being dependent for its origin on conditions that are more rife in some Hospitals than in others. So far as University College Hospital is concerned, there appears to be, at present, a tolerably uniform amount of it. In three years, from July 1870 to July 1873, we had twenty-three cases; nine in connection with amputations, fourteen with other operations and injuries. Of these twenty-three cases, four occurred in the latter half of 1870, eight in 1871, eight in 1872, and three in the first half of 1873. As to the mode of its development, there can be no doubt that it is the result of the exposure of wounds to an atmosphere overcharged with organic matter emanating from other patients with suppurating wounds. What I stated in the last lecture about the infection of the military hospitals with pyæmia during the Franco-German war, and the comparative freedom of the "hut-hospitals" from this disease, points clearly to its cause.

I look upon pyæmia, when of traumatic origin, as being primarily the local septic impregnation of a wound by organic atmospheric matters, in a condition capable of developing change of such a character in the wound that its fluids decompose; its surface usually becomes foul or sloughy, and the veins leading from it become plugged with soft clots, putrid or easily decomposable. The constitutional symptoms of this dread disease—the prostrating rigors, the profuse transudations from skin and lung, saturating the bedclothes and contaminating the air around with a faint sickly odour, the high temperature, the extreme mental depression—are all consequent on the entry into the circulation of the septic virus deposited from air on wound, absorbed into the veins, and thence transmitted through the system.

Pyæmia stands next to hospital gangrene amongst the septic diseases of local origin. It is less marked in its local phenomena; it is far more developed in its constitutional symptoms. But, though less marked locally, it is most distinctly characterised. Mr. Beck, who has made the *post mortem* examinations of the twenty-one cases of pyæmia that have occurred at University College Hospital during the past three years, with a degree of minuteness and care that leaves nothing unnoted, states that in every case except one—a case of necrosis of the tibia, in which there was no open wound until a few hours before death—distinct local evidences were found. In fourteen cases, the local origin of the embolism was evidenced by breaking down and putrid clots in the veins leading from the part; and in six there were foul sloughy wounds.

It is a remarkable fact that acute pyæmia never appears to occur in single isolated cases, invariably in groups of two or three; not necessarily absolutely cotemporaneous, but only separated by short intervals of time.

Is pyæmia contagious? The French surgeons generally believe that it is highly so. I have never seen an unequivocal instance of its spread in this way. This, however, may be accounted for by the fact that, whenever a case of pyæmia has declared itself in hospital, immediate steps have been taken to guard against contagion by isolating the patient and disinfecting the ward. We act, in fact, as if its contagion were proved, although we may not in reality be in possession of this proof. There certainly appears, however, to be an epidemic influence that favours its development. It is often coincident, though not invariably so, with outbreaks of erysipelas, both in the hospital and out of doors.

I have already said that it is necessary for the surgeon to consider the nature, rather than the number, of the cases contained within it. This is well exemplified by an outbreak of pyæmia that took place in Ward 1 in January 1871. In the early part of the month, this ward contained a rather large number of severe wounds, including a sloughing cancer in the groin, an amputation of the leg, a compound fracture of the fibula with extensive laceration of the soft parts, a compound fracture of the femur, and one of the tibia. Pyæmia occurred in the case of amputation of the leg on January 19th; in the compound fracture of the fibula on February 3rd; in the compound fracture of the femur on the 13th: they all died. At no time, however, was the ward overcrowded as to number of patients, two out of the fourteen beds being empty the whole time; so that each patient had a cubic space of no less than 1,800 feet of air; but it contained for two months an average of seven or eight open wounds, of which five were always severe, such as amputations or compound fractures. During this period, there was only one case of erysipelas, and the hospital generally was free from that disease. Another instance of a similar kind occurred in December 1872. At this period, Ward 1 became again crowded with severe wounds, there being an average of nine open wounds, seven or eight of which were severe, including three amputations and an extensive necrosis of the tibia. One of the amputation cases had pyæmia, and recovered; another had pyæmia, and died. On this occasion, erysipelas broke out in three cases; in both these outbreaks, the weather was cold.

In erysipelas, we find various influences tending to develope the disease—contagion, overcrowding, and epidemic influence, all produce their effect. About the contagion of erysipelas, there can be no question. I could adduce many instances of it, but one especially occurs to me; though it happened many years ago, it has made a deep and lasting impression upon my mind. On January 17th, 1851, a case of phlegmonous erysipelas of the leg was accidentally brought into No. 1 ward. As soon as the nature of the disease was discovered, the patient was removed to the erysipelas ward at the top of the building, having only remained in No. 1 for about two hours. At this time, No. 1 ward was perfectly healthy; but, a few days afterwards, a patient lying in the next bed to that into which the erysipelatous patient had been taken, and who had been operated upon for necrosis of the ilium, was seized with erysipelas. On the 22nd, I performed five operations on patients who were in this ward. Of these cases, three were attacked by erysipelas on the 24th, namely, a case of necrosis of the tibia, of partial amputation of the foot, and of encysted tumour of the scalp. All these patients died. On the 24th, a patient was operated on for strangulated femoral hernia. He was seized with symptoms of low peritonitis, doubtless of erysipelatous character, on the 31st, and also died. No case of pyæmia showed itself, but all the patients in the ward who were not attacked by erysipelas had diarrhœa and severe gastro-intestinal irritation.

There was a series of lamentable catastrophes, doubtless, directly induced by the accidental intrusion of an erysipelatous patient into an operation-ward, and then propagated by contagion.

That erysipelas may be developed in other ways, there can be little question. I believe that by no means an uncommon cause is infection from dissecting students. I have several times seen cases, both in hospital and private practice, distinctly referable to contamination from this cause; and I think that no student, during the time that he is engaged in dissections, should be allowed to serve as a dresser in an hospital.

There is a remarkable resemblance, if not an actual similarity, between puerperal peritonitis and the erysipelatous inflammations of the peritoneum following operations on the organs contained in that cavity. The influence of contamination in the way that I mention is well illustrated by what occurred some years ago at the Vienna Hospital. Prior to 1846, the proportion of deaths amongst lying-in women in this hospital was one in ten. In order to check this frightful mortality, Dr. Semelweiss required the students who attended these women to avoid making necropsies, and obliged them to wash their hands in a solution of chlorine before and after making vaginal examinations. The result was, that the mortality in 1848 fell to one in seventy-four. (Braidwood *On Pyæmia*, page 220.)

That erysipelas is often of epidemic origin, there can be no question; but the influence of any epidemic is immensely increased by an unhealthy condition of a ward from overcrowding. Of this I will give you an instance.

At the middle of November, 1872, ward 1 was filled by a very severe set of cases. There was one patient who had had both legs amputated below the knees; another whose leg had been amputated through the knee; another who had a compound fracture into the ankle-joint; one with extensive necrosis of the tibia, and another with extensive laceration of the fore-arm. And this condition of severe cases was kept up by two other primary amputations—one of the foot, the other of the thigh—these cases being admitted in December, but whilst the preceding ones were under treatment. There was no erysipelas in the ward until November 15th. On that day, the case of compound fracture into the ankle was attacked. He recovered, and the erysipelas had left him by the 21st. On this day, the patient with necrosis of the tibia had the sequestrum removed. He was a feeble old man. He was attacked by erysipelas on December 1st, was removed to the erysipelas ward, and died there on the 7th. On December 4th, the patient with scalp-wound was attacked, and was at once removed to the erysipelas ward. During this period, viz., on December 7th and on the 22nd, two of the other patients—the one with amputation through the knee-joint, and another—were seized with pyæmia. The patient who had been amputated through the knee, a healthy gardener, was the only one out of the twenty-three patients with acute traumatic pyæmia who recovered. During the same period, two of my patients in ward 5, both suffering from chronic wounds—one a fistula *in ano*, the other a sinus in the thigh—were attacked by erysipelas. To them, it is possible that the infection was conveyed by the house-surgeon or dressers; but, as other cases of erysipelas occurred in the hospital at the same time, and one was admitted from out of doors, it is possible that an epidemic influence existed.

In the next and concluding lecture, we will consider the means of prevention of septic disease, and of lessening the mortality in hospitals.

ERRATUM.—In Lecture II, page 97, column 2, line 38, after "general hospital practice," insert "in the adult."

CASE OF *POST PARTUM* HÆMORRHAGE TREATED BY THE INJECTION OF PERCHLORIDE OF IRON.

AT the present time, when the intrauterine injection of the perchloride of iron in *post partum* hæmorrhage is on its trial, it is well that each individual case of its failure or success should be recorded.

In November 1873, I was called to the lying-in ward of this hospital to see a woman suffering from *post partum* hæmorrhage after the birth of her first child. The woman was very pale, but perfectly calm and collected. The uterus was found to be above the umbilicus, in a very soft and flaccid state. By the use of manual pressure, accompanied with cold application to the abdomen, the womb contracted, expelling a large quantity of blood and clots. This contraction continued for about five minutes, when it ceased, and the uterus was in the state in which I found it. The hand was now introduced, and, with the means I had previously used, contraction was the result, but to be followed in a much shorter period by relaxation. The woman's position was now serious; her pulse was quick, weak, and intermittent; her respiration was a series of sighs; she was very much agitated, and had great desire to be left alone. The injection of the perchloride of iron was now determined on. Two ounces of the strong solution were used in half a pint of iced water. The hæmorrhage immediately stopped; the uterus became corrugated on its internal surface, but remained uncontracted. Stimulants with a sedative were now administered. From this time, she progressed favourably, and was discharged at the usual period.

A. MACLEOD HAMILTON, M.D.,
Resident Medical Officer, Parish Infirmary, Liverpool.

LETTSOMIAN LECTURES
ON
SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

LECTURE II.—*Continued.*

CASE II. *Paraplegia, probably from a Syphilitic Nodule in the Middle Dorsal Region of the Spinal Cord.*—Ann F., aged 41, a widow, was under my care in St. Mary's Hospital from July 24th to December 2nd, 1872.

She had been married eleven years, and had had two early miscarriages, but no living children. There was no history of syphilitic symptoms, but one iris was found bound down by adhesions. Her husband had died early in 1871 from an illness, which I venture to pronounce syphilitic affection of the brain. In June, 1870, while in apparent health, he had an attack of convulsions, which was attributed to sun-stroke, though he was at work under cover. After this attack, he was never himself; he had frequent fits, and his mind became affected; at times also he lost the use of his limbs. He died in an asylum nine months after the first attack.

The patient had for three months been losing the use of her legs. First, the right failed; then this seemed to recover somewhat, and the left became affected. The weakness increased till she could scarcely move about; the bowels were confined, and the urine was not passed readily. On testing the power of the limbs as she lay in bed, the right leg was fairly strong, but the flexors at the back of the left thigh were almost powerless; the extensors of the knee still retained a good degree of strength. I may note in passing that, in partial paraplegia, the flexors are usually affected earlier and more severely than the extensors of the knee. The ankle was fixed and immovable, the foot arched, and the great toe turned in. There was no loss of sensation anywhere. When the patient tried to walk, the difficulty was greater than the degree of paralysis led me to expect; she could scarcely walk alone, and was very awkward and clumsy; the left foot shot out uncontrollably. She could stand as steadily with the eyes closed as when they were open.

Iodide of potassium was given in doses of four grains, and the continuous galvanic current was ordered. The case appeared to be slight, and I hoped for much from rest in bed and treatment. She had, however, come under observation at a moment when the disease was in active progress, and a few days later the legs were almost absolutely powerless, and sensation was lost, this aggravation of the symptoms having come on rather rapidly. She had fallen helplessly in trying to get out of bed, when unaware of her increased weakness.

I found her, on August 7th, quite unable to move either leg; the limbs, however, were not flaccid and soft, but, when handled and tested, they were firm and rather stiff from involuntary resistance of the muscles, and it was ascertained on inquiry that, before she had so completely lost power in them, they became rigid when the feet touched the ground. Reflex action took place when the soles were tickled, but it was not vigorous. There was violent involuntary starting of the lower extremities, both during asleep and while awake. The difficulty in sitting up was peculiar. As soon as she made the attempt, aiding herself with her hands, the legs contracted and resisted, and it was only after a severe effort that she succeeded, the lower extremities jerking all the time.

Sensation, which was severely tested, was almost totally lost on the right side as high as the lower edge of the ribs; on the left, up to the level of the mamma; but there was an imperfect kind of consciousness of the contact with the soles of the feet when they were tickled. The bowels were still confined; there was less complaint of difficulty in passing urine, because of the loss of sensation; but the urine was retained, and the catheter was required.

The dose of iodide of potassium was increased to twelve grains—at first, three times a day, then every four hours. The galvanism was discontinued. In the course of a few days, sensation began to return—first, in the left side, in which the anæsthesia had extended highest, and the recovery was general in the extremity and abdomen, and not progressive; while, on the right side, the return was at first progressive from above downwards. It was further noted that, while the difference in the degree of sensation on the two sides existed, reflex action was more vigorous in the limb in which sensation was most impaired.

On August 13th, she had more control over the evacuations, and she thought there was some return of sensation and power in the legs. She was still much troubled by the contraction of the legs at night, which was accompanied by cramp-like pains, and disturbed her sleep.

August 17th.—She had less starting of the limbs during sleep, and the feet could be distinctly moved. Sensation was returning. The difficulty in sitting up in bed was as great as ever. Immediately on the attempt being made, the muscles of the lower extremities contracted, drawing up the knees, which had to be forcibly pressed down before she could raise the body. This was an interesting phenomenon in relation to the functional mechanism of the spinal cord, and it contributed to the formation of a diagnosis. The urine was now passed naturally. The improvement continued up to August 31st. The startings had ceased, the toes and legs could be moved, and sensation was returning. Cod-liver oil and iron were now ordered, and, by mistake, the iodide was suspended. A general relapse occurred; sensation and power were again completely lost, and the painful nocturnal startings returned. I was out of town at the time, and a week elapsed before it was known that she was not taking the iodide of potassium. It was ordered in doses of fifteen grains three times a day on September 17th, and blisters were applied; after which, in a few days, amendment set in. I found her, on September 25th, a little better than when I left town at the end of August. The iodide of potassium was increased to twenty-four grains, and one-sixteenth of a grain of biniodide of mercury was given with quinine and extract of hop, in a pill, at night.

From this time, the improvement was continuous. A curious fact observed for some time, while sensation was still imperfect, was, that a sharp pain could be excited in the left side by pricking a particular part of the leg of the same side near the knee.

On October 12th, faradisation was ordered. On October 23rd, the patient was able to stand by supporting herself with a chair; on November 1st, to walk with assistance; on the 12th, for a few steps, alone. She was kept in the hospital till she could walk well, and she continued for some time after she left, on December 2nd, to take the iodide in doses which, on February 15th, had been gradually brought down to twelve grains three times a day. She was then walking without perceptible halt, and with great vigour, and, so far as I know, she continues well.

CASE III. *Paraplegia from Syphilitic Nodule or Local Myelitis: Recovery.*—Another case, strikingly similar, even in details, was under my care from March 28th to August 9th, 1873. The patient, a domestic servant, aged 29, had been suffering for four months from loss of power and sensation in the lower extremities, which had come on with pain in the back. She was unmarried, and I could obtain no evidence of syphilis, direct or indirect; but she had the peculiar sallow pallor which often accompanies the latter stages of the disease. I took this as sufficient warrant for the treatment I adopted; but I should not have considered myself justified in bringing the case before you as one of syphilitic disease of the spinal cord, had it not been that, after the patient's recovery from the paralysis, when suffering from a severe attack of pyrexia, she confessed to the sister of the ward that, many years before, she had had an illegitimate child, and subsequently had some illness, attributed to syphilis.

The pain in the back experienced at the outset of the illness was situated in the lower dorsal and upper lumbar region; it extended round the abdomen and down the legs, especially when she walked or stood. It lasted about a fortnight, and then the loss of power which had been coming on became suddenly worse, so that she was unable to rise from a chair, or to raise the limbs; sensation also was greatly impaired, and the feet and legs were very cold. When examined, a few days after her admission, she was unable to move either leg; sensation was greatly impaired in both extremities and over the lower part of the abdomen, but more on the right than on the left side. Reflex action was exaggerated, and the limbs jumped very much, especially during sleep. The catheter was required, and the bowels could only be relieved by means of enemata.

The treatment consisted in the administration of iodide of potassium in gradually increasing doses, and the result was complete recovery. The catamenia were absent till near the end of her stay in hospital; and at one time, early in July, a profuse purulent vaginal discharge came on. She was examined by Dr. Meadows, who found no abnormal condition of the uterus. Convalescence was also, for a few days, interrupted by a sharp attack of pyrexia, not accounted for by any local inflammation. During this, the temperature, habitually slightly below the normal standard, went up to 103.6 degs. Fahr. She walked out of the hospital on August 9th.

CASE IV. *Paraplegia; Meningo-Myelitis of Lower Extremity of Cord: Recovery.*—The patient, a groom, aged 43, came under my care on October 3rd, 1873, complaining of difficulty in holding his urine, and weakness of the legs, with pain in the back. He had begun to suffer from intermittent pain in the back after a fall eight or nine months previously, which was increased or brought on by walking; he lately had lost power in the legs, and had been unable to retain his urine. He had had syphilis twenty years before.

It was found that the right leg was weaker than the left, the movements of this ankle being very imperfect, and flexion of the knee very feeble. The tests applied to ascertain the strength of the muscles gave pain. There was apparently cutaneous hyperæsthesia of the right leg. Reflex action was readily excited. He maintained the erect position with the eyes closed. A little pain was caused by percussion or pressure upon the last two lumbar vertebræ. There was at first improvement; less pain, more strength in the legs, and increasing control over the urine.

On October 17th, however, he felt cold and shivered; had great pain in both legs, especially at and below the knees, increased by movements. He was unable to walk. Pulse, 120; the temperature, previously rather below the normal, was now 100 degs. The pain became so severe, especially at night, that morphia injections were necessary, and the catheter was required on account of retention of urine. Later, the principal seat of pain was the left thigh, at first near the exit of the great sciatic nerve, but afterwards on the dorsum ilii and in the femur, in both of which situations it was found to be due to periostitis. The loss of power in the lower limbs did not increase, but the bladder continued to give trouble, and an abscess formed in or near the prostate, which, for a time, added to the patient's sufferings.

The treatment consisted in the administration of iodide of potassium and biniodide of mercury, together with the application of blisters over the seat of tenderness in the spine; and ultimately the patient recovered almost complete power in the legs and fair control over the urine.

CASE V. *Sensory Paraplegia; Loss of Control, but not of Power; Exaggerated Reflex Action.*—The following case is one of unusual interest, there being great impairment of sensation and exaggerated reflex action, with loss of control, but not of power. It might easily be taken for locomotor ataxy, but differs essentially from this affection in its symptoms, and, as I believe, in its pathology.

The patient, a cabman, aged 34, married, but childless, was admitted into St. Mary's Hospital, March 7th, 1873, for loss of power in the legs. He was a strong, stout, well-built man, with good colour, and large and firm muscles. He had, however, lost all his hair, not only from the scalp, but from the face, axillæ, and pubes; the eye-brows and eye-lashes also were gone. He had suffered from gonorrhœa ten years before, but had never had a sore on the penis; he had, however, had "measles" and a bad sore-throat fourteen years previously, which had lasted three months, and ample evidence of syphilis was afforded by large ulcerations of unmistakable character on both legs. The weakness of the lower extremities had been coming on for twelve months. He began to drag first the left foot, and then the right, and the knees and feet gradually became "numb." At times, they would be a little better after being in bed, or after sitting on his cab; they were worse in warm weather. He had been under the care of my colleague, Dr. Lawson, as out-patient for two months before his admission, and had been faradised with apparent advantage. For three weeks, however, he had been unable to walk.

On first seeing him, I told him to rise, so that I might have the opportunity of noting the degree of paralysis, and observing its character. He threw his legs off the bed without difficulty; but, when the feet were put to the ground and he endeavoured to stand, the attempt was completely defeated by violent spasmodic contraction of the legs, especially the right, which would have thrown him down, had he not been caught and assisted back to bed; the movements continued for some time afterwards. He explained that he could stand and walk better with his stockings on than when the feet were bare, and still better in strong boots. The difficulty obviously arose from excessive reflex action, which was more violent when the feet were in direct contact with the floor. Lying in bed, he could move every part of both lower extremities, and could resist forcibly the attempt to flex or extend any joint. The muscles were bulky and firm, and particularly well-nourished. He occasionally had startings of the limbs at night. Sensation was greatly impaired in every part of the thighs and legs, whether tested by compasses or by pricking and pinching. The insensibility to heat was shown by the fact that he had large blisters on the soles of both feet, caused by a hot bottle which he had not felt. He had, for three or four months, had difficulty in micturition; he had to wait some time before the flow began, and the urine came only in drops; it contained no albumen. Pulse and temperature normal.

To complete the account of the symptoms, it need only be added that, when he was able to stand and walk, he could do so equally well with the eyes shut or open, and he had no particular difficulty in turning.

He stood steadily with the eyes closed, when he could only walk with the aid of two sticks. In walking, the legs were not shot out or jerked up vaguely, as in locomotor ataxy, but were carried along stiffly and wide apart, the feet scraping the floor in consequence of want of flexibility in all the joints, which were kept rigid by tonic contraction of the muscles generally. The hand placed on the thigh or calf when he walked found them hard and firm, like those of an athlete.

The phenomena of this case are worthy of study and discussion. They were clearly not those of the condition known as locomotor ataxy, although they would be covered by the term. The mode of progression, the power of standing with closed eyes, the absence of pains in the limbs, exclude at once sclerosis of the posterior columns of the cord, which is the morbid change giving rise to locomotor ataxy; and there are other differences of equal significance. I cannot fully convey to you the precise grounds on which I came to the conclusion at which I have arrived, without reference to the functional mechanism of the spinal cord, as I understand it. The anterior grey columns consist demonstrably of the nuclei of the anterior or motor roots of the nerves fused together; the posterior grey columns in the same way of the nuclei of the posterior nerve-roots (this is inferred rather than distinctly proved). The antero-lateral white columns are the downward channel for motor impulses from the corpus striatum to the motor nerve nuclei; the central grey matter is the channel for sensory impressions upwards from the posterior nerve-nuclei to the thalamus; decussation of the fibres or cells constituting the sensory channel taking place one by one in the cord. Now, Brown-Séquard has shown that injury to the central grey matter will intercept sensory impressions without interfering with motor power, and this is exactly what had occurred in the case under consideration, and I concluded that a syphilitic tumour existed in the very axis of the cord. But the posterior and anterior nerve-nuclei together constitute the apparatus for reflex action, and there is in the cord an independent power of co-ordination, that is, of orderly combination of muscular movements for a given purpose, the mechanism for which consists in the linking together of the nerve-nuclei of different parts of the cord. It would have been difficult to say *à priori* whether such co-ordinating fibres would connect together anterior or posterior nerve-nuclei; but it has been found experimentally that it is through the posterior nuclei that co-ordination is effected, the fibres which effect it running in the posterior white columns. I am of opinion, however, that there is also an association of the anterior nerve-nuclei of different segments, as I find no other explanation of the peculiar arrangement of the fibres of the anterior white columns; and I think it serves some such purpose as the combination of the action of one fore-leg with the hind-leg of the opposite side in dogs, such association explaining the fact that injury to the corpus striatum does not occasion hemiplegia in dogs. Let me now, however compare this case, in which I suppose a segment of the central grey matter to be damaged, with locomotor ataxy, in which the posterior white columns are affected. In both we have impairment of sensation, with comparatively little loss of motor power, but with loss of control. In locomotor ataxy there is destruction of the fibres in the posterior white columns, which convey the impressions from one part of the cord to another, and bring about the delicate adjusting movements which insensibly maintain the balance of the body, and the patient is unable to stand with the eyes closed. My patient stood perfectly well. The loss of balancing power, then, in locomotor ataxy is not simply due to impaired sensation in the feet, as has been maintained by Dr. Clifford Allbutt. Again, in locomotor ataxy, motor impulses from the cerebrum for the act of walking arrive at certain nuclei in the lumbar swelling of the cord; in consequence of the disease in the posterior columns, these impulses are not diffused along them to the different segments of the cord which co-operate in the production of the harmonious movements of the limbs, but are concentrated upon the nuclei on which they impinge, throwing them into excessive and disorderly action, and causing the jerky gait. This was not the case with my patient, but, on the contrary, the impressions received by the feet in contact with the floor, instead of being partly transmitted to the brain for the communication of sensation, were, in consequence of the interruption in the upward channel, concentrated upon the cord, but distributed to different segments by the posterior columns, producing the excessive but co-ordinated reflex contraction of the muscles of the limbs which restrained or restricted their obedience to the will.

A small tumour, such as was indicated by the symptoms to be present in the axis of the cord, was just the kind of change to which syphilis might give rise, and which scarcely any other disease would produce. This is one of the examples, then, in which the symptoms alone would almost warrant a diagnosis of syphilis without any corroborative evidence.

The progress of the case was satisfactory. I began the administration of iodide of potassium in doses of ten grains, with carbonate of ammonia and sarsaparilla, carrying it eventually to twenty-five grains three times a day. In a few days, the nocturnal startings were less troublesome, then sensation began to return, and he passed urine better. He walked with the aid of two sticks on April 3rd, and on the 26th with only one, passing urine now quite readily; sensation also was much better, but not normal; the ulcers on the legs had healed. About this time faradisation was ordered.

He left the hospital on May 2nd, after a stay of less than two months. On the 27th, he drove a hansom to the Derby. He continued to take the iodide (fifteen grains) till July 24th, when tincture of iron with nux vomica was given instead. After a time, he gradually lost power, and, on September 3rd, had gone back considerably. The ulcers on the legs had also broken out again badly, and were extending. Iodide of potassium was therefore prescribed anew, and very shortly improvement again set in, which continues up to the present date. He is still faradised twice a week, as he thinks this does him good, and it aids the keeping him under observation. The relapse and improvement occurred independently of any change in this part of the treatment. He is now, against my advice, driving a four-wheeled cab, and has to assist in lifting and carrying luggage.

I was not so successful in a somewhat similar case which was under my care for four months, shortly before the case just related, namely, from September 2nd, 1872, to January 6th, 1873.

CASE VI.—The patient was a coachman, aged 30, who had had syphilis twelve months before he came to the hospital, and for seven months had been suffering from loss of power in the limbs, which had come on with pain in the loins. This at first had been induced by exertion, but had become constant, and the weakness was such that the patient could only walk by the aid of two sticks; his urine dribbled, and the bowels would be confined for three or four days, and then act suddenly without his control. His manner of walking was exactly that described in the previous case—the legs stiff and rather straddling, with all the muscles extremely firm; the joints unbending, the feet therefore scraping the ground. After walking, there was frequently most violent agitation of the legs, but especially of the right, and he would sit on his bed trying in vain to control the movements with both hands grasping the thigh. The patient had difficulty in standing with the feet together, tending to fall backwards, and, when the eyes were closed, he was still more unsteady on his legs.

In testing the muscles as he lay in bed, it was seen that he could execute any movement, and the limbs were remarkably well-nourished. He could resist flexion and extension of the ankle, but the muscles trembled; he resisted flexion of the knees powerfully, extension scarcely at all, the left leg being the stronger.

The treatment was by iodide of potassium, and, this failing to give marked results when carried to full doses, biniodide of mercury was given; blisters also were applied. He regained complete control over the bladder and rectum, and walked a little better, but needed two sticks, and the effort was usually followed by the violent shaking of the legs described; the amendment, therefore, was not sufficient to enable the patient to gain his livelihood.

Spinal meningitis is far less common than myelitis, and I have met with no acute case distinctly traceable to syphilis. A patient, however, was under my care in September last, suffering from severe pain in the back and limbs, made worse by movements, with feverishness, for which the cause assigned was a fall, in which the back was injured. The fall, however, had happened a month before, and he had since worked at his trade without pain or inconvenience. An explanation of the pain soon appeared in an outbreak of syphilitic eruption, and it was removed by a mercurial course I have now (January 15th) in hospital a patient recovering from a subacute attack, who had previously suffered from paraplegia, and whose case I have already given. She left the hospital well on August 9th, and remained free from symptoms till when she began to suffer from rheumatism, as she supposed. There was, however, no swelling of the joints, or fever, and the pain was provoked by movements of the limbs or spine, and had the characters of pain caused by spinal meningitis. She began also to lose power again in the lower extremities. The pains were at once relieved by iodide of potassium.

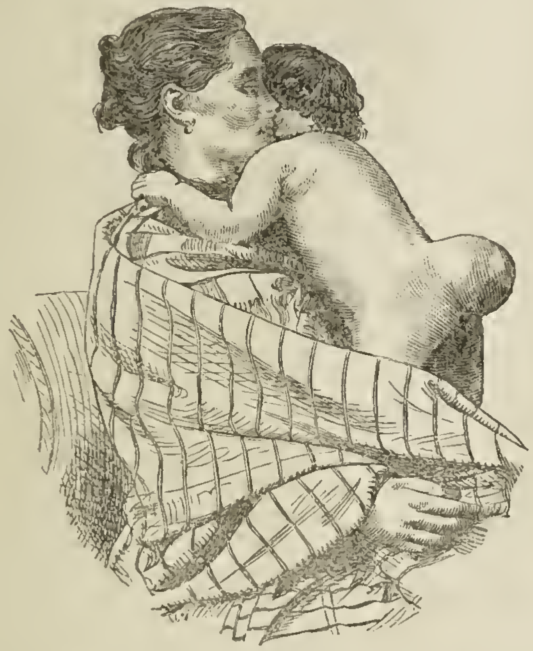
One of the worst cases of syphilitic affection of the nervous system which I have seen, and which ultimately resulted in insanity, began with spinal meningitis. The patient was under the care of Mr. Walter Coulson, with whom I saw him, and the case is partly related in his treatise on syphilis. When I first saw him, in August 1866, he was complaining of rheumatism—obviously spinal meningitis—which completely crippled him. Every movement gave him pain, but especially the first efforts, after being for a time in one position; so that it was distressing to watch him rise from a chair. He carried himself stiffly, was unable to stoop or to turn the head; in order to look round, he had to turn the whole body. There had previously been tertiary manifestations, and the meningitis yielded to iodide of potassium, leaving the patient, however, with a stoop; to it also was probably attributable sexual impotence, from which he was found to suffer afterwards.

[*To be continued.*]

SPINA BIFIDA CURED BY INJECTION.

By J. ROSS WATT, M.B.,

Consulting Surgeon to the Fever Hospital, Ayr, N.B.

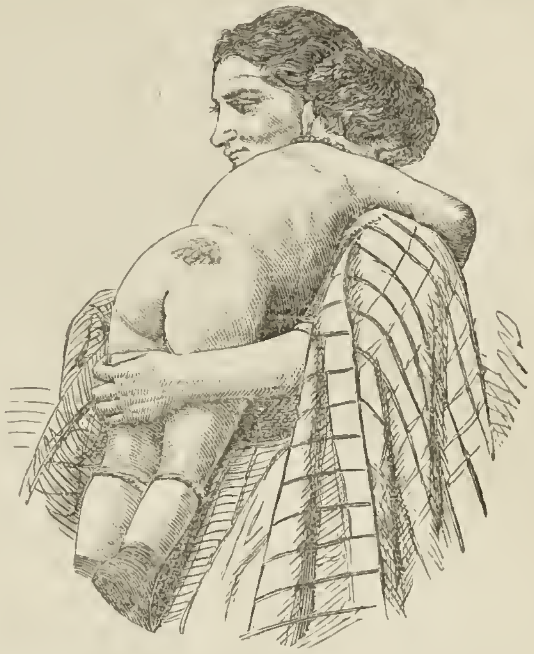


THIS wood-cut, from a photograph, represents E. G., aged three years, as she was brought to me in April last, and therefore conveys a correct idea of the size and situation of a spina bifida tumour, which, wholly covered by true skin, stood out with a prominence of nearly four inches, and measured thirteen and a half in circumference. It was very sensitive to the touch, became tense when the child cried, and palpation discovered a perfectly fluid condition of its contents. It was slightly pendulous when the child was erect, and gave her a ludicrous, although at present rather fashionable, appearance when dressed—the projection at her age being unlooked for.

Her mother stated that it was like a walnut at birth, and had increased gradually; that she walked at two years; was now active, although not firm on her legs, and easily knocked over; that she enjoyed excellent health, but was constantly annoyed by escapes from the bladder and rectum; and that she had always been advised to let it alone.

The treatment of this—my second successful case—was by the same method as that described in the JOURNAL of the 26th April last; viz., by injection of Dr. James Morton's solution of iodine and iodide of potassium in glycerine; and was briefly this. Two tentative tappings with a medium cannula, of respectively twelve and ten ounces of clear fluid, were made, with an interval of eight days, both being followed by an irritable and feverish condition of the child, and gradual refilling of the tumour to its original size. Ten days afterwards, other ten fluid-ounces were removed, and half a drachm of the solution injected. The opening was instantly closed on each occasion by a layer of lint soaked with flexile collodion. This last operation in a few days made the tumour tender, and caused the child to be feverish, restless, and extremely excitable, with decrease of appetite, milk and soups alone being taken. Ten days after this first injection, the tumour was very slightly less, and eight ounces were then removed, followed by injection of a similar quantity of the solution. This gave rise to even more severe irritative symptoms of the nature described; but a fortnight later showed the tumour only one-third of its original size, although still sensitive and painful when interfered with. At that time, about five ounces were removed, followed by a third injection of half a drachm; this caused cessation of any further formation of fluid, and a gradual absorption began, which, at the end of twelve weeks from the first interference, presented the appearance conveyed by the second wood-cut—a roughened, darkened, hardened, and thickened condition of skin, quite normally sensitive to the prick of a needle, replacing the tumour and closing the spinal aperture with an apparently gelatinous mass.

The treatment extended over nearly seven weeks, and the measured fluid removed amounted to forty-six ounces—a larger quantity, to my knowledge, than from any previously successful case. Half a drachm of the solution was deemed sufficient for each injection, owing to the large extent of sensitive surface to be dealt with; and the irritative symptoms developing therefrom quite justified the precaution taken.



This, my second case, with Dr. Morton's, make four successes, all that have been so treated; and, without appearing too confident of further success, the result is very hopeful and gratifying to the introducer of this method of treatment.

The patient is now very active on her feet (amusing herself, and standing as much consequent fatigue daily as her healthy companions), growing rapidly, and the sphincters are now almost wholly under control; cold sea-water baths being persevered with.[*]

THE PROPAGATION OF CHOLERA IN INDIA:

BEING A REPLY TO DR. MURRAY'S REVIEW OF DR. CUNINGHAM'S REPORT OF THE EPIDEMIC OF CHOLERA IN 1872.[†]

BY J. M. CUNINGHAM, M.D.,

Sanitary Commissioner with the Government in India.[‡]

DR. MURRAY very kindly sent me his paper yesterday, so that I might be prepared to answer him at the meeting to-night; but I regret that, owing to a press of business during a short visit to England, I have not been able to do more than make a few rough notes on the subject. I shall first take up, as shortly as possible, the various points to which Dr. Murray has referred, and then discuss others of very great importance which he has left out. Before doing this, however, I may make one remark regarding the Report itself.

The great object I had in view was not to promulgate any opinions of my own, but to collect facts and to draw from them the practical conclusions as to the best mode of dealing with cholera which these facts warrant. The collected facts are the really important part of the Report. To the best of my belief, no fact of any importance has been misstated, nor have any which were ascertained been omitted. The Report has been widely circulated among medical officers in India, and no exception has been taken to the record. We pass on, then, to the interpretation to be put on the facts; and here Dr. Murray urges objections.

He first raises the question as to the comparative value of negative in contradistinction to what he calls positive evidence. I am glad he has raised this question, for the proper solution of it is a matter of very great moment in the cholera inquiry. What constitutes positive evidence? If a person, after having come into contact with a case of cholera, be affected with the disease, he claims this fact as positive evidence that cholera is contagious. But such reasoning is altogether fallacious. The mere coincidence of two events by no means shows that they stand to one another in the relation of cause and effect. The mere fact of an attendant being attacked is no proof whatever of contagion. The real point at issue is, whether attendants suffer *more* than others; and no such evidence has been adduced.

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[*] This case was shown at a meeting of the Ayrshire Medical Association.

[†] See BRITISH MEDICAL JOURNAL, January 17th, p. 71.

[‡] Read before the Epidemiological Society of London.

Dr. Murray next charges me with attaching no value to the opinions of those who are considered authorities on cholera. This matter might have been passed over as having no real bearing on the points under discussion; but let us examine what it amounts to. Opinions vary. The opinions of so-called authorities on cholera now-a-days are very different from the opinions of authorities five-and-twenty years ago. If inquirers at that time had been restrained from expressing their views by reverence for authorities, there would have been a stagnation of thought, and, among other results, we should not have had Dr. Murray to-night urging his extreme contagionist doctrines. Men in responsible positions, such as I have the honour to hold, can never be guided by mere opinions, no matter how high the authorities by whom they are supported. When money has to be spent, and the social happiness and welfare of many millions of people are concerned, facts alone can form the only proper basis for action. Dr. Murray says that, in the history of the pilgrims, I have missed a link which might have been supplied by the civil surgeons; but, as a matter of fact, the greatest pains were taken by Dr. Fairweather, the officiating Sanitary Commissioner of the Punjab, to trace the pilgrims, and to ascertain the history of cholera in their track. The results are stated at page 89 of my Report; and it will be seen that, so far as regards importation, the evidence altogether breaks down.

Dr. Murray next cites the resemblance between the epidemics of 1867 and 1872, and concludes that this alone is strong proof that the pilgrims were the agents in disseminating the disease. As I understand the argument, it amounts to this: in both these years there were pilgrims, and in both cholera spread over much the same area; therefore the pilgrims were the cause of the epidemic. There were important differences in the history of the cholera in these two years; but, assuming that Dr. Murray's comparison is in the main correct, what evidence does it afford? Indeed, the stronger the resemblances between two epidemics, the less likely is it that the conclusion which Dr. Murray bases on this resemblance is correct. If the distribution of cholera were due to human agency, is it to be believed that we should have in two different years the same distribution repeated—the same large areas covered by the disease, and the same large areas exempted, when we know as a fact that the pilgrims spread all over the country? I do not remember having stated that small-pox is "only contagious under certain aërial influences". All I have said in regard to small-pox is, that the argument by analogy is fallacious. We do not know, as is assumed, that cholera is like small-pox; and what we do know shows that the doctrine of contagion will not explain the spread of small-pox, its periods of quiescence and epidemic prevalence.

Speaking of the evidence of importation, which I have analysed with some care, Dr. Murray remarks that "the remaining five, who illustrate their opinions by facts, are disposed of in the minority." This is not the case. I know of no facts tending to prove that the disease had been imported into any of the places referred to; but all the facts are given, and any one can prove for himself what their value is. They conclusively prove to my mind that they entirely fail to make out any case for importation. The omission in my Report of the details which have been given in the Report from the Central Provinces is very easily explained. The Central Provinces Report had not reached me when my own Report was written; but, even if it had, I should not have referred to it, for, as I have expressly stated, the evidence on which my Report rests has been taken only from "those places which I visited, and in which I was able to make personal inquiries into the circumstances of the outbreak." There is no evidence more likely to mislead than that gathered from native officials, and I should never accept it until it had been subjected to very searching examination. Dr. Murray attributes the comparative exemption of native soldiers to their living in huts, and to their not using common latrines; while the prisoners and British troops are differently situated in both these respects. Even if it were true that such a distinction exists, we must have much further proof before we can conclude that the two stand in the relation of cause and effect; but in reality the statement is incorrect. In some few places, the Sepoys still live in huts and frequent the fields; but, as a rule, they are provided with barracks and have privies. And, what is much more to the point, those who live under the one set of circumstances in these respects suffer no more from cholera than those who live under the other. As regards movement, my recommendation of decisive moves had reference to special localities, such as Mean Meer, where experience has proved that movement to a distance beyond the affected area is attended with the best results. Of the value of movement as a preventive against cholera, there is no difference between Dr. Murray and myself; but I cannot admit that the procedure is in any respect founded on contagion, or that the benefits derived from it in any degree support the contagion views. On the contrary, the facts point to the peculiar localisation of cholera on which I have insisted so much; and, if this point be impressed on the authorities—that there is danger in remaining in a place where cholera has appeared—there will be the strongest incentive to get away from it.

Dr. Murray's comparison of the extent of cholera among different sections of the community, so as to show the benefits of quarantine, labours under this great disadvantage, that no such comparison is admissible. A comparison between different bodies of people living in or about the same locality might perhaps yield some useful information; but to compare the inhabitants of a district covering several thousand square miles with the troops in a camp or the prisoners in a jail situated at one point in it, is obviously fallacious. The escape of the jails of late years Dr. Murray claims as an argument in favour of quarantine. Assume that his premisses are correct, and we have the same form of reasoning of which I have already given more than one example. The jails of late years have been subject to quarantine, and cholera has abated; therefore the quarantine has been the cause of the abatement. But have there been no other changes during much the same time? There have been many changes in diet, clothing, accommodation, cleanliness, and general sanitary improvement. Are these all to be set aside as nothing, and the one condition of quarantine selected as the powerful agent to which the diminution in cholera is to be attributed? If the change had been due to quarantine, we should have expected to see a most marked line of demarcation between the time when there was no quarantine and the time since quarantine was in force. But there is no such sudden change; the improvement has been gradual and progressive. In order to show that quarantine ought to be credited even with any part of it, one would expect some evidence to the effect that cases of cholera had in this way been detected and isolated, which would otherwise have been brought into contact with the main body of the prisoners. There is no such evidence. Moreover, if a single case of cholera occur in a jail, this is sufficient to show that the quarantine failed. In 1872, no less than sixty-four of the hundred and sixty-three jails presented cases of cholera, though happily in very many of them it was limited to one or two isolated attacks. Even assuming that Dr. Murray's premisses in this matter are correct, there is no evidence whatever that quarantine did the smallest good; but in reality his premisses are not correct. Nowhere in the jails throughout India is there any system which can properly be called quarantine. In many places, there is no attempt at anything of the kind; and at the best it amounts only to keeping new arrivals in a separate barrack for a few days, where those who have completed their term of separation mix with others just come in; and all are looked after by guards over whom there can be little or no restraint in so far as preventing their coming in contact with cholera cases outside is concerned.*

Dr. Murray has referred to Dr. Bryden's aërial theory, and suggests that my views are the result of my acceptance of that theory. I keep aloof from all theories, for what concerns my office is the practical action which ought to be taken to prevent cholera; but this I will say of Dr. Bryden, that no man ever worked harder or more honestly at a very difficult task; and I feel certain that his labours will yet be more valued and more acknowledged than they have hitherto been.

So far I have taken up *seriatim* the main points contained in Dr. Murray's paper, and have shown, I hope, that his objections have really no weight whatever; but there are other most important matters which he has, as I have already said, left out of sight. He has not, indeed, grappled with the great facts—the geographical distribution of the cholera; the prevalence and dissemination of the disease among different sections of the community at or about the same time; the circumstance of several outbreaks, such as that, for example, at Moran, in which nine soldiers were attacked within a few hours of one another, the only cases that occurred—circumstances not to be explained by importation; or the facts that cholera was not propagated along highroads of communication one whit more than it was elsewhere; that the disease travelled no quicker in these days of railways than it did before there was a mile of railway laid down in the country; and that the attendants on the sick suffered no more than others. The evidence against the water-theory also is left unassailed; yet, if cholera really be spread by a specific poison, it is very probable that that poison is conveyed either by air or water. If the water-theory be shown to be untenable in explaining a large proportion of severe outbreaks, as it is supposed by many to do, then a serious inroad is made on the channels of communication by which the specific poison is supposed to spread. Dr. Murray suggests that my remarks to the effect that I know of no case in which the poison supposed to be contained in cholera evacuations has spread by means of water in India, apply only to the experience of 1872; but I apply it in its widest sense, and I assert that in India, even in those parts of it in which cholera has its home, there is absolutely no evidence of anything of the kind; and I would ask Dr. Murray, and all others who believe in this theory, to adduce one single instance, that it may be thoroughly sifted.

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* The only instance I know in which anything like quarantine was carried out in a jail was in the Central Prison at Lahore; and it is not a little remarkable that while the prisoners here suffered severely, those in the Lahore Female Jail, where no such precautions were taken, altogether escaped.

I could dwell much longer on these matters, and I should like to discuss others; but I shall not detain you longer. In conclusion, I would only remark that I object to the current theories of the day in regard to cholera—1. Because they are founded on altogether insufficient bases to warrant their acceptance as scientific truths; 2. Because the quarantine and other restrictive measures to which they lead are impracticable; 3. Because, so long as mankind believe in such theories, they will never wake up to a proper sense of the great importance of the real work which has to be done—the improvement of the conditions under which they live; and 4. Because the prohibitions which flow from such theories are so vexatious, that the people are set against everything under the name of sanitary reform. I am quite willing to learn in a very difficult inquiry, and to weigh every piece of fresh evidence that can be brought forward; but let us see that the facts are really what they profess to be. And, as regards India, where there are special opportunities of studying cholera, let there be no error in statements, and no hurried rushing to conclusions.

ON VALERIANIC ETHER.

By W. F. WADE, F.R.C.P.,

Physician to the General Hospital, Birmingham.

SEVERAL years ago, Messrs. Southall, chemists of this town, prepared, at my request, some valerianic ether.

At that time, I was not much in the habit of using valerian or its preparations, and consequently allowed this one to fall into desuetude. Of late years, I have recognised more fully the frequency and importance of neurotic elements in mixed diseases, as well as of neurotic disorders pure and simple.

Some of these conditions are most decidedly alleviated by valerian, but the inelegance and nauseousness of its ordinary forms militate against its sufficiently frequent employment. My mind consequently reverted to the ether, and Messrs. Southall have again, at my request, prepared it; and also, for convenience of dispensing, a spirit of it, containing in twenty parts one of ether. The price is about ten per cent. dearer than chloric ether. Fifteen drops of the spirit is a convenient dose.

This preparation seems to me to possess the good qualities of the infusion and tincture, but to be more agreeable to patients both in odour and in appearance. Messrs. Southall inform me that the ether is free from alcohol, water, and valerianic acid, and is as pure as can be readily obtained. I may add, that Messrs. Southall affirm that both their wholesale and retail trade prove that valerian preparations are much more extensively employed of late years than formerly.

If any of our members try the spirit of valerianic ether, I should be glad to hear, after a due time, their opinion as to its merits as compared with those of other valerianic preparations. It is scarcely necessary to add that it is easy to combine it with arsenic, zinc, ergot, bromides, or indeed any ordinary drug.

THERAPEUTIC MEMORANDA.

AMYL COLLOID IN SHINGLES.

I AM anxious to call the attention of the profession to the great efficacy of the "amyl colloid" in removing the pain attendant upon shingles, which, as every practical man knows, is thoroughly out of proportion to the appearance of the eruption, and is often the cause of sleepless nights and great general discomfort. As far as my experience goes, no drug, applied externally or given by the mouth, can be compared to the soothing effect of the amyl colloid painted for three or four coats round the clusters of the eruption. It may be applied as soon as the pain sets in, and continued twice daily as long as required; but it must not be applied on the eruption. In severe cases, the addition of three or four grains of morphia to each drachm of the colloid will be found advantageous. Of course I do not wish this treatment to banish any general or special treatment that may be required in individual cases, but only as a great help to our means of easing pain.

HERBERT M. MORGAN, Lichfield.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, JANUARY 13TH, 1874.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

LARGE ADENOCELE, COMPLICATED WITH MILK-CYST. BY F. LE GROS CLARK, F.R.S.

E. H., aged 24, married, was admitted into St. Thomas's Hospital in November, 1872. At the age of sixteen, she first noticed a swelling in the breast, which had gradually increased to its present large dimensions, but unattended by pain. She had been married two years, and had an infant seven months old. The bulk of the tumour was below the nipple, and the entire mass measured twenty-six inches and a half in circumference. It was removed on December 4th, and the true gland, being almost entirely distinct, was only partially removed with it. The patient made a good recovery. The solid tumour weighed between eight and nine pounds, and proved to be adenoid growth, resembling, on section, the structure of healthy breast-tissue. In its interior was a large cavity, containing about two pints of thick, creamy milk. Its lining membrane was ragged and fibrinous. Its microscopic characters were those of true gland-tissue. The patient had been again recently confined, and suffered only temporary inconvenience at the early period of lactation.

Mr. BIRKETT said that such cases as that described by Mr. Clark were very rare. He had recorded a case in *Guy's Hospital Reports*, in which gland-tissue was formed and milk was secreted. There was a marked distinction between these and the so-called adenoid growths; the former might be regarded as true glands. In Mr. Clark's case, the growth was first noticed at the age of 16; and in Mr. Birkett's it appeared early, but it was long (in consequence of the patient being either pregnant or suckling) before there was an opportunity of removing it. It was found to be a small cyst containing matter like cream cheese or condensed milk. Hanging from the walls of the cyst were imperfect ducts. These growths might be regarded as developments of true mammary glands without nipples or ducts. In another case, he removed a rapidly growing cyst, in which lay many adenoid growths. It contained thickened milk which, he thought, came from the neighbouring normal gland. Another case was operated on by Mr. Luke, in which milk was found in a cyst like an adenoid growth.

REMARKS ON DISLOCATIONS OF THE FIRST AND SECOND PIECES OF THE STERNUM. BY WALTER RIVINGTON, M.S.LOND., F.R.C.S.

The object of the paper was to give an explanation of the mode of occurrence of dislocations of the sternum, illustrated by cases coming under observation at the London Hospital; and to account for their peculiarities by the anatomy of the superior sternal articulation. That dislocations and fractures of the sternum might be produced by direct or indirect violence, and that they frequently complicated fractures and dislocations of the spine, were well recognised facts; but as to the mode of their occurrence, conflicting and indefinite explanations had been offered. Of fourteen cases collected by Mr. Poland, the displacement was due or was attributed in four to force applied immediately to the sternum; in one, to violent lateral compression of the chest; in one, to muscular action; in one, to flexion of the body forwards as the result of a fall; in three, to falls from a height on to the back; in two, to falls from a height, the part struck not being mentioned; whilst in one the cause was not stated. Precisely similar causes had been assigned to fractures of the sternum, and the two classes of injury had so much in common that some writers included displacements of the sternum under the head of fractures. In the large majority of cases of both, the upper fragment was found lying behind the lower. In displacements, for instance, the manubrium was almost invariably found lying behind the gladiolus, the second pair of ribs remaining attached to the manubrium, and the strong posterior layer of periosteum untorn, but stripped up from the bone, holding the two segments together. The only recorded exception to this disposition of the segments known to the author was a case recorded by Sabatier. The position of the manubrium behind the gladiolus had been generally attributed to the direct force of the blow, pushing it backwards; but the same effect might be produced, in all probability, by force applied to the body of the sternum, the elasticity of the ribs and costal cartilages attached to it, causing it to rebound after it had been depressed. This was M. Maisonneuve's suggestion, and it appeared the more probable because the gladiolus was more exposed to violence. The question might arise whether a particular fracture or displacement had been the result of direct or indirect force. The injuries to the sternum, for instance, which complicated fractures and displacements, were often attributed by some surgeons to a violent descent of the chin on to the bone, and often explained by others as the effect of counterstroke; others, again, regarded them as the result of a doubling forwards of the sternum, caused by forcible flexion of the spine. That violent descent of the chin on to the sternum might occasion fracture was both *à priori* probable and was supported by the records of cases. The author quoted a case which had occurred in the practice of his colleague, Mr. Couper, at the London Hospital, as one apparently of this nature. An acrobat, aged 30, in turning a double summersalt, fell about ten feet on to the back of his head. He came down on some tan, and his head was violently flexed on to his chest. The injury caused a separation between the sixth and seventh cervical vertebræ and an oblique fracture of the sternum, such as might have been produced by the chin inclined to one side. The author believed that the descent of the chin on to the sternum was far more likely to occasion a fracture than a dislocation, and that it was only in cases of disruption of the ligaments uniting two of the cervical vertebræ, by which a freer flexion of the head could be effected, that this cause came into operation. Neither Mr. Poland nor Mr. Hamilton mentioned it, and certainly it had been used to explain cases due to forcible flexion and extension of the dorsal spine. Two cases were related in exemplification of the influence of forcible flexion and extension of the dorsal spine on the sternum, in both of which the injury had been attributed by some to the patient's chin. In the first case a man, aged 37, was walking in the street when some scaffolding fell on his head. The vertical force thus applied caused fracture and crushing of the third dorsal vertebra, and the violent flexion of the dorsal vertebræ, acting through the medium of the ribs, produced disruption of the ligaments uniting the manubrium and gladiolus. In the second case a man, aged 55, was standing on the floor of a warehouse when a bag of seeds, falling from a height, alighted on his back between the scapulæ, fracturing the six upper ribs on the left side near their angles, breaking off the spinous processes of the six upper dorsal vertebræ, and fracturing the body of the sixth dorsal vertebra. The dorsal spine was thus violently extended, the shock was conveyed through the ribs to the sternum, but, owing to the greater length and leverage of the five lower true ribs, more powerfully to the gladiolus than to the manubrium, and hence the occurrence of a dislocation of the two segments. This driving forwards of the gladiolus, either separately or more powerfully than the manubrium, which was held firmly by the first pair of ribs, would appear to be the correct explanation of some recorded cases explained in a different manner; as, for example, by muscular action, such as fractures or displacements from simple falls on the back, or from falls in which the back struck against a prominent object, or falls on to the feet and nates, the body finally falling over on to the back. The lever-like action of the ribs came into play during compression of the chest, and in cases in which the force was applied unilaterally, as well as in overarching of the back by violent contraction of the muscles during the expulsive efforts of labour. The frequency and pathological peculiarities of dislocations were fully explained by the anatomy of the articulation. Although the English anatomical text-books merely stated that the manubrium and gladiolus were united by a single piece of symphysial cartilage, there were in reality two distinct kinds of joint found between them—the amphiarthrodial and the diarthrodial. Having noticed this in examining specimens in the *post mortem* room at the London Hospital, Mr. Rivington turned to the authorities, and, finding no mention of the fact in English books, consulted a French "Anatomy" by M. Jamain, in which M. Maisonneuve's researches were epitomised. Thirty years ago M. Maisonneuve had fully described the two kinds of joint in a paper on Luxations of the Sternum, published in the *Archives Générales de Médecine* (serie iii, tome xiv). In the amphiarthrodial joint there was a single piece of true fibrocartilage uniting the segments more thin and friable in the centre than at the periphery. In the diarthrodial each bone was clothed with a distinct lamina of cartilage, adherent on one side, free on the other; and the cartilage belonging to the gladiolus was continued without interruption on to the facets for the cartilages of the second ribs. The spur of the second costal cartilage was joined to the manubrial layer, thus shutting out the articulation formed between the upper facet on the second costal cartilage and the manubrium from the true sternal joint, whilst the lower chondro-sternal articulation was continuous with it. These anatomical peculiarities explained the adhesion of the second costal cartilages to the manubrium in dislocations, and the presence of a distinct layer of cartilage on the end of each segment. M. Maisonneuve's accurate description of the layers of periosteum clothing the anterior and posterior aspects of the sternum was quoted. The anterior coat was described by him as thicker than the posterior, strongly adherent to the bones, and forming a sort of felt possessing a great power of resistance, especially in the transverse direction, whilst the posterior layer was composed of longitudinal fibres, adhering but slightly to the chondro-sternal articulations. As the force of injuries generally acted from behind forwards through the ribs, and as the sternum forms an arch with its highest point at or near the junction of the manubrium and gladiolus, the greatest strain usually fell on the anterior ligaments, and when the segments had been separated by the rupture of these ligaments the gladiolus was carried forwards and upwards in front of the manubrium, and the end of the latter becoming inserted like a wedge between the posterior layer of periosteum and the body of the sternum, that layer was stripped up from the bone as far as, but no further than, the level of the third pair of ribs. Violence applied to the sternum in front, and occasioning fracture, caused the ends of the bone to be bent inwards, rupturing the posterior ligament, but not generally tearing the anterior layer. The author differed from some of M. Maisonneuve's conclusions. M. Maisonneuve, without stating the number of his observations, placed the proportion of diarthrodial to amphiarthrodial joints as high as three out of five, and found the diarthrodial joint more often in females than males. In children the diarthrodial joint was rare. The author's observations showed a preponderance of the amphiarthrodial joint, and the greater frequency of the diarthrodial form in males than females. Out of one hundred fresh sterna examined by him, fifty-one were amphiarthrodial, six ossified, thirty-two diarthrodial, and eleven of a mixed nature, the separation between the segments being incomplete. The diarthrodial joint was met with at all ages, and in very old people without a trace of ossification. The author had found it in old people between seventy and eighty years of age. On the other hand, the amphiarthrodial form was subject to ossification at a comparatively early age. The author had seen ossification at thirty-four and thirty-six years of age. He believed that the diarthrodial joint was formed by absorption after puberty. M. Maisonneuve had ascribed to the clavicles great influence in causing dislocation of the manubrium, because fracture of the clavicle was often found accompanying the injury. The author attributed far more influence to the first and second pairs of ribs, which were united to the manubrium much less movably than the clavicle, and must exercise more power over it both in forcible flexion and extension of the dorsal spine, and in cases in which the violence was applied unilaterally. If a fresh specimen were examined in which the diarthrodial joint existed, or in which there was a tolerably thick symphysial cartilage, it would be found that, in addition to gliding movements forwards and backwards (varying much in degree in different specimens), some rotary motion was obtainable. This must favour displacement from unilateral violence; and it seemed obvious that the first and second ribs must be chiefly concerned in giving the necessary twist to the manubrium. Two cases were referred to in illustration of these views. A man, aged 45, fell from a plank about fifteen feet to the ground on to his back, the two upper dorsal vertebræ coming in contact with a piece of timber a foot square. Great pain was experienced at the upper sternal joint, and tenderness on pressure remained for several days, showing that the joint had been severely strained, although the force conveyed by the second ribs had been insufficient to occasion a dislocation. A man, aged 36, fell off a gate on to the back of his head and neck, the lower part of the neck coming into contact with a large stone. The fifth and sixth cervical vertebræ were separated, and the first left rib was separated from the manubrium. On examining the sternum, it was found unusually thick, with the upper joint completely ossified. Under ordinary circumstances, the force conveyed along the rib would have caused a dislocation or fracture of the sternum; but, owing to the unusual strength of the bone, the rib became separated instead. A *résumé* of the main points concluded the paper, which was illustrated by specimens, showing the two different kinds of joint and the effects of dislocation.

Dr. NORMAN MOORE asked whether there was emphysema of the lungs in any of the cases of fractured sternum described by Mr. Rivington. Bulging of the sternum, which would favour the occurrence of fracture, was common in emphysema.—Mr. HOLMES could not quite understand how a blow from the chin should cause a fracture or dislocation of the sternum at the upper part. If the injury were caused in this way, there should be some evidence of contact in the tissues about the chin.—Mr. BARWELL could not see why the displacement in Mr. Rivington's case was attributed to a blow from the chin. But he had seen a case in which he had no doubt that the injury was produced in this way, as there was a bruise on the sternum and a corresponding one on the chin.—Mr. LE GROS CLARK agreed that there was not sufficient evidence that fracture of the upper part of the sternum was produced by a blow with the chin. The sternum was very rarely broken by direct violence from any cause, unless there were also at the same time fracture of the ribs.—Mr. RIVINGTON had not attended to the question of emphysema; but, of course, a great arching of the sternum would favour the occurrence of fracture. He was not certain that a blow with the chin produced fracture of the sternum in his case; but it might do so in certain cases.

CLINICAL SOCIETY OF LONDON.

FRIDAY, JANUARY 23RD, 1874.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

PYÆMIA IN PRIVATE PRACTICE.

THE PRESIDENT delivered an address on this subject, which is published at page 129. At its conclusion, he invited a discussion.

Mr. JONATHAN HUTCHINSON: I feel great diffidence in rising to begin this discussion; but I have a few facts to add concerning the investigation of pyæmia, as it occurs, not amongst human beings, but amongst the lower animals. The facts I have to add are these: that pyæmia is extremely common amongst the lower animals, and it occurs amongst them when they are not crowded in the least, but when they are placed under the most perfect hygienic circumstances. I have been engaged the last year or two in collecting such facts as I could respecting the diseases of lower animals. I had some under my own care. Last spring, I had the misfortune to lose a considerable number of ewes, after parturition, from pyæmia. I made *post mortem* examinations of them all. Most of them were treated in the open field. One of the most typical cases was one that was carefully treated out of sheds, away from any contagion. The ewe had not been in contact with other animals which had suffered from suppurative disease; she simply had a retained placenta; the placenta decomposed, and from the decomposition she had internal metritis and the most characteristic pyæmia. The lungs showed pyæmic deposits; and we found the same condition in several animals under similar circumstances, proving most clearly that, at any rate, hospital conditions, or anything in the least allied to hospital conditions, are, as you have well stated in your remarks, not in the least necessary for the production of pyæmia. I unfortunately had another fact in the country bearing in the same direction. My managing man at the farm had his finger bitten by a calf. It was not bitten deeply, and he thought nothing of it. He was teaching the calf how to drink, and it gave his finger a grip. The skin was not broken in the least. He was a man living at a farm-house in a very healthy part of the country, and, although he was not in contact with diseased persons in the least, still he was not himself in robust health. The sequel was this. His finger inflamed, as the result of this grip; he had a thecal abscess; he had intense inflammation of the hand, and the thecal abscess opened. He had very severe rigor, and passed into pyæmia. He was better for a while, and was able to walk about, still looking extremely ill, with his wrist and hand very much swollen. Then he suddenly had a swelling in front of his hip-joint, and a very large abscess grew there; he had another abscess in his leg, and he ultimately died of pyæmia. Now, if it should be suggested that I took him the pyæmia, because I opened his thecal abscess after coming from a hospital, I would reply, that he had his first severe rigor the day before I cut it. It was not cut early enough, because I was only there occasionally, and I did not see him soon enough; I cut it on the day after the rigor which indicated the pyæmia. I do not believe there was any contagion. Only recently, I was asked, in the same part of the country, down in Surrey, on one of the most healthy hills in the locality, to see the gamekeeper of one of my friends, Mr. Hudson. This man had been bitten between his thumb and fore-finger by a ferret. The other gamekeeper stated that he had been bitten twenty times before, and had never taken any hurt; and I daresay many gentlemen present will confirm me by their own experience, that there is nothing poisonous in the bite of a ferret. This poor fellow, a man of very temperate habits, died eight days after this very trifling injury, having had a very severe rigor on the third day after the bite, having acute inflammation of the whole of his arm as a consequence. I should like very briefly to add, that my conviction, from all that I have seen of pyæmia, is this—that it will originate wherever bone is implicated in the inflammation, but that the reason why injuries to bone are so dangerous, and of course idiopathic periostitis amongst them, is simply, and I believe has long been believed by many to be, that, whenever bone is inflamed, you have great risk of inflammation of the veins. In another class of the cases in which there was no proof of bone-injury, in a certain number of ewes, periostitis appeared to be the starting-point, leading to inflammation of veins. Then why does it occur in a few cases in which there is no injury to bone, and in which apparently the injury was of the most trifling description? I will take your case of a girl admitted after puncture and injury, and who subsequently got pyæmia from this simple accident. It is obvious one must seek some special difference in these cases from the general run of similar injuries from which no ill consequences follow. We must not be content to say it is a mere matter of accident whether a patient gets pyæmia, or not. Although it is a mere conjecture, I think it has a certain amount of plausibility in its favour, that, in cases where pyæmia has followed slight punctured wounds of the soft tissues, or inflammation of soft tissues even without punctured wounds, in which no bone is involved, a vein was implicated. My suggestion would be that, in the case in which the man died from a bite from a ferret, it is not improbable that the ferret's tooth went right through some vein, and that he consequently got actual inflammation of the vein and formation of pus within—inflammation which caused his death. That would be my guess; a mere guess, but still worth keeping in mind in the investigation, to suggest what might have been the cause in the girl dying from the puncture of a needle. Then we come to the final question, as to what extent pyæmia is to be regarded as a disease due to hospital air, or to any influences which are incident to the confinement of patients in hospitals. We shall be very premature indeed, if, reasoning from the facts you have brought forward, showing that pyæmia can undoubtedly arise from circumstances extremely different from those of patients in hospital wards, we conclude that, therefore, the patients in hospitals have no special proclivity or have no special liability. My conviction is, looking at the results of my private practice as compared with the results of my hospital practice, that the hospital patients are in far greater danger of pyæmia. I have been trying, since I heard the title of your address announced, to recollect whether I had lost any patients in private after operations from well characterised pyæmia. I have seen a great many cases in private dying of pyæmia, after periostitis, carbuncles, boils, etc., but I do not recollect more than one or two somewhat uncertain cases in which we have lost patients in private after operations. Now I have lost a great many in the hospital; not many of late years, but in former years, at the London Hospital, a considerable number. At the Metropolitan Free Hospital, I never recollect to have lost one, although it was a crowded, ill-ventilated hospital, under the worst circumstances, the London Hospital being one of the best. I cannot, then, help thinking that there is the possibility of the conveyance of something from patient to patient which may be the cause of pyæmia; and my conviction is, that, under many circumstances, the inflammation of bones and veins—of bone, because it leads to inflammation of a vein—is very often a matter of contagion, and that patients confined in hospitals are very much more likely to get the disease, as the result of contagion, than those treated under ordinary circumstances. Hence, if this line of reasoning be at all correct, we come to the principle upon which we should attempt to diminish the risks of pyæmia in hospitals; not by ventilating; there is no use whatever in introducing fresh air into the hospital with a view to prevent pyæmia; at least, that is my conviction. We have had the windows of a ward kept constantly opened where has been pyæmia, and have given the patients erysipelas by letting draughts blow upon them when asleep, and yet have not prevented pyæmia. I am no believer in fresh air at all in preventing pyæmia. It is a matter of contagion. What you want here is to take away the source of contagion; so far as erysipelas and pyæmia are matters of contagion, you must remove the source of contagion; and, if you can prevent any wound from taking on erysipelatous action, you prevent it from becoming a focus from which other cases may spread by its proximity.

Mr. BRUDENELL CARTER: I hope that, in the course of the discussion, some of the senior members, who can look back to the time when venesection was commonly practised, will tell us whether they ever saw a case of pyæmia following blood-letting. I think that, if Mr. Hutchinson's view be correct, pyæmia should have been more or less frequent after that little operation.

Mr. CHARLES HAWKINS: I must apologise for presuming to offer an opinion upon subjects connected with large hospital practice; but it was my good fortune for many years to watch very attentively one of the largest operating practices in this country, and certainly one of the largest for variety of operations. My experience, spreading over nearer twenty years than fifteen, can bring to my mind many such cases as you have described, resulting from operations and accidents alike apparently simple. I am very glad that your paper has been read, because I think it will lead people to consider a little more than they hitherto have done the bad character thrown upon hospitals and hospital construction, and hospital dangers. There were two cases very lately that struck me as a very good example of the theory with which you have set out to-night. There was a gentleman riding in the Park before going to Lincoln's Inn—a lawyer—who had the misfortune to be thrown from his horse, and to fracture his leg. When I say he was under the care of the President of this Society, it is sufficient to prove that he was well looked after. He was brought, as many of these cases are, into St. George's Hospital, and was placed, at your request, in a ward in the new wing, which hitherto had not been occupied. He had for breathing space upwards of 12,000 cubic feet. He had a nurse told off to himself; and he had, as you know, anything in the requirement of diet that he would have had had he been your patient in Belgrave Square. The Governors of St. George's Hospital have never placed any limit upon the diet of their patients. That patient died, I think, within about three weeks, of pyæmia. In the next ward, where there were thirty or forty patients with 1,200 cubic feet, where one nurse and assistant were attending them, going from patient to patient, carrying whatever they might have to take, there was a patient who was bringing up a horse from Epsom; and the individuals who follow that life do not, as we are told, live perhaps the best life physically or morally. He had come to grief with his horse, and the result was his thigh was broken, his jaw was broken, and he made such an impression upon his skull, that, I think, before he left the Hospstal, there were seven or nine pieces of bone taken from his cranium. That patient did well in the crowded ward. You may recollect some years ago an outbreak of phagedæna in a ward, so extensive that it was brought to the notice of the Board. That was in the ward at the top of the house, in the best ventilated and best placed ward in the hospital. In the wards below there was very little of this phagedæna. There has been in the ward scarcely any phagedæna since, or hardly any appreciable quantity. But we have had the means, through the munificence of one individual, of putting to the test the opinion which has been given with great earnestness for many years, that if operations were performed in the country, and we only had convalescent hospitals where the patients could be sent out of the contamination of London and the closely packed beds, the cases would do well. Through Mr. Morley's liberality, the governors of St. George's Hospital were put in possession of a hospital at the top of Wimbledon Hill, in, I suppose, perhaps the most healthy position to which we could go within the distance. There are surgeons in this room who have operated at both hospitals. We have seen the most serious operations do well at St. George's, we have seen them do badly; we have seen them do well in Wimbledon, and we have seen them do badly. We have seen patients die at Wimbledon having a room all to themselves, nurses for themselves, where there was no disease of any contagious kind, for the patients were almost convalescent, with an air blowing pretty nearly from the sea. That has not solved the question; they died in exactly the same way. There was a hospital in this town which, I suppose, was about the most perfect specimen of what it ought not to have been that could possibly have been produced. It was a discarded workhouse, built in a churchyard crammed full of bodies. There were some great operations performed in this hospital, and there was a very considerable amount of success. Then a new hospital was set about; the best opinions were taken, and the hospital was built; all the dead bodies were removed, and carried to a distance. I should like those who have practical experience to tell me what alteration has taken place in the results of the accidents and operations in those two buildings; whether in the new building it has been necessary to shut up any wards for a time, or whether the accidents and operations are so very much better. I believe that, when you find these fatal cases occurring in public practice, you will find them in private practice. It was a result of Sir Benjamin Brodie's great experience, that, under certain circumstances, he was exceedingly loth to operate—in north-east winds, and in the great heat of summer; he never much liked an operation when there was a sudden change of weather. But I could relate to you a great number of cases which occurred very much as you have depicted to-day.

Sir JAMES PAGET: I am sure that not the Society alone, but the public, are greatly indebted to you for bringing this matter very prominently before them; for, after all, the question which has been raised by two of the previous speakers is mainly this, and most important of all, whether there really be conditions in hospitals which render pyæmia more frequent in them than in private practice. The question is very difficult to answer; because, even for those who have had large experience in both hospital and private practice, the classes of cases with which they have to deal are so different, and the classes of persons so different, that it is very hard indeed to compare them. I suppose that very few surgeons, even of the largest practice, have had many cases of amputation in private practice for what used to be at least a common cause of operation in hospitals—diseases of the knee or elbow-joint. In private practice these hardly ever come for operation: they are by long care remedied; and we have not the number of cases of amputation in private practice which we can at all compare with those in hospitals. The classes of patients and of diseases are in the two cases so widely different, that it is hardly possible to get the exact numerical results by which the frequency of pyæmia in the two conditions could be determined. We can have only a very general impression, which may, after some years of experience, be considered almost as true as to which would result from a comparison of numbers. My own experience exactly accords with your own, that pyæmia in private practice is, making a certain deduction for the different class of persons with whom we have to deal, just as frequent, arises from just as trivial causes, occurs after the same class of injuries, and leads to the same fatal results, as ever it does in hospital practice. I tried once to compare my cases in private with those in hospital; and for six years, while assistant-surgeon to St. Bartholomew's, the number of cases was pretty nearly equal. The result, so far as it could be reckoned with reference to what may be called "plagues of surgery", erysipelas, gangrene, etc., was to find that there was no marked difference between them, except that, as one had to do with the well-fed in the one place and the starved, the comparatively temperate and the drunken in the other, there was an advantage in favour of private practice; but, barring this difference, there was nothing that could be fairly established. Among private patients, I have seen pyæmia arise from more trivial causes than I have ever seen in hospital practice. One case I may mention, where an ordinary chilblain in a young nobleman led to pyæmia and rapid death. He was at school in one of the healthiest districts in England, near Bagshot, with every condition of health. A young lady living at Kilburn, well placed for health, manner of life, house, and all circumstances about her, had a slight chafing from the lining of her boot above her tendo Achillis; and from that, in a fortnight, she died, with abscesses in various parts of the body, and with all the characteristics of pyæmia. Again, I may say in the only two cases in which I have seen pyæmia follow operations for piles, both were in private patients. Happily neither were fatal, but both were very well marked. I am sorry, too, that my experience after operations has not been so favourable as Mr. Jonathan Hutchinson's. I have seen quite as great a frequency of pyæmia after operations in private as in hospital practice. Of the very few amputations for disease of the knee-joint which I have done in private, one was for a wound of the knee. It was done at Croydon, on a fairly healthy lad, in a perfectly well arranged house, well aired, well nursed, with every condition of health. He died of well marked pyæmia. After operations upon the breast, I have seen pyæmia as frequent in private practice as in hospitals; and I may here add, as it is, after all, the chief point to which the paper must tend, that not only with pyæmia, but with the other accidents, as they are called, of operations, I have seen no reason to believe that hospitals are places of greater infection, as it is called, or of greater unhealthiness, than what is met with in private practice. I have seen three cases of hospital gangrene in private, and only three under my own care at St. Bartholomew's; and of those three in private practice, one occurred in one of the best houses in Harley Street, another in the best house in Regent Street, and another in St. John's Wood, all three at distances of two or three years asunder, and with no cases of hospital gangrene or any disease of the kind, as far as I know, within reach of the patients. I therefore come to the very clear conclusion that there is really nothing, I will not say in any hospital, but nothing in a fairly well managed hospital, which contributes to the production of pyæmia. My experience is limited entirely to my own private practice and to St. Bartholomew's Hospital; and I would say for certain that, with the exception of a few times when I believe certain wards were under the management of careless sisters or house-surgeons, I have not seen anything in the hospital which would hinder the prevention of pyæmia more than it may be hindered amongst one's patients in private practice. I am therefore very earnest in the hope that the term "hospitalism", which is being applied not only to this, but to many other diseases that occur to surgeons, will be at once and for ever abolished. It seems to me a name altogether unfair. I believe there is not any fair evidence whatever that these maladies following surgical operations are more frequent in hospitals than anywhere else. But it is not on the ground of unfairness alone that I would speak; but because I believe a term such as "hospitalism", or such as another which was invented of "surgical fever", does lead astray altogether those who would inquire fairly into the truth. If pyæmia is to be studied only in hospitals, everyone would be studying it in a wrong direction. The thing must be studied, as you have yourself suggested, equally and with equal fairness in private practice and in hospitals, with an exclusion of all foulnesses of air such as we may have in private houses, and an exclusion completely of all influences supposed to minister to it in hospitals, and then we may come to a fair knowledge of the truth. Before sitting down, in answer to Mr. Carter's question as to the frequency of pyæmia after venesection, I would say that I fear I am one of the few who have had any large experience in venesection. I am just old enough to have known it when it was rife in country practice; for, in the town in which I was apprenticed, it was customary to bleed on every market-day a considerable number of persons who came with no definite malady except that they believed it would be better to be bled. They came especially in the spring and fall of the year, both of which were elastic terms, extending over two or three months. I do not remember the total number bled, but it was as large a number as liked to come and pay a shilling apiece; but, so far as I remember, pyæmia never did follow. If it did, the patients must have retreated into the country, and there been lost sight of; but certainly there were a large number of townspeople bled of whom I should have known the fate. At the time, I never saw a case of pyæmia at all, except after very severe operations. I therefore think venesection can hardly be charged with producing great liability to pyæmia. But then it should be said that the wounds were always treated in the manner in which pyæmia, if arising from atmospheric causes, was likely to be averted; they were very carefully bandaged, shut up, and very quickly healed.

Dr. **Robert Barnes**: I also remember the time to which Sir James refers, of country bleeding, and have bled nine or ten people in the morning on market-days as quite a common practice. I have on one occasion seen pyæmia follow; it might have been from a foul lancet, and I cannot say what the cause was, but it was by no means a common event. I was also for sometime physician to the *Dreadnought*. There was a hospital in very peculiar circumstances, isolated from everything on land, and surrounded by water. That hospital had been prone to pyæmia and to hospital gangrene to, I believe, a considerable extent. It came under the charge of Mr. Tudor, the resident surgeon, who was a man of great energy and painstaking, most particular in everything he did; nothing could be allowed to be done upon which he did not have his eye. He went round dressing his patients in the morning with a pupil behind him; and, instead of using sponges or anything of the kind, a piece of clean tow was used for every patient to wipe up the secretion, and was pitched overboard instantly. Nothing was ever used to two patients, I believe, for the three years or more during which the system was followed, and there was scarcely ever a case of pyæmia or any infectious disease in the ship. He attributed it, and I believe with very great reason, to the care he took in dressing the patients, putting aside everything that could possibly be carried from one patient to another. In hospitals on shore this is scarcely possible. You have a number of dressers, a large number of students who are using all sorts of things; and it is with horror I see sometimes a case of ovariotomy in a hospital where the fingers of half a dozen persons are poking into the peritonæum. So far from assenting to the proposition of Sir James Paget that cases of operation are not likely to be more dangerous in hospitals than in private practice, I entertain a profoundly different conviction, as to this particular operation, on account of the enormously increased risk of infection, from the surroundings of the patient in a hospital, as compared with private practice. That cases do arise in private practice, apart from hospital influence, is a matter that cannot be disputed, especially after the evidence of yourself and others in this room, and what one sees in the practice in my department especially, analogous to that which Mr. Hutchinson has mentioned among the lower animals. There undoubtedly retained placenta, or some cause of the kind, may get up symptoms of pyæmia, and patients die from a form of fever which I call autogenetic, as arising from the patients' own conditions, apart from everything external anywhere. There is a point also bearing somewhat in favour of Mr. Hutchinson's idea that the veins are concerned, certainly in the uterus. If the placenta be not removed, it goes into decomposition, and there you have a series of veins of a kind peculiarly liable to be affected by the imbibition of foul matter. There is no department of practice which does not yield some facts and some experience to illustrate this subject. It cannot be looked at entirely from one side, either inside a hospital or out of it, from one practice or another. It is one which should engage the earnest attention of every member of the profession.

Mr. **Campbell De Morgan**: I think that there are perhaps two questions mixed up together, with reference to the occurrence of pyæmia in hospitals. There is no doubt, I suppose, that if several patients be put together who have had operations, and one get pyæmia, let it be introduced how it may, the others may be liable to it if exposed to any contact whatever; and that therefore, in the event of pyæmia occurring in the wards of a hospital, it is more than probable you will get more than your average of cases in a certain number. I suppose concurrent testimony would show that the observations which you have made are correct—that it does occur in private, dotted here and there, not communicated from one to the other as it might be in hospitals, and without any apparent cause, such as is supposed to exist in hospitals. But may it not be from very much the same causes in both? I should doubt whether we may not have even in the best private houses much the same sources of contamination which we have in hospitals, and sometimes even more. The most fatal case of blood-poisoning I ever saw, was in a lady living in what appeared to be a very well ventilated house in the north of London. She died of most intense blood-poisoning, after the removal of a tumour in the neck, without any indications of phlebitis, and certainly no bone exposed. It turned out afterwards that there was a general feeling of *malaise* now and then on the part of some of those who inhabited the house, and they occasionally found a certain amount of uncomfortable smell about it. There was no doubt that here there was imperfect drainage. If you come to look to the connection of the various ventilating apparatus connected with the sewers and so on, I doubt whether there are many houses in London in which you would not find an imperfection which you would not allow to exist in a hospital, if you knew of it. You may have this undoubtedly without any condition, of which you or I or the patients themselves would be conscious. We had a very curious illustration of this, which has been quoted so often, that I am almost ashamed to mention it again. In the Middlesex Hospital there were two beds, one on each side of a window, and patients in them almost invariably, if they had a cold or were operated on, had erysipelas or pyæmia. There was nothing in connection with the window in the part of the ward, so far as smell was concerned, to call attention to it; but it was found that at some distance below, in the area, in a line communicating with the window, there was a dust-bin. The dust-bin was ordered to be cleansed out, and the window was not allowed to be opened again, and for two or three years we never had a case of erysipelas or pyæmia in those beds. Then the precaution was neglected, and the thing again occurred. I do not quite agree with Sir James Paget as to the notion of covering up the wounds in cases of bleeding having anything to do with prevention of pyæmia. I think it was the immediate closing of the vein, so that nothing could be carried up: it was not from the exclusion of air. I am becoming sceptical as to the effect of air upon wounds in producing decomposition, or giving rise to unhealthiness. I think that free exposure to the air, even of a hospital ward, seems to agree with wounds just as well as treating them in the most careful manner by dressings. I have adopted it in several cases of late, and certainly with very admirable results, and with very little trouble indeed. I think that pent-up matter is very often the cause of all the mischief you get; but if it can drain away, and not be collected in the dressings, you thereby would prevent contamination. I agree also with what Mr. Hutchinson has said, that pyæmia is connected a good deal with the conditions of the veins ot the bone. There again it is from pent-up matter, as you get in cancelli of bone: the matter is collected and decomposing from lodgment, not from exposure to the air, but because the air does not pass freely enough to it. Anything that has a septic tendency, I take it, will have the effect of producing pyæmia or its allied condition, erysipelas, either in hospitals or in private. I quite think the notion of "hospitalism," or hospital disease, has been carried a great deal too far; that it is altogether a mistake to suppose the hospitals are so very much more prone to these diseases originally than private houses. That they will spread, is another question.

Mr. **Bryant**: In listening to your paper, the chief point that attracted my attention was the very interesting one in which you threw the weight of your authority towards the idea that pyæmia is not a purely hospital disease. This has long been very much my opinion, not simply based upon the theory of the question, but upon the observations which I have been able to make both at Guy's Hospital and elsewhere. A few years ago, when I was working at the subject of pyæmia, it was an object of interest to me to find out whence these cases of pyæmia came; and I was very much struck with the important fact that the worst cases of pyæmia which we saw in Guy's Hospital were admitted with the infection; and that these cases all followed trivial accidents, such as small wounds, slight ulcers, boils, and carbuncular affections of the milder form; and, in analysing the results found after death, I find that after the trivial accidents the pathological results were far more severe than when they followed the graver accidents which we are in the habit of seeing in a hospital ward. That is to say, in patients dying from pyæmia following simple contusion, or abscess, or boil, we were more apt to find multiple abscesses We would find suppuration in a larger number of glands, in the liver, the kidneys, the spleen, and more frequently in the heart. Of course, in the lungs we expect to find them. All this was in cases trivial in their origin, being almost all cases of simple suppuration, or of suppuration in the cellular tissue following contusion. That fact was a most striking one; and, I confess, led me to feel that pyæmia could not be regarded fully or solely as a hospital disease, and that we should find as much pyæmia probably outside, if we could get a fair statistical comparison, as we find in the hospitals. I was very much struck, on hearing your cases, that so many of them were attacked first by erysipelas; and I suppose we must class erysipelas amongst the so-called hospital diseases. I have been taking for the last three years considerable pains to find out really how far such an inference is correct; and I find, in looking at our erysipelas ward in Guy's Hospital, that two thirds of the cases of erysipelas admitted into the ward have been admitted from outside the hospital; and that only one-third of the cases have been cases drafted from the surgical or medical wards. Erysipelas, taking it merely from these statistics, cannot be looked upon as simply due to hospitalism. Of course, erysipelas and pyæmia are connected with hospital work. There can be no questioning the facts that Dr. Barnes has given, and the facts which we are in the habit of noticing in hospitals, where, from the want of cleanliness or attention on the part of the dressers in the matter of sponges, erysipelas and pyæmia are more apt to spread; but, to say that they are simply due to, or connected with, hospital practice, is very unfair. Dr. Barnes gives us the most rigid test, that connected with puerperal patients, and more particularly with a severe operation of surgery, such as ovariotomy. But, unless unusual care or extra precautions be observed in the performance of ovariotomy, we cannot expect the same success with which we should meet were we to exclude all those extraneous influences which we know to have some kind of influence in producing erysipelas and pyæmic affections. Feeling, as I do very strongly, the great necessity of observing extreme care as to cleanliness, air, and so on, in hospital work, I must say I should not like to sit quiet without expressing my conviction that pyæmia and erysipelas are not really hospital diseases; that they are in their fullest extent, if we could get a fair amount of statistics, quite as common outside the hospitals as they are in them.

Mr. T. HOLMES: The observations which Mr. Charles Hawkins made with respect to the hospitals at Wimbledon and St. George's, brought to my mind a rather striking circumstance that occurred in my own practice at these two hospitals, and one to which I have no doubt he was alluding. Mr. Morley, as Mr. Hawkins justly observed, left us the opportunity of trying the experiment as to whether operations would succeed better in the country than in town; and I thought at one time of testing this by performing a series of amputations at Wimbledon and comparing them with a series of similar amputations at St. George's. I commenced with two cases, which seemed to me to be very appropriate for the experiment. One was a middle-aged man suffering from chronic disease of the tarsal bones, a perfectly healthy individual who had never, as far as I could find, had any serious disease in his life, and certainly never suffered from erysipelas. The other was a man broken down by all kinds of dissipation, and no doubt, to a certain extent, a bad subject for an amputation, but otherwise there was nothing very remarkable about the case. I sent these two men down to Wimbledon, and performed amputation upon both on the same day, a few days after their admission into the hospital. They were treated in separate rooms, neither room having even been used before; one was in one of the wards of the hospital, the other in one of the private rooms. They were separate from each other, but attended by the same nurse; otherwise they were in exactly the same conditions as a man would be in private practice. The rooms were entirely free from all possibility of contamination. They were not attended by medical students at all, but by the resident medical officer of the hospital. There were no other cases in connection with them whatever, and all the other cases in the hospital were simply convalescent cases. I never saw two cases more likely to do well. One of them was certainly a case of amputation which anyone would have expected to recover—merely Syme's amputation for chronic disease. Both of these people died; one of pyæmia, and the other of erysipelas. The erysipelas did not attack the stump at all, but simply the head. This appeared on the fourth or fifth day, and was followed shortly afterwards by sloughing of the skin of the back to an enormous extent, a piece as large as a soup-plate sloughing a few hours before his death. The patient died the fifth day after the amputation. The other man died on the seventh day of pyæmia. I must say that, although the occurrence of two isolated cases of the kind proves nothing, still it discouraged me so far, that I ceased to think it worth while to spend the great amount of time that would be necessary to carry the experiment further.

Mr. CROFT: I had the pleasure of being Dr. Barnes's colleague at the Seaman's Hospital when he was physician, being then assistant-surgeon. I do not think that I gained, during my five years' experience of surgical work, the same impression which seems to have adhered to Dr. Barnes's mind since his leaving the hospital. I think that it would be scarcely fair to the reputation of those gentlemen whom Mr. Tudor succeeded, to leave the Society under the impression that Mr. Tudor found a system of dressing at the hospital which could be condemned. When I say that it was under the care of Mr. Busk, I think that it is a sufficient guarantee that the utmost care was taken both surgically and hygienically. Mr. Busk had Dr. Rooke under him as resident surgeon, who worked there in, I think, no less energetic a manner than Mr. Tudor; and I think it is only fair to Mr. Busk and to Dr. Rooke, who is dead now, that I should say that I think they had done all that they could do. I know that, after some alterations had been made in the state of the hospital, an improvement took place in the number of cases of erysipelas, pyæmia, and phagedæna; but, after a time, while Mr. Tudor was there—I am sure, if he were here, he would bear out what I say—both pyæmia, erysipelas, and hospital gangrene were rife. I had many cases of sloughing bubo under my care to treat—hospital phagedæna, and not simply syphilitic phagedæna. I do not wish to say anything about hospitalism beyond this, that I am extremely glad Sir James Paget has said openly at this Society he hopes the name will be dropped. The sooner the name is forgotten, I think, the better, for nothing is clearer in my mind than that it is a most unfair term. I think that the comparison between the experience at hospitals and the experience in private practice has perhaps taken up, I was going to say, too much of our attention; at any rate, it seems now that we have arrived at a point when our attention should be, as you have proposed, turned into a new way of investigating pyæmia. One is too apt to take a number of cases of pyæmia in the lump, and say that so many cases of pyæmia have occurred, without studying each particular case. It seems to me now that we have arrived at this stage when accurate reports should be presented. When I say "accurate," I mean reports which will extend not only to the general condition of the patient, the general condition of the house in which the patient was, or the hospital in which the patient was, but which will give details of the juices in the patient's body; I mean the condition of the nutritive fluid in the patient's body. When we have a series of reports of cases including such statements as I have referred to, we shall then have a good basis to go upon. At present, it is only here and there that we get an account of the condition of the patient's blood or lymph in pyæmia.

Dr. BARNES: The conclusions of Mr. Tudor were carefully published for two or three years, and I think that, if the Fellows refer to the reports, they will see that what I have said will be borne out.

Dr. BASTIAN proposed that the discussion be adjourned till the next meeting of the Society.

Mr. HUTCHINSON seconded the proposition, which was agreed to.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, DECEMBER 13TH, 1873.

LOMBE ATTHILL, M.D., Vice-President, in the Chair.

Preventive Treatment of Post Partum Hæmorrhage.—Dr. A. H. MC CLINTOCK read a paper on the prophylactic measures which may be employed, where there is reason to expect *post partum* flooding. The conditions which determined the production of hæmorrhage after delivery were—1. Deficiency of muscular contractility of the womb; 2. Vascular excitement; and 3. Want of coagulable power in the blood. Vascular excitement, towards the end of gestation and during labour, always foreboded hæmorrhage. This had been especially pointed out by Madame La Chapelle and by Gooch. A rapid and jerking pulse, at the end of labour, indicated the probable occurrence of flooding. The experience of a woman's past labour afforded some clue as to possible inertia of the uterus. The presence of any tumour in the womb, or unusual distension of its cavity, from plurality of fœtuses, or from dropsy of the amnion, should also awaken suspicion. As pointed out by Dr. Whittle and Dr. Atthill, sharp, quick, abruptly ceasing pains, in the second stage especially, were also commonly forerunners of hæmorrhage. The interval between the pains was generally increased under these circumstances. Extreme mental depression, and chloroform sometimes, exerted a paralysing influence on the uterus. Chloroform, however, in other cases was of advantage in allaying the influence of mental depression, but only then was its use judicious where there was reason to dread the occurrence of flooding. Sometimes *post partum* hæmorrhage took place without any warning whatever, and in such cases particularly the woman's previous lying-in history was of great importance. The prophylactic measures, to secure quietude of the circulation, and to allay local vascular excitement, were open-air exercise, abstinence from stimulants, and regularity of the bowels. Digitalis and cooling medicines might be given, and in plethoric persons, blood might be drawn from the arm, as strongly recommended by La Chapelle. But sometimes rapidity of the circulation depended on anæmia; and here the opposite treatment must be adopted. Where the character of the pains, or the previous history of the patient, furnished grounds for expecting hæmorrhage, reliance must be placed—in addition to the slow extraction of the fœtus, and the following down of the uterus with the hand, etc.—on two measures; the letting off the liquor amnii by artificial rupture of the membranes, and the administration of ergot of rye. The time for puncturing the membranes was when the os was nearly fully dilated; the presentation, of course, being known as a head or pelvic extremity. The most effectual resource was the use of ergot. If it failed to excite uterine action, it would have no toxic influence on the child; and if it stimulated the uterus, the child would probably be born before any danger to it could arise. To be of real service, the ergot must be given some little time before delivery, and the unlikely presence of morbid adhesions of the placenta might practically be disregarded. Two drachms of the liquid extract of the *British Pharmacopœia* might be given. In primiparæ, however, a smaller dose was sufficient; and the soft parts, as well as the os uteri, should be pretty well dilated before the drug was administered. Where deficiency in the coagulating power of the blood appeared to be a predisposing cause of *post partum* bleeding, Dr. Mc Clintock had sometimes given gallic acid for days or weeks previously, and with advantage. Dr. Bassett, of Birmingham [BRITISH MEDICAL JOURNAL, November 22nd, 1873], had used iron with equal success. Denman, lastly, under similar circumstances, commonly administered some tonic medicine, such "as one grain of the zincum vitriolatum two or three times a day," for several weeks before delivery, and he strongly recommended the cold bath as an additional preventive.—The CHAIRMAN believed that the condition of the pulse was a most useful guide as to the possible occurrence of flooding after delivery; at the same time he considered that bleeding in plethoric women was not called for. In anæmic individuals, or in patients of feeble muscular habit, liable to nervous exhaustion or the subjects of mental depression, a quick pulse was of very serious import. Here the forceps was valuable in addition to ergot, a drug which he never administered without previously rupturing the membranes. He thought that *post partum* hæmorrhage was sometimes induced by the too early and forcible removal of the placenta.—Dr. CHURCHILL said that if the pulse continued at a high rate after the second stage, we might anticipate hæmorrhage. He strongly objected to the forcible extraction of the placenta, but, at the same time, he thought it should come away within a very short time. By grasping the uterus firmly, he found that the after-birth generally came away within five minutes. He agreed with the author of the paper as to the time for giving ergot.—Dr. JOHNSTON was in accord with Dr. Mc Clintock and the last speaker, as to the administration of ergot. Out of 686 cases delivered at the Rotunda Lying-in Hospital during the year ending November 5, 1873, there were seven cases of flooding—six slight, and only one requiring the injection of solution of perchloride of iron (the patient recovering). In 419 of these cases, the second stage was concluded within thirty minutes, 337 being pluriparæ (in two, slight flooding), and fifty-six primiparæ (no flooding); four were twin cases (no flooding), and two suffered from severe hæmorrhage on former occasions, but not on this. He considered that these figures proved that a short second stage did not predispose to hæmorrhage. With Dr. Churchill, he advocated the early removal of the placenta, but without unnecessarily active interference.—Dr. CRONYN laid great stress on the importance of judicious manipulation of the uterus, in obviating the likelihood of flooding. He also thought that hæmorrhage was apt to follow where portions of the membranes were left behind in the uterus.—Dr. DARBY considered that quick pulse was an important sign, but he could not agree that hæmorrhage after one delivery predisposed to a recurrence of the accident after subsequent labours.—Dr. DENHAM attached little value to rapidity of pulse in the second stage. But he never left a patient's room without feeling the pulse. If it then continued fast, it was a bad sign. Two rules should be carried out in removing the placenta. One was to make pressure over the uterus, the other, to use gentle traction on the cord. Ergot, given towards the end of the second stage, certainly prevented hæmorrhage; but its exhibition, after the expulsion of the placenta was useless.—Mr. A. H. RINGLAND mentioned a case of a pluripara in whom *post partum* hæmorrhage recurred after each of three pregnancies. Morbid adhesions seemed to be the cause.—Dr. Mc CLINTOCK replied, and the society adjourned.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, DECEMBER 20TH, 1873.

ROBERT D. LYONS, M.D., President, in the Chair.

Colloid Cancer of Ovary.—Dr. KIDD exhibited a very large tumour which he had removed on December 17th. When the patient was seen for the first time on November 22nd, a swelling extended to the pubes from two inches above the umbilicus; the abdominal walls were lax and pendulous; and an irreducible hernia existed at the umbilicus. A distinct fluctuation could be excited in the tumour, which appeared to be composed of a solid movable mass floating in fluid. Over it, there was dulness on percussion. An examination of the uterus, *per vaginam*, showed that this viscus was movable and empty, three inches in length; a sound introduced into it moved through an arc of ninety degrees, when the abdominal tumour was manipulated. The diagnosis was made of a multilocular ovarian tumour, attached to the uterus. The patient, a lady aged 36, stated that she had been twelve years married, had two children, the younger nine years of age; had never miscarried, and was regular in menstruation. In December 1872, she imagined she was pregnant, but the catamenia did not cease until the following March. In August, a scanty flow recurred. On December 4th, 1873, the principal abdominal measurements were—circumference at line of umbilicus, forty-seven inches; length from pubes to umbilicus thirteen and a half inches; ditto from xiphoid cartilage to umbilicus, eight and a half inches. Two days later, eight pints of fluid were drawn off by an aspirator, the size of the lower part of the abdomen being thus reduced. On December 12th, the umbilical tumour burst, and, subsequently, the size of the upper part of the abdomen diminished somewhat after the escape of a quantity of serous fluid. The hernia became semi-solid, and irreducible, the pain in the epigastrium lessened, and the appetite returned. In operating on the 17th, the peritoneum was found much thickened, and the tumour was universally adherent to it. The ovarian tumour consisted of a multilocular cyst, each loculus filled with gelatinous material similar to that which had escaped through the umbilical opening. The disease was a good example of the alveolar or colloid cancer of Cruveilhier. Dr. R. J. Harvey had carefully examined the structure, and reported that it presented the histological characters of colloid carcinoma, many of the cells embedded in the stroma apparently undergoing fatty degeneration, and so giving to portions of the mass its whitish look. The patient sank in eighteen hours from the time of operation.

Cerebro-Spinal Arachnitis.—Dr. GRIMSHAW showed the brain and spinal cord of a railway porter, aged 23, who had died of this affection on the previous day, after an illness of six days' duration. On Saturday, December 13th, while walking in the street, the patient was suddenly attacked which green vomiting, followed by faintness and pain in the head and back of the neck. When admitted to Steevens' Hospital, his head was retracted, he had herpetic patches on the left chest and lower jaw, complained much of pain in the back of his neck, and of hiccough. His pupils were now dilated, but finally became contracted. He was delirious, although easily recalled to consciousness. The pulse was not jerking, there was nothing peculiar about the respiration, and the temperature never rose above 103 degs. F. The existence of hyperæsthesia was rather doubtful. A vertical tremulousness of the eyes was noticed. Opisthotonos became very marked, and an attack of convulsions ushered in death. At the necropsy, a number of characteristic small black spots were observed over the back. The spinal cord was softened at its origin and about the lower part of the cervical region; there was also some effusion of lymph within its membranes. The surface of the brain was generally hyperæmic, and localised deposits of yellowish-green lymph were found, especially about the circle of Willis. Most of the cerebral nerves were bathed at their point of origin in this lymph. There was softening of the cerebellum also. The specimen presented most of the pathological appearances observed in the epidemic of 1867.

Enteric Fever; Profuse Intestinal Ulceration with Constipation.—Dr. A. W. FOOT showed the intestines of a young man, aged twenty-three who had died on the twenty-fifth day of enteric fever. During the period which he had been under observation in hospital, there had been marked constipation. After twelve days inaction of the bowels, an enima of turpentine brought away some fæcal matter from the large intestine. The cause of death was hypostatic pneumonia; the lung complication had been serious and striking from the beginning. In the last six feet of the ileum there were forty-seven ulcerations of various sizes, from cup-shaped ulcers of solitary follicles of the size of a hemp-seed, to oval patches an inch and a half in length. There were many small ulcerations in the cæcum. There was neither perforation, hæmorrhage, nor peritonitis. The eruption was confined to three or four rose-coloured spots.

MEDICATED CANDLES.

MESSRS. FIELD and Co. have introduced, for medical purposes, candles medicated with the balsams of which the vapour is most often beneficially inhaled by persons suffering from bronchial irritation and spasmodic asthma. Among these are benzoin, storax, etc. The candles give out while burning aromatic fumes in abundance. Among the various modes of diffusing balsamic vapours in the air inspired by patients with various affections of the breathing, this novel method is one of the most ingenious yet proposed. It is clean, effective, and free from all trouble. It deserves, and no doubt will receive, trial by medical men.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JANUARY 31ST, 1874.

THE GENERAL ELECTION.

THE interests of the medical profession are always largely concerned in a general election. There are many great social questions in which medical men are specially interested: the legislation relating to public health, the administration of the relief to the sick poor, the medical services of the Army and Navy, are all matters which demand the attention of the House of Commons, and which are very often treated with carelessness, and with little anxiety to do justice to the labours and the cares of the profession concerned in the executive duties of these departments.

It must be said that the members of Mr. Gladstone's Cabinet have not dealt with these subjects satisfactorily. Mr. Stansfeld has been a conspicuous failure as a legislator on public health. He had a great opportunity, and he missed it. From carelessness or conceit, from a jealousy of the officers with whom the best information lay, and from neglect to master the leading facts and principles of sanitary legislation already established, he egregiously erred in laying down the lines for legislation; and since then he has shown the worst feeling towards the medical officers of his department. He has created a sanitary chaos, where it was easy to have introduced principles of order; and he has aggravated that offence by subsequent endeavours to thwart his most valuable official counsellors. It is no secret that he wishes to destroy the medical department of his office, in order to remove the standing reproach which it offers to his past and present blunders. It would be in the best interests of sanitary progress that Mr. Stansfeld should be deposed.

Mr. Cardwell has treated the Medical Service of the Army with gross and apparent injustice. When this has been distinctly pointed out to him, he has offered merely illusory redress, and has given no answer whatever to further representations. Any measure of justice for the service can apparently only be wrung by force from this minister.

We cannot say that Mr. Göschen has behaved with liberality to the Medical Service of the Navy.

In all these cases, therefore, it must be admitted that the deposition of the present ministers would apparently be a clear gain to the country.

At a general election, however, there are other questions which press themselves upon men's minds, belonging to the political situation of the country. With these, we do not find ourselves called upon to meddle. The Association has, in a general political sense, no politics; its members have the most various shades of opinion. They will be guided in their votes by many considerations. We shall not pretend to endeavour to influence them, otherwise than by urging that medical men, who are highly influential in elections, will be amply justified in obtaining from their representatives at the hustings pledges to support an improved measure of Public Health; the maintenance of the just position of the Medical Department of the Local Government Board, which has been scandalously misused by Mr. Stansfeld; and redress for the grievances of the Medical Departments of the Army and Navy. We commend these matters especially to the medical constituents of Mr. Gladstone, Mr. Stansfeld, Mr. Cardwell, and Mr. Göschen.

We fear that the number of medical members of Parliament will be diminished. Besides the loss of Mr. Dalrymple, we fear that Sir Dominic Corrigan is not likely to be re-elected for Dublin. Sir Henry Thompson has been invited to stand for the University of London, and offers of support so rapidly poured in, that there is reason to believe that, had not the weight of professional labour prevented him from standing on this occasion, Mr. Lowe's seat would have been in great danger. Dr. Lush, Dr. Brewer, and Mr. Brady, will, we hope, be returned; and Dr. Playfair is so thoroughly acquainted with the subjects of Public Medicine, and so closely identified with medical and scientific interests, that he is a tower of strength; and his presence in the ministry might almost reconcile sanitary and social reformers to its continued existence, were he entrusted with the functions now attributed to Mr. Stansfeld.

THE DISCUSSION ON PYÆMIA.

THE report of the discussion at the Clinical Society on Friday last will naturally be read with much interest, and we would direct the reader's attention to it in conjunction with the lectures from Mr. Erichsen's pen on the subject of "Hospitalism", now appearing in our columns, and of which an enterprising contemporary has done us the honour to secure for itself a mutilated version. One point, and one only, as far as we see, comes out undenied and indubitable from the chaos of conflicting opinions, and it is, luckily, one which is in the highest degree reassuring. It is this: that by attention to the well known rules of hygiene and surgery, an amount of success can be obtained in hospitals in the performance of grave operations, such as amputation, far exceeding that which is shown by the averages. To those of the public who, misled (as we humbly conceive) by the sensational denunciations of our hospitals, for which the eminent authority of Miss Nightingale, Dr. Farr, and Sir J. Simpson can be quoted, have despaired of the successful treatment of grave injuries or diseases among the poor, except after some unexplained and probably impracticable revolution of our whole hospital system, such a conclusion must be most welcome; and it is a fact which is admitted even by Mr. Erichsen, while explaining what he means by "hospitalism". It is true that he says in one passage, that although septic affections are not unknown in private practice, "they are unquestionably infinitely more common in hospital than in private practice". Yet, as he treats this as an "unquestionable" truth, he has naturally made no attempt to prove it; and that it can be no necessary element in hospital practice he admits, for he says that, by the admirable treatment which Mr. Callender has lately adopted, he appears likely to reduce the mortality (due, as he says, only to septic diseases) within the rate alleged to prevail in private practice. Mr. Callender, however, has stated very plainly that his treatment involves no novelty whatever—merely care and attention to the well known rules of surgery. If so, it follows inevitably that, in Mr. Erichsen's opinion, nothing except care is required to bring the rate of hospital mortality down to that of private practice; and this being the case, it is not very easy to see what hospitalism would mean. At the same time, the fact which Mr. Erichsen thinks unquestionable is not merely questioned, but is utterly denied by no less an authority than Sir James Paget, who stated distinctly at the Society that he knew of no proof that the septic diseases (which, following a bad custom, we are in the habit of calling "hospital diseases") really prevail in a greater ratio in hospitals than out of them, nor any proof that private practice is really more successful than hospital practice, if the cases and the patients are similar. And the fact that one surgeon was able to produce twenty-one cases of pyæmia occurring in his own practice, among the best fed, best nourished, and probably best bred families in the kingdom, many of them in the healthiest country mansions, most of them due to the most trivial exciting causes, stands in marked contrast to the random assertions which are so common as to the immunity of private practice from this affection; and yet that experience was at once confirmed by Sir J. Paget's.

The resumed debate will be of still more interest, as the speakers will have had time given them to think over the question in its various bearings. The President's paper treated of pyæmia only; but it was impossible to prevent the discussion from embracing the question of the prevalence of other "hospital", or, as Mr. Erichsen better calls them, "septic", affections in private practice; and equally impossible to resist speculation as to their origin, or the suggestion that a methodical inquiry into this point would be, of all others, the most appropriate employment for a Clinical Society. The most cautious speakers were silent on the theoretical question; but it was evident that the greater number of those who spoke inclined to the opinion that much importance was to be attributed to direct contagion; and one of them very plausibly offered this as a reason (perhaps not the only one) for the greater success of ovariotomy in private practice or in private hospital, compared with public hospitals. It certainly seems likely that a large number of the cases of erysipelas and other septic diseases which break out both in private and in hospitals are excited by the direct inoculation of septic matter, either on the surface of a wound or in some other way. The interesting remarks of Mr. J. Hutchinson showed—if, indeed, it were necessary to show—that this cannot be the only cause. Ewes who die of puerperal pyæmia, shepherds who have pyæmia from an unopened thecal abscess, cannot be poisoned by inoculation of septic matter; nor, indeed, can they be poisoned by foul air, which is another of the usually assigned causes; and it is hard to follow the explanation which refers the event to supposed germs in the atmosphere. The phlebitis theory is here more plausible; but it labours under the difficulty pointed out by Mr. Carter, that wounds of veins used to be the commonest things in the world in the old bleeding days, and were not always made with any scrupulous care for the cleanliness of the lancet; and yet, as far as is known, any consequence of the kind was almost unheard of.

The discussion, as far as it went, was most interesting. It showed, at any rate, how far the strong assertions of Sir J. Simpson and others have been from convincing those best able to form a really impartial judgment on the subject, how little is yet accurately known of the pathology (using that term in its widest sense) of some of the most common affections, and how much reason we still have to say with Milton, "to know that which before us lies in daily life is the prime wisdom." We shall look forward with much interest to the renewal of this discussion.

A NEW BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

We have the pleasure of recording the formation of a new Branch of the Association, which will at the outset be entitled the South Hants Branch. It was formed at a meeting held at Portsmouth on Tuesday evening last. Forty members were enrolled; and Dr. J. Ward Cousins, of Kent Road, Southsea, was appointed Honorary Secretary *ad interim*. Another meeting will be held shortly, to elect office-bearers for the year, and to approve laws. This Branch occupies a part of the country where the want of one has been for some time pointed out to us by many correspondents; and several influential friends of the Association have co-operated on this occasion. Dorsetshire and South Wiltshire might be with great advantage included in the new organisation; and we venture to suggest that the Branch should be entitled the South Hants, Dorset, and South Wiltshire Branch, and that measures should be at once taken to canvass and organise these districts.

The sad news of the death of Dr. Livingstone from dysentery seems to be confirmed beyond a doubt.

Dr. Max Schultze, Professor of Anatomy in the University of Bonn, has died suddenly from heart-disease.

The New York Laryngological Society has elected Dr. Morell Mackenzie as one of its honorary members.

At a meeting held at Grantham on January 12th, the preliminary steps were taken for founding a hospital there. A large amount of subscriptions were announced.

We learn, from the Registrar-General's report, that a young man, aged 16, died in St. Thomas's Hospital, on the 17th instant, while under the influence of chloroform.

It is officially announced that His Royal Highness the Duke of Edinburgh has been pleased to make the following appointment in his household: Dr. Wilson Fox to be physician in ordinary to their Royal Highnesses the Duke and Duchess of Edinburgh.

Dr. Lyttelton Winslow is a candidate for the Lectureship on Insanity at Guy's Hospital—a post for which he is certainly highly qualified by training and special study. His recent compendious and complete *Manual of Lunacy* shows him to possess the power of clear and accurate exposition. Dr. Lyttelton Winslow is a son of Dr. Forbes Winslow.

The Emperor of Austria has conferred the golden cross of merit on Herr Eggerth, a surgeon practising in the little town of Ebenfurth, in Austria. The decoration was publicly conferred on him on the 14th instant, on the occasion of his completing the fiftieth year of his practice, in the presence of the municipal council of the place, the members of the profession in the neighbourhood, and many of the inhabitants. The proceedings terminated with a banquet, given by Baron von Moser, the bürgermeister.

HUNTERIAN SOCIETY.

The general meeting for the election of officers, and other purposes, will be held at the London Institution, Finsbury Circus, on Thursday, February 12th, at seven o'clock. The annual oration will be delivered at eight o'clock, by John Couper, Esq., F.R.C.S. The dinner will take place at the Albion Tavern on Friday, February 20th, at 8 P.M., Thomas Bryant, Esq., F.R.C.S., in the Chair.

EXTIRPATION OF THE LARYNX WITH THE EPIGLOTTIS.

On the last day of the year lately ended, Professor Billroth performed the operation of removing the larynx and epiglottis—a proceeding which had never before been attempted in the human subject, though Czerny had shown, in 1870, by careful experiments, that it was anatomically and physiologically practicable. The patient was a strong man about 40 years of age, the subject of cancerous growths in the larynx, which had repeatedly, after putting him in danger of death from suffocation, been removed by Dr. Störk with the aid of the laryngoscope. In the beginning of November, the new growths extended so far into the interior of the larynx, that their removal from above was no longer possible. As, however, a part of the right vocal cord was present, Drs. Störk and Billroth hoped to preserve this, however imperfect; they therefore opened the larynx from the front, and, after removing the growths, applied solution of perchloride of iron to the inner surface. The result of this operation, which was well borne by the patient, appeared at first to be very promising; but in the middle of December new growths were detected by the laryngoscope, and at the end of the month symptoms of asphyxia appeared. On December 30, Dr. Billroth and Dr. Störk decided that the whole larynx was so full of malignant growths, that it would be useless to repeat the operation of dividing it and clearing them out; and there was no longer a possibility of preserving any part of the vocal cord. Extirpation of the part would produce no additional physiological defect, and might lead to a radical cure, if the disease were confined to the part and had not reached the glands. Professor Billroth therefore removed the entire larynx. The patient bore the operation very well; he breathed freely through the trachea, in which a tube was inserted; the fever was slight and of short duration; and on the 9th instant the wound was healing favourably. On the 24th, the man was reported to be able to eat and drink, and to sit up for several hours daily.

VACCINATION IN THE METROPOLIS.

REPORTS are being made by the vaccination officers to the various guardian boards that there are a very considerable number of persons endeavouring to evade the law in the non-vaccination of their children. At the weekly meeting of the Islington board, that body unanimously passed a resolution sanctioning the immediate prosecution of several parents, for non-compliance, by their vaccination-officer.

THE STATUS OF DISEASE.

DURING the week ending last Saturday, 5,562 births and 2,526 deaths were registered in London and twenty other large cities and towns of the United Kingdom. The natural increase of population was 3,036. The mortality from all causes in these towns was at the rate of twenty-four deaths annually to every 1,000 persons living. In the metropolis, 2,358 births, and 1,492 deaths were registered, the former having been 141 above, and the latter 322 below, the average. The 1,492 deaths included four from small-pox, seventy-four from measles, twenty-two from scarlet fever, two from diphtheria, fifty from whooping-cough, twenty from different forms of fever, and fourteen from diarrhœa; thus to the seven principal diseases of the zymotic class 186 deaths were referred, against 244, 212, and 190 in the three preceding weeks. The deaths referred to diseases of the respiratory organs and phthisis, which in the five preceding weeks had steadily decreased from 1,112 to 554, further declined to 514 last week, and were 137 below the corrected average weekly number; 239 resulted from bronchitis, 139 from phthisis, and eighty-one from pneumonia.

DR. E. SYMES THOMPSON.

WE publish in another column a communication from Dr. E. Symes Thompson, referring to the painful occurrence with which his name was publicly connected during the week. It will be seen that Dr. Thompson forwards a copy of the letter of explanation which he addressed to the Council of the Royal Medical and Chirurgical Society, of which society he is at this moment one of the honorary secretaries. The President of the Society, at the meeting on Tuesday evening, read out the resolution just passed by the Council, expressing their unanimous confidence in the uprightness of Dr. Thompson's intentions. And this verdict, coming from a scrupulous and responsible body, will be received, we feel assured, with general satisfaction; for Dr. Symes Thompson has long held a high place in the personal esteem of his fellows in the profession, and has enjoyed their unquestioned confidence in his probity.

THE LATE DR. J. J. PHILLIPS.

ON Tuesday evening last, the corpse of this physician was removed, by the London and North-Western Railway, to Wales, for burial at his birthplace, Towyn. The hearse and mourning coaches were received at the Euston Square Station by a large number of personal friends, colleagues, and members of the medical societies with which he had been, or was at the time of death, associated, together with very many students of Guy's Hospital. A portion of the station was railed off by a wall of black cloth, and a touching address was delivered beside the coffin by the Rev. T. Braden, of the Weigh House Chapel. A short selection of passages from Scripture was read, and the service was concluded by prayer. Amongst those present, we noticed the Treasurer of Guy's Hospital, Sir William Gull, Drs. Oldham, Habershon, Braxton Hicks, Moxon, Fagge, Pye-Smith, Daldy, Aveling, G. Eastes, Playfair, Fotherby, Squarey, Wiltshire, and Messrs. Thomas Smith, Scott, Davies-Colley, Moon, Evershed, etc. Three months previously, Dr. Phillips had stood by the coffin of his colleague, Dr. Murray, at the same station.

LIVERPOOL MEDICAL INSTITUTION.

AT the annual meeting of the members of the Medical Institution, on January 13th, the following office-bearers and council were elected. *President:* W. McCheane, Esq. *Vice-Presidents:* T. Shadford Walker, Esq.; A. Davidson, M.D. *Treasurer:* M. G. B. Oxley, L.K.Q.C.P. *Secretaries:* C. E. Lyster, M.D.; T. R. Glynn, M.B. *Librarian:* William Carter, M.D. *Members of Council:* C. Puzey, Esq.; R. Caton, M.D.; J. Newton, Esq.; Rushton Parker, Esq.; Edgar A. Browne, Esq. *Microscopical Committee:* P. M. Braidwood, M.D.; T. R. Glynn, M.B.; J. Newton, Esq.; William Carter, M.D.; D. J. Hamilton, Esq.; Rushton Parker, Esq.; R. Caton, M.D.; A. Davidson, M.D.

INFANT LIFE PROTECTION SOCIETY.

A MEETING of this Society was held last week. Amongst those present were—Mr. Charley, M.P., Mr. Ernest Hart, Mr. W. T. Manning, the Rev. Richard Wood, and the Rev. Oscar Thorpe and Mr. J. B. Curgenven, Honorary Secretaries. It was resolved that the "Bill to amend the law relating to offences against the person" should be introduced early in the session. It was also resolved to re-introduce the "Infanticide Law Amendment Bill." This Bill passed the second reading last year without opposition, but could not be carried further for want of time. It provides that it shall be sufficient to prove that the life of any infant has been destroyed by its mother either *during* or after birth to constitute the crime of infanticide, and that the punishment for such crime shall be by penal servitude. By the existing law, it is necessary to prove that the child was *wholly* born, before being killed, to ensure conviction. This, in a majority of cases, has been impossible, and the guilty have been acquitted, although, as in a case that occurred not long since, the child's throat was cut from ear to ear. From information the Society had obtained, it was stated that, although not many nurses had been registered under the Infant Life Protection Act, the existence of the Act had had a very salutary effect in breaking up all the known baby-farms. One baby-farmer thought she would protect herself by being registered; but, after inquests held on two infants that died in her house, her license was withdrawn and her establishment broken up. The evils connected with baby-farming could not be wholly checked until the Act be extended to all those who receive but one infant to nurse at a time, and until a system of inspection be established.

MEDICAL AND OTHER RELIEF.

THIS is the title of a sermon recently published by the Rev. Llewelyn Davies. Assuredly the subject cannot be considered out of place in the pulpit; for those who are best acquainted with institutions for dispensing medical and other relief, know well how much need there is that Christian charity should be guided by wisdom and discrimination. Mr. Llewelyn Davies has evidently paid much attention to these subjects, and hs remarks are very sagacious. He sees the evils of the present system of medical relief; some of which he points out in the following paragraph.

"The immediate managers of a charity are strongly impelled by the desire to obtain as much money as they can for the work in which they are interested; and of the salaried officials, in particular, this becomes the professional duty. A familiar acquaintance with our public charities considerably impairs, I am bound to say, the reverence with which it is natural to regard them. It is never safe, for example, to judge from appeals whether money is really wanted for any particular work or not. To the official mind of charities, it seems always right to ask for money; if it be not wanted for use, it can be invested. And the raising of money for charities has become an art. To this art belongs that most objectionable system of voting, which has been recently the subject of discussion, and the only real defence of which is that it increases the number of subscribers. Then in many cases an unreasonable percentage has been expended in the raising of funds—managers and secretaries naturally thinking that it is better to raise money expensively than not to get it at all. It is always possible, too, that an undue proportion of the funds may be spent upon administration. And it is a further question—the most important of all—whether the help given is given to those for whom it is really intended, or goes to those it would be better on the whole not to have it."

We share with the writer in the hope that the Committee of the Hospital Sunday Fund may be able to look at the working of charities with a single eye to the public interest; and, that being armed with a discretion in the distribution of the Fund, it may exercise great influence upon the action of the medical charities, both by the expression of its judgment, and by the giving or withholding of contributions according to the real value of different institutions. It has already in some measure done so, by pronouncing strongly against dispensaries as compared to hospitals, and asserting that out-door medical treatment ought not to be provided gratuitously for the working-classes in general, but that they ought to be encouraged to provide for themselves. Mr. Llewelyn Davies is also much in favour of helping the poor to help themselves by means of provident institutions. Thus he says:

"The general need of the working classes—in this I agree with the Committee—ought to be met by the establishment of *Provident* Dispensaries. That it can be, is shown by the existence and success of such dispensaries. By the ordinary method of *insurance*, that is, by weekly payments kept up regularly in health as well as in sickness, working people can provide medical treatment for themselves and their families when they need it, without any overwhelming pressure on their means of subsistence. And it is much better for themselves that they should do so, than that they should beg for letters from subscribers at the cost of much time, with the risk of delay and of failure, with the humiliation of having to go from door to door, and with the danger of this being a first step in the baneful practice of mendicancy. A time of rising wages and increasing independence is one especially suitable for the promotion of this provident system. I hold these convictions so strongly that I have never been easy, as many of you know, in acquiescing in the absence of a Provident Dispensary in our own quarter."

The writer's remarks on the necessity of educating popular opinion on the subject of charities, and on the great danger of pauperising the industrial classes, are also well worthy of attention.

DEATHS FROM CHLOROFORM.

DR. J. MURRAY GIBBES, of Napier, New Zealand, writes to us:—I am sorry to have to add to the already long list of deaths from chloroform, two which have taken place in this colony during the last month. One occurred in the Provincial Hospital of this province in a man suffering from epithelial cancer of the lip; and the second in the Dunedin Hospital, during an operation for removal of cancer of the breast.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

THE following circular has been issued by the medical officers of this hospital.

"The General Committee of this hospital have, in a very liberal manner, placed certain funds at the disposal of the medical staff, for the purpose of collecting works on ophthalmology and allied subjects, and for the establishment of a museum. It is thought that this work might be most advantageously aided by individual professional influence and effort, and the library and museum thus founded might be rendered thoroughly representative of this special branch of our profession. It is by no means intended that the use of these collections shall be limited to the medical staff, but that members of our profession generally, and duly registered students of the hospital, shall have access to them, subject to certain rules. The medical staff would, therefore, appeal to your kindness to assist them in this work, and would feel especially grateful for any copies of works on diseases of the eye, or on optics, or general medicine and surgery bearing upon ophthalmology; or for drawings, models, or specimens of the eye in health or disease, the presentation of which would be duly acknowledged. We sincerely trust that this object may commend itself to your consideration. We are, dear sir, yours truly: R. Middlemore, Edwin Chesshire, James Vose Solomon, Arthur Bracey, D. C. Lloyd Owen."

Such a library and museum would no doubt be very useful and desirable. To justify this appeal, it will of course be placed under the most liberal regulations, and should be open to all registered practitioners and registered students of medicine.

GERMAN ORDERS.

ON the 18th instant, His Majesty the Emperor of Germany conferred orders on a number of members of the medical profession. Among them were the following: Order of the Red Eagle, second class—Professors Bardeleben and Du Bois-Reymond; Order of the Red Eagle, third class—Professors Schultze and Veit of Bonn, and Professor Virchow of Berlin. Among the recipients of the Royal Order of the Crown of the fourth class was Dr. Wittelshöfer of Vienna, the editor of the *Wiener Medizinische Wochenschrift*.

HOSPITAL OUT-PATIENT REFORM ASSOCIATION.

THE first annual meeting of the above Association will be held in the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Tuesday, February 3rd, at 8 P.M. The Report of the Committee for the past year will be presented; and a resolution will be moved with reference to Dr. Chapman's dismissal from the Metropolitan Free Hospital. The chair will be taken by the President of the Association, Dr. Alfred Meadows. The attendance of all who take an interest in the subject is requested.

THE WORCESTER DISPENSARY.

WE are glad to observe that the Committee of the "Worcester Dispensary and Provident Medical Institution" have determined to increase the acting staff by the election of three additional medical officers, with a view to carry out the resolution passed at the recent general meeting of governors. In this way, one of the difficulties to which we alluded last week has been met, and that in the most satisfactory manner. We trust now that all will go well with this attempt to combine a provident and a charitable dispensary. It will certainly need the services of an efficient staff, zealous on behalf of the provident principle; for the union of the two has elsewhere been found one of the most fruitful sources of failure. We should have been glad if the dispensary had been placed altogether on the provident footing, as was done a year ago at Gloucester. But meanwhile this is a step in the right direction; and we cannot but hope that, with such a population as that of Worcester, a further development of the provident system will ere long be called for, as being that which is best suited to the wants and wages of the artisan class.

OPIUM IN CHINA.

THE production of opium in China, it appears, is greatly increasing. The cultivation of the poppy is exceedingly profitable, much more so than the yield of wheat, etc., and consequently it is easy to understand why the growth of the poppy is so popular, and tends to increase with such rapidity. Occasionally it may be noted that the Chinese Government makes a slight effort to stop this cultivation, and issues edicts prohibiting it; but such, in very rare cases, are carried out, or even attempted to be carried out. The officials do not appear to be too stringent in the administration of their legal code, and regard the cultivation of the poppy with no small degree of favour, inasmuch as it contributes very usefully to both the national and individual exchequer, some ill-natured persons asserting that the individual exchequer is not a little benefited. We trust, however, that Chinese officialism is not to be tempted in such a manner even by opium. Another significant fact connected with Chinese opium is, that the native product is rapidly increasing in popularity and is consumed much more largely than formerly, which must tend to increased production. Hitherto Indian opium, as our readers will be aware, was extensively imported into China, but of late years this importation has rather decreased than augmented, and it is said that the native drug is driving the Indian out of the field altogether. It may, indeed, be readily imagined that the increase in the cultivation of the poppy in China, together with the increasing taste of the natives for the article of their own production, could not fail to have a most serious effect upon the consumption of the Indian opium; and the fact is important that, while the imports of opium from India have, during recent years, remained quite stationary, the production of the native drug during the same period has more than quadrupled. With regard to the quality of the opium produced in China, the statement may be truthfully made that it has not improved; but, on the other hand, this advantage is claimed for the Chinese drug—the habit of smoking it may be thrown off comparatively easily, and that its use is much less injurious than that of the foreign article. The consequences of this increased popularity of the native opium may readily be conceived. That there will be a gradual falling off in the demand for the foreign drug may be looked forward to with certainty, and the extinction of the trade in Indian opium is even anticipated. Indeed, if the statistics representing this importation into China during recent years be carefully examined, it may be seen that there is evidence of a gradual, if at present slight, diminution, and that, in all probability, the trade in Indian opium, so far as China is concerned, has, to all appearances, seen its best days. Whether the increase in the cultivation of the poppy in China is likely to prove of ultimate benefit to the Chinese, is a matter with regard to which it is idle to speculate; the most important fact to be noted at present being, that it is exceedingly profitable—more profitable than anything else, and that consequently there is a very vigorous determination to actively prosecute the industry, notwithstanding the feebly-promulgated edicts of the Imperial Government. These edicts, in fact, seeking to prohibit the cultivation of the poppy, appear to be altogether ignored, and have no legal force. It may, however, be mentioned, that opium-smoking is not allowed amongst certain classes. Thus, visitors are generally much struck with the fine appearance of the soldiers at Tientsin, and the heartiness with which they work; the reason being ascribed to the fact that opium-smoking is not allowed in the camp, and that the men are strictly watched. The punishment for breaking the rules is slitting or excision of the upper lip for the first offence, and decapitation for the second; and thus we find the anomaly that in one part of the empire the magistracy derive a large income from permitting a practice which, in another part, is punished by the severest of all penalties, viz., death.

IRELAND.

THE LICENSE IN MIDWIFERY OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE College have decided not to alter their opinion with regard to the conferring of this qualification on women, and a committee has, we understand, been appointed to report upon the necessary curriculum and examinations for the license. The *Obstetrical Journal of Great Britain and Ireland* has the following remarks on this subject.

"In the time of William and Mary (1692), a charter was granted to the King and Queen's College of Physicians in Ireland, giving it power to examine and license midwives, and to punish those not licensed. Clause XXX runs thus: 'And whereas we have been informed that there are great abuses frequently committed by unskilful midwives practising, who do not understand their duty or office, to the great prejudice and destruction of many of our good subjects, therefore our further will and pleasure is, and we do hereby give and grant unto the President and Fellows of the King and Queen's College of Physicans aforesaid, full power and authority to examine all midwives, and to license and allow such as they shall find skilful and fit to exercise that profession, and to hinder all such as they shall find unskilful for practising; and also to punish all such as shall practise without their license in such manner as they can, or may punish any person or persons for prescribing (*sic*) or administering any noisome, unwholesome, or unfit medicine or physic, or any other person or persons whom we intend they should have power, by these presents to examine and punish.'

"There can be little doubt that the power thus granted to the College, was for the purpose of licensing women only, yet, strange to say, it has only conferred diplomas on two female practitioners of midwifery, the first being to Mistress Cormack, in 1696-7, and the second in 1731. In the case of the former of these midwives, a resolution was passed ordering her diploma not to have the College seal attached to it, but the private seal of the President. On the strength of the clause above quoted, the College now grants licenses in midwifery and the diseases of women and children to men, the original purport of it having been lost sight of for more than a hundred years. At length an aspiring midwife has, however, again drawn the attention of the College to the right which it possesses, and has applied for information as to whether she can obtain from it a registerable qualification in midwifery. To this application the College has replied, that it formerly granted, and would be prepared again to grant, a qualification in midwifery to women, but could not say whether such qualification could be registered. This reply having been framed and passed at an ordinary meeting of the College, without any previous notice, was not a legal resolution.

"The subject therefore was again brought before the fellows on January 19th, when a general feeling in favour of granting women midwifery licenses was expressed, and a resolution was passed 'that a committee be appointed to report to the College on the qualifications and examination to be adopted in the case of candidate midwives, and the form of the diploma to be conferred on them.' It was also considered expedient to suspend the granting of qualifications to midwives for the present, and to postpone the question as to whether such licenses should be registerable. It would be difficult to exaggerate the importance of these proceedings. Our Irish brethren have boldly undertaken the solution of what we confess to be a most difficult problem. They will have to define what they mean by a midwife, to erect the legitimate boundaries of her practice, and determine what shall be her professional status. All these thoughts are now occupying the minds of many medical men, and the decision of the College will be most anxiously waited for, and will be a most responsible act. The question of registering the license they propose to grant women will be the most difficult one to deal with, but competent legal opinion will doubtless be taken upon this matter. It will be remembered that the executive committee of the General Medical Council objected to register the Irish licenses in midwifery, on account of all mention of them having, by some technical omission, been left out of the schedule. This plea, however, was not held sufficient, and the names were restored to the register. Before granting a midwifery license to women, a most complete understanding on this point must be arrived at; for, should it be found that midwives possessing the license of the Dublin College of Physicians will, in virtue of it, have a right to be placed on the Medical Register, it will too late be discovered that an inferior class of legally qualified practitioners has been created, who, by Section XXXI of the Medical Act, will, although possessing only a midwifery diploma, be entitled to practise 'Medicine or Surgery, or Medicine and Surgery.' It is certainly most desirable that midwives should be examined and licensed, but in raising the professional position of these women, we must be careful not to degrade and dishonour the present hardly earned scientific status of the medical profession."

SUDDEN DEATH IN THE STREET; FATTY HEART. DID VIOLENCE CAUSE DEATH?

A GENTLEMAN well known to the legal profession in Dublin, was found the other night (at two A.M.) in a dying state, in Rutland Square, in that city. It seems from the evidence given at the inquest, that it was pretty well known before his death that he suffered from fatty disease of the heart. When found, his watch was missing, having evidently been violently removed. The verdict of the coroner's jury was "that the cause of his death was fatty disease of the heart." The question naturally suggests itself, was there an attempt to rob the gentleman during life, and might not death have been caused by the excitement and shaking consequent on an attempt to rob him of his watch? May not the gentleman have been shaken to death? This is quite possible and should have been carefully looked into; but, from the Dublin papers, it seems to be satisfactorily disposed of, by the statement that there was no marks of violence. We may add that, instead of being taken to a police station, as drunk and incapable, the policeman on duty took the unfortunate gentleman to the Jervis Street Hospital, but he was dead before his arrival at the hospital.

THE ASHANTEE EXPEDITION.

[FROM OUR OWN CORRESPONDENT.]

Gold Coast, January 1st, 1874.

SINCE my last letter, the harbour has been gradually filling with steamers of all shapes and sizes. The *Amethyst* has returned from Ascension, bringing a number of very fine turtles—a treat, and agreeable change of diet. The *Himalaya*, *Dalmatian*, and *Tamar*, had been directed to rendezvous some two hundred miles south-west of Cape Coast Castle. A most interesting meeting is stated to have taken place on Christmas-day, when the 23rd, 2nd Battalion Rifle Brigade, and 42nd met in mid-ocean. During the cruise, the men of the various regiments were exercised in running drill, and in the adjustment of their field-kits and *tentes d'abri*, the latter being adapted for the reception of three men recumbent. These shelter-tents are only intended for use after the troops have crossed the Prah.

During the voyage out and back a few mild cases of erysipelas appeared on board the *Dalmatian*, and two cases of sunstroke or apoplexy occurred among the men of the 23rd, probably from exposure. In the passage across from the West Indies, the 1st West Indian Regiment lost two of its number. Surgeon-Major Jackson, Surgeon Bennett, and Lieutenant Jones returned in the *Simoom* after a two months' cruise, during which Captain Charteris, son of Lord Elcho, unhappily succumbed to the sequelæ of fever contracted on the Coast. He appeared to have died from collapse, the pulse and temperature having nearly fallen to its normal standard, all efforts at restoration proving unavailing. Some non-commissioned officers of the Royal Marines also died on the passage. The *Simoom* afterwards touched at St. Helena. This vessel, previously to her departure, had been becoming rather unhealthy; some cases of fever have arisen on board, a not uncommon thing when vessels lie for any length of time off the Coast, although anchored more than a mile to windward. She proceeds shortly to St. Vincent.

There are at present fifteen steamers in harbour, giving to the roadstead quite a gay appearance. We are having strong sea-breezes from the west and south-west, alternating now and then with rather oppressive mornings; and the haze and coldness of the water are already indicating the approach of the Harmattan or dry easterly or north-east wind, coming from the far distant desert. During its prevalence, the early mornings are exceedingly cold—so much so as to cause quite a sensation of chill, scarcely to be believed; and occasionally the water is so cold, owing to the excessive amount of evaporation, that bathing becomes quite an effort. The officers who have landed from the *Simoon* and other steamers appear to have benefited much by their trips; the pure air, regular living, and improved diet, doing away with the ill effects of the opposite conditions existing on shore. Fresh English meat and vegetables are the best restoratives, and are found by experience to be so in Africa, when the constitution has been undermined by the subtle poison. Those who have served in Africa can, at all events, speak to the presence of malaria, which warmth, the antithesis to cold, will not dispel.

It was intended to dress the men of the West India regiments in the grey serge suits; but, for some reason, the clothing sent out from Pimlico has not been issued. This admirable suit has been manufactured for the very moderate sum of 25s. 6d. The grey helmet looks exceedingly well, and would be an admirable substitute for that most absurd head-dress, the shako, looking far more manly and effective, quite irrespectively of its advantages as a protection to the head. Probably in time this will be discovered. The light blue veil is issued with the helmet, and, when folded round, sets it off very much. This last addition is intended as a protection against glare, dust, and mosquitoes; the latter, unfortunately, are but too numerous.

The *Dromedary* arrived on the 30th ultimo with the much desired stores from England. She will be employed as a convalescent steamer and tender to the *Victor Emmanuel* hospital ship. It may be expected that these vessels will soon have to be called into requisition, as already the troops have commenced their march to the Prah; the commodore with the Naval Brigade having landed and marched on the 27th. Sir Garnet Wolseley and the head-quarter staff left at the same moment, mounted upon mules recently brought from Teneriffe. As it is, a large number of sick and convalescents from the 2nd West India Regiment have come down from the front, mostly men who have suffered from fever and diarrhœa. These are at presented located at Connor's Hill, pending their removal to Sierra Leone. The regiment has had very hard and difficult duty to perform during the past three months, frequently returning to their camps wet, tired, and foot-sore, and consequently have been knocked up in some numbers as a consequence. The change to a more regular mode of life has had already a visible effect, especially in those cases of diarrhœa very often increased or brought on by the foregoing conditions.

The troops marching for the front will start from their halting-places punctually at 5 o'clock A.M., and are to receive before starting a ration of cocoa and a biscuit; the men of the West India regiment receiving rations on the native scale, which is not illiberal, and more suited to the native soldier, who usually prefers the produce of the country to the regulation ration.

The manœuvring army will be of the following proportions as nearly as possible:—

Staff and Departments	60
Three Battalions English Troops	2,040
Naval Brigade	265
Royal Artillery	35
Royal Engineers	50
Rait's Houssa Artillery	59
2nd West India Regiment	214
1st Reserve S.H.H.	7
Russell's and Wood's Regiments	824
Total...	3,554

Of this number, 2504 will be on the European scale of rations, 1,050 on the native scale; included in the latter category are 200 of the 2nd West India Regiment, 50 of Rait's Artillery, and 800 of Wood's and Russell's regiments, nondescript corps of Houssas, Kossos, Sierra Leone men, natives from the Bonny, etc.

The European scale of rations consists of $1\frac{1}{2}$ lb. of bread, or an equivalent in biscuit or flour; $1\frac{1}{2}$ lb. of fresh, or 1 lb. preserved, meat; 2 oz. of rice or peas, or 4 oz. of preserved potatoes or vegetables, $\frac{3}{4}$ oz. of tea, and 3 oz. of sugar, with a due proportion of pepper and salt. The ration for native levies consists of 1 lb. of salt meat, with $1\frac{1}{4}$ lb. of rice, or 1 lb. of biscuit, $\frac{3}{4}$ lb. of preserved beef, when pork is not issued; this last substance being never given to Houssas or Mahomedans. These field-rations are very liberal ones; it will be of some scientific interest to see how far they prove suitable to an army fighting under such peculiar circumstances as those of the present case. Of one thing it is certain, there can be no substitute for fresh beef and mutton; preserved meats pall on the appetite, and salt pork and beef in a hot country, and one so malarial as West Africa, are excessively apt to set up bowel-complaints of a most formidable character. Out here, this has been proved only too often by a sad and bitter experience. During the last war in Africa, it added largely to the mortality, especially from dysenteric affections. In consequence of this, the sanitary officer has recommended that these substances should be issued to the troops on the march as sparingly as possible.

We have had to regret another death from the effects of climate among the officers of the expeditionary force. Lieutenant Townshend, 46th Regiment, succumbed on board the *Tamar*, on the 29th ultimo, from dysentery and debility. He had gone out for a cruise a few days before. The disease was contracted in the bush. It is a curious coincidence that Captain Hopkins, promoted into the same regiment during the earlier period of the war, also died from a similar affection while on passage home to England in August last.

The following are the chief points inculcated upon the troops in Sir Garnet Wolseley's recent military memorandum upon the conducting of the operations against the enemy beyond the Prah, at least those bearing upon the health of the men. Alluded to in a recent letter, they are now given more in detail.

Officers must see that tea or chocolate, with a little biscuit, is provided for their men every morning before marching; and quinine will be given by the medical officers.

When marching late in the morning, commanding officers may allow the patrol jackets to be taken off and carried by the men. Immediately that the march is over and long halts take place, these jackets are to be at once put on.

Never allow the body to suffer from a chill.

Never expose the head uncovered to the sun.

When camping out at night endeavour to construct a sleeping place raised from the ground.

If any irregularity of the bowels be experienced, go at once to a medical officer.

Never drink water until you have filtered it.

Much surprise has been expressed out here by those who were present at the attack on the camp at Dunquah, at the version given of the death of poor Wilmot of the Artillery, and the undue prominence of a gallant colonel's name in this particular affair. It was Dr. Gore and four men of the 2nd West India Regiment who picked up the body of this promising young officer when he fell (like a British soldier, with his feet to the foe), and carried it to the rear under a heavy cross-fire, where it was handed over to Assistant-Commissary Lundy of the Control Department. Lieutenant Jones's name, and that of Sergeant Fairclout, who is said to have shot his assailant, do not appear at all in the account given in the newspapers. To the uninitiated in bushwarfare, the difficulty of getting the wounded to the rear can scarcely be appreciated. Carrying men along a narrow path, crowded for perhaps a mile or more with combatants whose rifles point in all directions, is anything but easy to those concerned. The natives, as a rule, carry their wounded comrades upon the back, one or more friends supporting the disabled warrior at each side. It is wonderful how quickly they get to the rear on this as on other occasions; this turn for retrograde movements is a most remarkable feature of the Fantee character.

Yellow fever has been very prevalent of late in the Bight to leeward. The last was the third of the steamers for England flying the yellow flag at the fore on arrival. Fortunately, hitherto the Gold Coast has been almost exempt from the ravages of this dread disease, and it is to be hoped it will continue so. Very probably the difficulty of communicating with the shore has something to do with this exemption from this worst form of paladal poisoning. Dr. Home, the principal medical officer, leaves shortly invalided to England. His successor will be Surgeon-Major Woodbine, senior medical officer.

THE WEBB FUND.

THE following is a list of the actual amounts received by Mr. Augustus Churchill, as Treasurer to the "Webb Fund", to January 28th. They are enumerated in the order in which they have been received.

	£	s.	d.
Mr. Churchill	10	10	0
Sir Wm. Jenner, Bart.	20	0	0
Sir James Paget, Bart.	10	10	0
D. D., per Sir J. Paget.	10	10	0
Mr. J. Warwick	5	0	0
Dr. J. W. Ogle	5	5	0
A Friend	1	1	0
Dr. Leared	3	3	0
Dr. Burrows	10	10	0
Mr. H. Morley	1	1	0
Dr. Stocker	20	0	0
Messrs. Pardon and Son	5	5	0
Dr. Symes Thompson	2	2	0
Mr. H. Gore	5	0	0
Mr. T. M. Stone	2	2	0
Mr. J. T. Clover	10	10	0
Mr. E. Saunders	5	5	0
Dr. Hughlings Jackson.	5	5	0
Mr. Collisson	1	1	0
Sir Henry Thompson	20	0	0
Dr. Martyn	10	10	0
Dr. Wilks	1	1	0
Mr. R. Baker	2	2	0
Dr. Fayrer	5	5	0
Dr. Bissett Hawkins	10	10	0
T. E. W.	21	0	0
F. E. W.	21	0	0
Mr. H. S. Hughes	1	1	0
Mr. W. S. Roots	2	0	0
Dr. Habershon	5	5	0
Dr. R. P. Cotton	2	2	0
Mr. T. Stokes	1	1	0
Mr. Pye Chavasse	2	2	0
Editor of *Edinburgh Medical Journal*	2	2	0
Mr. T. B. Curling	5	5	0
Dr. C. J. B. Williams.	20	0	0
Dr. Edis	1	1	0
Mr. E. Bradford	5	5	0
Mr. T. Underwood	10	10	0
Mr. H. W. Statham	5	5	0
Sir, Thos. Watson, Bart.	10	10	0
Mr. R. King Peirce	2	2	0
Dr. Julius Pollock	3	3	0
Dr. Oliver	1	1	0
Dr. Elam	10	10	0
Sir Curtis Lampson, Bt.	25	0	0
Mr. G. C. Lampson	10	0	0
Mr. Henry Lampson	20	0	0
Mr. J. Lindsay Bennet.	10	10	0
Messrs. Barnett, Hoare, and Co.	10	10	0
Mr. W. T. Rigg	5	5	0
Mr. E. Goad	5	5	0
Mr. J. Joseph	5	5	0
Baron Stern	3	3	0
Mr. J. W. Ford	2	2	0
Dr. Hall	1	1	0
Mr. C. Groucock	1	1	0
Messrs. Pastry & Pasteur	5	0	0
Mr. J. H. Willock	1	1	0
Dr. Moxon	10	10	0
Dr. Parkes	5	0	0
Mr. J. Chatto	2	2	0
Dr. P. Frank	5	5	0
Dr. G. Harley	3	3	0
Mr. Kiallmark	1	1	0
Mr. W. Pretty	1	1	0
Mr. H. P. Robarts	10	10	0
Dr. Dow	1	1	0
Mr. John Cross	10	10	0
Mr. John Simon	5	0	0
Dr. T. P. Peacock	10	0	0
Mr. Thomas Smith	5	5	0
Mr. Morrant Baker	2	2	0
Mr. H. S. Giffard, Q.C.	5	5	0
Mr. C. O. Humphreys.	5	5	0
Mr. Daniel Morgan	1	1	0
Dr. Marcet	3	3	0
Dr. Buzzard	2	2	0
Dr. J. W. Moore	0	10	6
Mr. Allingham	3	3	0
Dr. Clapton	3	3	0
Professor Laycock	2	2	0
Editor of *Student's Jour.*	1	1	0
Proprietors of the *Medical Times and Gazette*.	50	0	0
Mr. Toulmin	3	3	0
Mr. Le Gros Clark	3	3	0
Mrs Druitt (sen.)	3	3	0
Miss Druitt	2	2	0
Dr. Gavin Milroy	2	0	0
Mrs. Price	2	2	0
Dr. David S. Price	3	3	0
C. T., 69	3	3	0
Dr. W. H. Day	2	2	0
Messrs. Worthington & Sons	5	0	0
Mr. William Adams	5	5	0
Dr. Coates	5	5	0
Mr. P. Hambro	10	10	0
Mr. Charles Bowman	10	0	0
Mr. William Bowman.	2	0	0
Mr. T. Craddock Watson	1	0	0
Miss Watson	1	0	0
Mr. W. S. Watson	2	2	0
Dr. Cholmeley	20	0	0
Dr. Maurice Davis	3	3	0
Mr. T. Carr Jackson	5	5	0
Sir W. Baynes, Bart.	2	0	0
G. B.	1	1	0
Mr. Robert Loder	5	0	0
Mr. E. L. Cox	5	0	0
Mr. Richard Twining	5	5	0
Mr. S. H. Twining	5	5	0
C. H.	1	9	0
J. C.	0	10	0
Mr. W. W. Richardson	2	0	0
Mr. F. Banbury	5	5	0
Messrs. Sanderson and Co.	5	5	0
Messrs. B. F. Babcock and Co.	5	0	0
Mr. J. R. Reeves	5	5	0
Messrs. Chalmers, Guthrie, and Co.	5	0	0
A Friend	1	1	0
Mr. Osgood Field	2	2	0
Mr. Thomas Angell	1	1	0
Captain Poole	1	1	0
R. T.	3	3	0
Mr. Robert Crawshay	5	0	0
Mr. Arthur Soames	5	5	0
Messrs. Alexander, Cunliffe, and Co.	5	0	0
Mr. Russell Sturgis	5	0	0
Mr. W. Banting	2	2	0
Mr. F. A. Shröeter	5	5	0
Messrs. Oliverson, Aukland, and Co.	2	2	0
Mr. G. E. Scaramanga.	5	0	0
A Friend	1	1	0
Mr. J. S. Morgan	5	0	0
Messrs. Morton, Rose, and Co.	5	5	0
Mr. C. C. Gooch	2	2	0
W. W.	2	2	0
Proprietors of the *Lancet*	25	0	0
Total	800	19	6

SPECIAL CORRESPONDENCE.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

THE quarterly meeting of the managers of the Infirmary was held on the 22nd ult. It was unanimously resolved that every candidate for the office of Physician, in addition to possessing a degree in medicine, shall be a Fellow or Member of the Royal College of Physicians in London. Every candidate for the office of Assistant-Physician shall be required to send in, together with other testimonials, a diploma from a university in the United Kingdom requiring examination for its degrees; or, if he possess a foreign or colonial degree, he shall be a member of the College of Physicians, London.

At the same meeting, the appointments made during the last three months were confirmed, and the recommendation of the Medical Committee, that the offices of House-Physician, Junior House-Surgeon, and Physicians' Assistants should be bestowed as prizes upon gentlemen who had attended the practice of the Infirmary, was considered. It was ultimately decided that the future appointments to the offices above named should be for six months, and that a salary of twenty guineas, besides board and lodging, should be paid. The Senior House-Surgeon will be appointed for twelve months, as heretofore, and will receive the same salary of eighty guineas. It is confidently expected that these changes will be attended by the best possible results, and that gentlemen will gladly avail themselves of the excellent opportunities afforded them by these resident appointments.

At the annual meeting of the Medical Society held on the 14th instant, Dr. Lloyd Roberts resigned the presidential chair in favour of Dr. Morgan, the President-elect.

The town has been remarkably free from any epidemic for some time past; lately, however, several cases of scarlet fever of apparently a malignant type have occurred in some districts. In one house in Ancoats, five children were laid up with the fever; one died very rapidly. The father was in constant attendance upon his children; at his work, he received a cut on his finger; some of the discharge from one of the children's throat was introduced into his system through this wound; cellulitis of the arm, accompanied by gangrene of the fingers, soon supervened, and in eight days he died of acute blood-poisoning.

The medical officer of health for Crumpsall reports the health of the district as very satisfactory. On the other hand, a smart outbreak of scarlet fever is reported from the Swinton district.

On Friday (operating day) last, Mr. Smith performed lithotomy in two cases at the Infirmary. The curved staff was used. This is invariably employed, and the lateral operation generally performed. The operation is exceedingly successful here. During the last twelve months, lithotomy has been performed about ten times, and all the cases recovered.

On the same day, Mr. Heath attempted to reduce a dislocation of the shoulder of six weeks' standing, complicated with fracture of the clavicle on the same side, in an old man 65 years of age, and of feeble constitution. Steady extension was kept up for about ten minutes, the patient being under the influence of chloroform; but, at the end of that time, the attempt was abandoned, in consequence of the head not moving in the least from its new position.

A case of hydrophobia is reported from the workhouse in Bridge Street. At the inquest, it transpired that the bite was inflicted on the thumb of the left hand as long ago as the beginning of last summer. The thumb was cauterised, and, in about two months, healed completely. Deceased continued in apparently good health till January 7th, when he complained of feeling unwell and of a pain in his left arm; unmistakable hydrophobic symptoms set in; he was admitted into the workhouse, and died soon afterwards.

CORRESPONDENCE.

DR. SYMES THOMPSON AND THE GREAT NORTHERN RAILWAY COMPANY.

Sir,—I feel that an explanation of the circumstances under which I appeared at the Clerkenwell Police Court last week is due to my professional brethren. I therefore forward a statement which I addressed to the President and Council of the Royal Medical and Chirurgical Society.

I have also the pleasure to enclose a resolution which the Council unanimously adopted; and I confidently trust that the profession in general will receive the explanation in the same generous spirit as was shown at the meeting of the Royal Medical and Chirurgical Society on Tuesday last. I am, etc., E. Symes Thompson.

3, Upper George St., W., Jan. 27, 1874.

To the President and Council of the Royal Medical and Chirurgical Society of London.

Mr. President and Gentlemen,—As Honorary Secretary of the Royal Medical and Chirurgical Society, I feel called upon to make a statement with reference to a charge made against me of travelling on the Great Northern Railway without having previously paid my fare, and with intent to defraud the Company, the result of which has been reported in the daily papers.

On the morning of December 25th, my wife being ill, and being very much hurried, I reached the Potter's Bar Station too late to take a ticket or speak to the guard. I at once determined, as I was coming back in the evening, to take my return ticket at King's Cross, having failed to do so at Potter's Bar.

When the train stopped at Holloway, I had to change carriages, and, passing a ticket-office, I took a ticket to King's Cross, solely with the purpose of avoiding delay and explanation, and believing that I was too well known on the line to be accused of wishing to avoid the payment of my full fare. The ticket-collector, before whose eyes I had deliberately left the train and taken the ticket, demanded my ticket for the former part of the journey. I then, for the first time, realised that I had placed myself in a false position. I stated that I had not a ticket, but was intending to obtain one on my return in the evening. On his objecting, I offered to pay my fare from Potter's Bar. This he would not receive; so I gave him my name and address.

At King's Cross, I took a return ticket, as I had always intended to do, used half that evening, and sent the other half (P. B. to King's Cross) to the head ticket-collector at Holloway, with a note, apologising for having laid myself open to misconstruction. I then considered the matter at an end. But, on January 16th, I received a summons to attend the Clerkenwell Police Court on January 22nd, and the case was then brought before the magistrate. My solicitor advised me to leave the case in his hands, without any explanation on my part. He did not explain my motives, nor did he enter into details. I felt at the time my defence was very imperfect. He did not say (as stated in some of the papers) that I pleaded guilty. He admitted the facts as stated by the ticket-collector to be true, acknowledged that there had been an infringement of the Company's bye-laws, and that, of course, if insisted on, a fine must be paid.

I admit that the facts were capable of the rendering put upon them, and I do not complain of the action of the railway company or of the magistrate, though it is, perhaps, remarkable that the directors should have imagined that I wished to defraud them of one shilling. While acknowledging that I have been guilty of great error of judgment, I feel confident that those who know me will not allow a single act of folly to outweigh, in their minds, the evidence of my whole past life; or that a moment's thoughtlessness should be interpreted into a case of moral guilt.

I do not wish to resign my secretaryship, as I know I am not morally guilty; but I desire to be guided by the decision of the Council, and to place my resignation in their hands.

I have the honour to be, Mr. President and Gentlemen,
Your faithful servant,
E. Symes Thompson.

Resolution of Council of Royal Medical and Chirurgical Society.

"The Council, having read a communication from Dr. Symes Thompson, resolve that, in their opinion, the probity of his character, and the high esteem in which he is held by the profession, fully justify them in coming to the conclusion, and expressing their firm conviction, that he acted entirely from inadvertence in the haste of the journey, and that there is no ground for imputing to him an intention to defraud the railway company."

THE WEST HADDON CASE: TEMPERATURE AFTER DEATH.

Sir,—I have generally observed that the greatly wasted bodies of persons who have died of phthisis, cancer, disease of the œsophagus, etc., cooled quickly, so that twelve hours after death (and the examinations at the London Hospital are not made sooner) they were quite cold. On the contrary, bodies having a thick layer of subcutaneous fat cooled more slowly; and, on several occasions, I have found such bodies so warm, that it was very disagreeable making the examination. If a body cooled very slowly, and it was in consequence unusually warm twelve hours, or even longer, after death, that circumstance would not enable me to give any opinion as to the cause of death.

I am, etc., Henry G. Sutton.

9, Finsbury Square, January 28th, 1874.

THE OBSTETRICAL SOCIETY OF LONDON AND MIDWIVES.

Sir,—In the number of the Journal for January 17th, Dr. Gream remarks that the very contemplation of enforcing the education of midwives, and examining and licensing them, "is derogatory alike to the profession, to science, and to the Obstetrical Society." This is very strong language, and reminds one of the words written by Dr. Tyler Smith in 1849. He believed that all midwives were a mistake, and that they would speedily be superseded by men. Their very existence, he said, was "derogatory to the obstetric art". His argument against them was a good one. He said, "If midwife practice be less safe than attendance by an educated medical practitioner, it is a very questionable charity to supply it to poor women." It was a laudable desire that the poorest should have the best medical aid; but further experience showed him how impossible it was to provide it. He completely altered his opinion on this subject during the last few years of his life; and it is well known that he took an active part in forming the plan for examining midwives adopted by the Obstetrical Society. I cannot help thinking that Dr. Gream has also been led away by his enthusiasm and high aspirations for obstetric medicine. There must be subordinate persons in all professions. It would be very nice if it could be so, but every Bible-reader cannot be a bishop, nor can every soldier be a general; and yet the profession of the bishop is not dishonoured by the action of the Bible-reader, nor does it detract from the *prestige* of the army because its bulk consists of privates. The profession of a midwife, although limited to the attendance of natural labour, as the Obstetrical Society would have it, is an honourable one. Her action is no more derogatory to the obstetrician than that of the skilled surgical nurse is to the surgeon, or that of the trained medical nurse to the physician. Besides, it is not a question of creating a class of midwives; it already exists. The real question is, how far we are culpable in allowing the present race of midwives to remain ignorant and consequently dangerous. The general impression is, that the Obstetrical Society has done good service in the step which it has taken. The writer of an excellent article on this subject in a contemporary medical paper a short time since said, "The Obstetrical Society would have been unworthy of the name if it had not brought this subject under the notice of the Ministry." When a deputation of the Parliamentary Bills Committee of the British Medical Association, introduced by Mr. Ernest Hart, waited upon Mr. Stansfeld to bring before him the question of instructing midwives, he said "it was really due to a scientifically educated profession, and to their own character, to endeavour to help the education of those who worked in a narrower groove and in a subordinate position, and upon whom the medical profession must at times rely." We have here an authoritative expression of lay and medical opinion entirely at variance with that of Dr. Gream; and I cannot help thinking and hoping that he, like Dr. Tyler Smith, will, when he has found time to consider the subject more fully, come to the conclusion that midwives are an useful and necessary body of women, and, although holding a humbler rank, by no means dishonouring even to a royal obstetrician. I am, etc., J. H. AVELING, M.D.

January 1874.

THE ELECTIONS TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

SIR,—In your issue of the 10th instant, your Dublin correspondent (referring to the habit of candidates for election to Council of notifying their candidature by a visiting card) expresses his admiration for such a system, and is "sorry that it was injudiciously broken through some years ago by the sending round of a printed circular by one and (he believes) only one candidate." Your correspondent says that he "knows that such document injured instead of benefited its author, and absolutely influenced some Fellows to go to the College to vote against the gentleman who circulated the letter."

Although I am not the only person who has communicated with the Fellows of the College by means of a circular note, I believe that the observation of your correspondent refers to me. With every respect for the view which he and those Fellows who are said to have voted against me have adopted, I am unable to see the impropriety involved in the placing before my constituents a simple statement of my views on medical policy and collegiate administration. On the contrary, I am of opinion that the election of Councillors who perhaps have no definite policy, or, if they have, are not in any way pledged to it, is inconsistent with the representative principle and misleading to the Fellows. The Council elections of the last few years have made it manifest that there are questions of the policy and management of the College in which the Fellows take an earnest interest, and upon which they are divided in opinion. I take credit for holding definite views on such questions, and for acting up to those views when occasion arises; and I do not aim at gaining the suffrages of those who differ from my opinions, by leaving it in doubt what my ideas on these large questions and my votes upon them would be. I therefore thought it proper on one occasion to state plainly to the Fellows my views on certain debatable subjects in which they were interested; and I put that statement in the form, not of a self-commendatory note, but a parliamentary address. I certainly think that such a confession of faith—at least on the part of a candidate whose opinions had not been manifested by previous service in the Council—would be far more candid and far more just to the Fellows than the visiting-card system, which would permit a candidate to obtain a seat on the Council who, if he had not the courage to pledge himself beforehand, might feel himself at liberty to vote afterwards rather with circumstances than with principle. I really do not see why it should be considered reprehensible in one who seeks the votes of a constituency numbering three hundred and seventy-four, three-fourths of whom have no means of knowing the medico-political views of the candidate who asks their vote, to place those views before the electors in a defined and intelligible form. If there be any "etiquette" against such a procedure, I think it would be "more honoured in the breach than in the observance".

I am, etc., ARCHIBALD HAMILTON JACOB,
A Member of the Council of the College.

79, Harcourt Street, Dublin, January 21st, 1874.

THE TOPICAL USE OF PERCHLORIDE OF IRON IN *POST PARTUM* HÆMORRHAGE.

SIR,—In your last number, Dr. Gream, discussing the treatment of *post partum* hæmorrhage, expresses himself as follows:—"The injection of perchloride of iron is not likely to become a popular remedy; it is known to produce mischief, which I myself have witnessed, and even death; and, besides, it is never required."

Dr. Gream further says:—"It was taught by an eminent physician, many years ago, in his lectures, that, if death resulted from hæmorrhage whilst a supply of brandy was at hand, the fault was attributable to the medical attendant; a bold assertion to make, no doubt, but nevertheless a true one. In such cases, all the remedies wanted are brandy and ergot, and, in addition, if possible, ice."

I think it may be stated with confidence that, if brandy and ergot, aided or not by ice, were all-sufficient, local styptics would never have been used. Certainly, in the great majority of instances which have come under my observation, in which flooding was so severe as to threaten, and even to destroy, life, brandy at least, and often ergot also, had been used with no sparing hand. Who has not seen women die, bleeding and swallowing brandy to the last? So far is this remedy from being unduly neglected, that it is the most universal and the most "popular." The evil is, that it is too much relied upon. In many cases, it has seemed to me to act prejudicially. So long as it can be absorbed, it may excite the circulation, and thus increase the flooding; and, when there is extreme prostration, it either is inert in the stomach, or is rejected. And I cannot accept Dr. Gream's conclusion, that vomiting is an indication of "returning vitality," at least as a general proposition. Vomiting is too often the close antecedent of fatal collapse.

One advantage of local styptics is, that they can be depended upon to stop bleeding when the stomach is rebellious to brandy, ergot, and everything else. And this is the condition in which many others, as well as myself, have used it with signal success. I submit with confidence that Dr. Gream's proposition, that "the perchloride of iron is never required," cannot be sustained in the face of large experience to the contrary.

I have but a few words to say concerning Dr. Gream's statement, that "he has himself witnessed mischief, and even death," from the perchloride. In discussing a great practical question like this, it is, above all things, necessary to relate clinical facts in full. I would, therefore, urge Dr. Gream, as I have urged others, to publish the complete history of the fatal cases he has seen. In doing this, it is especially desirable to note—1, the state of the patient when the injection was made; 2, the other means which had been employed to arrest the hæmorrhage; 3, the symptoms observed to follow the injection; 4, the time at which death occurred after the injection; and, 5, the *post mortem* appearances, if a necropsy were made.

In estimating the influence of perchloride of iron in cases of flooding ending fatally, it should not be forgotten that the remedy is used because the danger is already urgent. In this condition, even passing the hand into the uterus, to clear out clots, has been the immediate cause of death.

Only those cases which are related in full can have any value in a scientific discussion. I am, etc., ROBERT BARNES, M.D.

London, January, 1874.

SIR,—Dr. Robert Barnes repeats some extracts he has already published in the last number of the *Obstetrical Journal*. Perhaps you will allow me to give the answer which will appear, in the form of a footnote, in the forthcoming number of the same journal.

"In the previous journal, page 661, Dr. R. Barnes endeavours to convict me of having stated something which is inaccurate. But I am unable to perceive that I have done so. It is quite correct that I have 'seen nine or ten cases' where death has followed the injection of the perchloride of iron; and also that I have 'examined the uterus in four cases.' It surely cannot be necessary to say that an examination of the body was not permitted in every case. I thought myself fortunate in having the opportunity of examining the uterus on four occasions. The case recorded is the same as that related by Dr. Heywood Smith; but it is not improbable the description of the uterus and appendages may not be identical. The examination of the uterus was carefully made, and took all the spare time I had during a period of at least six weeks before I satisfactorily made out all the points. The account given is drawn up from my own notes, made day by day as the examination proceeded, and I am certain is quite correct. It was not a question of numbers with me, but a question of facts; and I feel assured the facts are correctly stated. Dr. Barnes will, no doubt, be pleased to see two fatal cases recorded in the present journal, one from his own practice, which had been in some way unaccountably forgotten. And, if it be considered desirable to have an useless repetition of other cases, I can have no objection to the publication of such notes as I have of them. *Verbum non amplius addam.*"

Dr. Barnes, however, must not imagine that he can rest the qualification of the statements he has made—the whole of which I maintain are erroneous—upon the verification of these cases. Any "clinical experience" he may have had rests upon entirely different data; and, if the only evidence he can adduce in support of his statements consist in throwing out insinuations of this character, he must excuse me when I say he has put forth statements without having any sufficient facts to justify or maintain them. I am, etc., T. SNOW BECK.

London, January, 1874.

THE IRISH PHARMACY BILL.

SIR,—In the portion of your JOURNAL of the 24th instant allotted to Irish intelligence, a communication appears commenting on the proposed Pharmacy Bill for Ireland, and reflecting injuriously on the status and conduct of the Apothecaries' Company. Your readers are informed that the proposed licence is to be "purely pharmaceutical", "but entitling its holder to practise medicine." Either there is a clerical error in this passage, or its self-refutation is obvious. Your correspondent also says that "the present Apothecaries' licence seems to entitle the holder to practise medicine, although the original intention (!) of the qualification was similar to that issued to the English chemists and druggists;" but, as the writer allows that the Local Government Board and other public boards (in accordance, I may observe, with enactments of the Irish and Imperial Legislature) receive it as a *medical* qualification, this passage too carries its own refutation. In answer to the suggestion "that the Company should show that they have already fulfilled the intention of their founder (?) by providing proper pharmaceutists for Ireland," I have to state that the Company has licensed a sufficient number of well and suitably educated general practitioners, who, until recently, almost universally kept establishments for compounding prescriptions and the sale of medicines, in addition to being the ordinary medical attendants of the families around them, especially those of the middle and less affluent classes; but that the extension of the Poor-law dispensary system throughout Ireland, and other causes over which the Company had no control, induced many apothecaries in the smaller towns to limit their compounding and sale of medicines to their own patients, or else to avail themselves of other openings to practise their profession. As to the necessity for a pure and suitably educated pharmacist, the Apothecaries' Company, as the present sole guardians of pharmacy in Ireland, is willing and anxious to provide such a person, and to create under the proposed Bill, and to co-operate with, a Pharmaceutical Society for this important object. Whether such an enactment deserve to be promoted or opposed by the other Irish medical authorities, it is not for me to decide. With regard to the reference to Sir Dominic Corrigan's letter, in which he is reported as having denied a certain statement made by me, I beg to enclose copies of his letter and of mine in reply thereto.

I am, etc., CHARLES H. LEET, M.D.

Eversden, Rathmines, January 26th, 1874.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Queen's Hotel, Birmingham, on Wednesday, the 4th day of February next, at a quarter past 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

37, Great Queen Street, London, Jan. 22nd, 1874.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE third ordinary meeting of the Session was held at the York House, Bath, on Thursday evening, January 22nd; E. L. FOX, M.D., President, in the chair. There were also present thirty-three members and one visitor.

New Members.—The following gentlemen were elected members of the Association and of the Branch:—G. D'Arcy Adams, M.B., Nailsea; W. A. Concannon, Esq., Pill; Christopher Elliott, M.B., Bristol; W. J. Fyffe, M.D., Surgeon-Major, Army, Clifton; T. H. Gray, M.D., Bristol; G. E. Lawrence, Esq., Bath; and Henry Waldo, M.D., Clifton.

Papers.—The following were read:—1. Case of Acute Pleuritic Effusion, treated with Dieulafoy's Aspirator, with remarks. By H. F. A. GOODRIDGE, M.D. This led to considerable discussion, in which Drs. Thompson, Caddy, Shingleton Smith, Brabazon, Davey, and Messrs. Mason and Leonard took part.

2. Jottings on Lunacy (continued). By J. G. DAVEY, M.D. Drs. Caddy, Thompson, E. L. Fox, Carter, and Mr. Waugh made remarks.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEETING.

A MEETING was held on Thursday, December 18th, at the new General Hospital, Croydon. Dr. CARPENTER took the chair at 4 P.M., and sixteen members and visitors attended.

Papers, etc.—1. Dr. DUKES gave the history of a case of Imperforate Anus, in which the bowel was reached by an incision. The child lived some weeks, passing the motions naturally, but eventually died. No *post mortem* examination could be obtained.

2. Dr. PARSONS SMITH read the notes of a case of Gangrene of the Leg, caused by an Embolon, in a patient the subject of extensive heart-disease. In spite of this complication, chloroform was administered, and Dr. Smith amputated the thigh, the patient making a good recovery.

3. Mr. MORRANT BAKER gave a detailed explanation of Esmarch's Bloodless Mode of Operation. A discussion ensued upon it.

The Dinner took place at 6 P.M., and was attended by eighteen members.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

LINCOLN.—The health of the city of Lincoln appears to be very unsatisfactory. During the quarter ending Septemer last, the death-rate was thirty-two per 1,000 living, 225 deaths having been registered, whereas the average for the corresponding quarter, during the seven previous years, had been 151. This heavy mortality is also largely due to preventable causes, fifty deaths being recorded as due to scarlatina, and four to other forms of fever. Numerous complaints are made as to the defective condition of the present system of sewerage; and, in other respects, the sanitary requirements of the city do not appear to receive the consideration they merit. As regards the epidemic prevalence of scarlet fever, it cannot be too strongly impressed on the Town Council that its spread is due to infection from person to person, either directly or indirectly, by means of clothing, bedding, and other articles with which the patient has come into contact, and that the means by which it may be stayed are essentially the isolation of the sick, and the organisation of a proper system of disinfection. In all places where there is no hospital accommodation for those persons who, though above the pauper class, have in their own houses no means for isolating patients suffering from infectious diseases, it is the duty of the sanitary authority to provide it; and, though the adoption of such a measure must of necessity be accompanied by a disbursement of public money, yet experience has abundantly shown that there is no truer economy than a judicious outlay in the cause of health.

THE GENERAL ELECTION.

SIR,—It is now several months since, through your columns, I addressed my Poor-law medical brethren, on the subject of reform in that branch of Poor-law administration. I have been silent, as the conviction has been forced on me by the proceedings in Parliament during the past two years, and notably in the last session, that nothing in the shape of useful legislation was to be expected from the Parliament which has just come to an untimely end; and, therefore, considered it was not worth while to waste time and energy in what would have been profitless agitation.

It was, however, my intention at an early date to convene a general meeting of the Poor-law Medical Officers' Association, for the purpose of arranging a concerted scheme of action at the general election which was known to be imminent. The unexpected manner in which Mr. Gladstone has decreed a dissolution, has deprived me of that opportunity. I have, therefore, no alternative but to ask you to permit me to remind the Poor-law Medical Service that there are three objects of the Association which have been repeatedly endorsed at our quarterly and general meetings, the advisability of supporting which should be pressed on the attention of candidates, and particularly on candidates for counties.

These are—1. The entire instead of partial payment of salaries from the Consolidated Fund; 2. An amendment of the Superannuation Act, rendering it absolute on the part of Boards of Guardians, and that the amount should be determined prior to the officer tendering his resignation; 3. The extension to the rural districts of the dispensary system, which has been found to work so advantageously for the poor and the profession in the metropolis.

If this is to be done effectively, it can only be by each Poor-law Medical Officer writing to the candidate for the representation of his borough or county, immediately on reading this.

I am, etc., JOSEPH ROGERS.

33, Dean Street, Soho, January 28, 1874.

MILITARY AND NAVAL MEDICAL SERVICES.

IMPROVEMENT OF THE MEDICAL DEPARTMENT.

THE following suggestions for the improvement of the Medical Department of the Navy and Army have been drawn up by a Staff-Surgeon of the Royal Navy of twenty-five years' full-pay service.

Rank.	*Four Grades of Rank.*	Relative Rank. Army.	Relative Rank. Navy.
1. Surgeon	From entry to 10 years' full-pay service	Captain.	Lieut., under 3 years.
2. Surgeon-Major	From entry after 10 years' full-pay service (if passed, or a F. R. C. S.).	Major.	Lieut., over 8 years.
Ditto.	After 15 years' full-pay service	Lt.-Col.	Commander.
3. Surg.-General	By selection from Surgeons-Major, 20 years, after 3 years' service as such for war services, epidemics of a severe nature, and superior professional abilities.	Colonel.	Captain, over 3 years.
4. Chief Surg.-Gen.	By selection from Surgeons-General, after 3 years service as such in charge of a hospital or fleet, for war services, superior professional abilities, and administrative talent	Major-Gen.	Rear-Adm.
The Director-General of the Medical Department, by selection, from Chief Surgeons-General		Lt.-Gen.	Vice-Adm.

N.B.—It was the opinion of the Commissioners who were appointed to inquire into the pay, retirement, promotion, etc., of army medical officers in 1857, that with respect to promotion, the rule of strict seniority should be adhered to in the lower ranks, and strict selection in the upper ranks, this constituting the best working system for the public service.

Full Pay.

Surgeon, to commence with 10s. *per diem*, increasing 6d. *per diem* for each additional year's service.

Surgeon-Major, to commence with 15s. *per diem*, increasing 1s. *per diem* for each additional year's service.

Surgeon-Major, after twenty years, to commence with 25s. 6d. *per diem*, increasing 1s. 6d. *per diem* for each additional year's service, to a maximum of 33s. *per diem.*

Surgeon-General, to commence with 35s. *per diem*, increasing 2s. *per diem* for each additional year's service, to a maximum of 43s. *per diem.*

Chief Surgeon-General, 48s. *per diem*, increasing 5s. *per diem* for each additional year's service, to a maximum of 68s. *per diem.*

The Director-General of the Medical Department of the Army and Navy to receive £2,000 *per annum*, house-rent included.

Indian, Colonial, Lodgings, Travelling, Forage, Servants, Fuel, Good Service, and Greenwich Hospital Pensions, as granted in 1870.

Retirement.

Optional retirement for all medical officers, after twenty years' full-pay service, six-tenths of the full-pay arrived at; after twenty-five years' service, on seven-tenths; and after thirty years' service, on eight-tenths. The Director-General to be kept on the active list, and his time to count for retirement.

Compulsory retirement for Surgeon and Surgeons-Major, under 20 years' service, at fifty years of age; for Surgeons-Major above twenty years' service, and Surgeons-General at sixty; and for Chief Surgeons-General at sixty-five, or at any previous age if physically incapacitated.

A step of honorary rank to be given to all medical officers, on retirement, after twenty-five years' full-pay service.

Paymasters of the Royal Navy, who after long service are generally rated as Paymasters-in-Chief, have the relative rank of Colonel given them, and their widows would receive a pension of £90 *per annum.* The widow of Deputy Inspector-General, whose service was under five years, would have £80 only, his relative army rank being Lieutenant-Colonel, a Staff-Surgeon's *idem.* The number of Surgeons-General (Deputy-Inspectors of the Royal Navy) should be increased to eighteen, there being no prospect of promotion for the present Staff-Surgeons; and a Surgeon-General should be appointed to every flag-ship carrying the flag of a Commander-in-Chief on foreign stations, with a Surgeon-Major under fifteen years' service as the next senior medical officer. There should be two Surgeons-General at the Royal Naval Hospital at Stonehouse, as at Haslar Hospital. No Surgeon-Major should be promoted to Surgeon-General who has not obtained the diploma of F. R. C. S.; this to apply to all new entries.

Every naval medical officer to have had three years' continuous hospital service before promotion to the rank of Surgeon-General, and a roster to be kept for these appointments. Without having had that amount of naval hospital experience, few naval medical officers would be sufficiently well qualified for the higher position of Surgeon-General of the Royal Navy.

After five years' service in the Army or Navy, it should be compulsory for every medical officer to attend for a second time the four months' practical course at Netley. The names of these officers, if in the Navy, should be entered on the books of a flag-ship for full-pay; and, after reaching the rank of Surgeon-Major, they should be allowed four months on full-pay, in order to attend the practice of a metropolitan hospital, and for performing all the operations of surgery on the dead subject under a teacher of known reputation.

The medical officers of dockyards and victualling-yards, hospitals, and marine infirmaries, of above twenty years' full-pay service, should retain their appointments for five years, in consideration of the great expense of moving their families and furniture—from a considerable distance, probably—and other residential expenses; also, because the duties take some time to learn, being different in many particulars from those of a ship. The office of Director-General of the Medical Department should likewise be held for a period of not less than five years.

To reward medical officers for distinguished services during war, or a severe epidemic of cholera, dysentery, or fever, it is proposed that they should be advanced in the scale of full-pay for their rank—say one, two, three, or more years, according to the merits of the individual cases. If already, however, in the receipt of the highest rate of pay, then promotion for Surgeons and Surgeons-Major (under fifteen years service); but it is not considered fair to promote junior men over th heads of their seniors, who have served well and are of considerabl professional abilities, simply because it has happened to them to hav been placed in circumstances of temporarily increased duties. For pe sonal deeds of valour, the Victoria Cross is open, and has very just and deservedly been awarded to several army medical officers, althoug as yet, not to one naval medical officer. The Companionship of th Bath should be given to medical officers of and above fifteen years' servi for meritorious services during war. There are four Surgeons-Major the Army thus decorated, but not one in the Royal Navy below the ra of Deputy Inspector-General. Owing to the great difficulty experienc by naval medical officers of Staff-Surgeon's rank in obtaining emplo ment, early promotion has proved a disadvantage to many, instead being a benefit.

One-third of unemployed time should be allowed to count for retir ment, as now granted to naval officers in consideration of the abo difficulty.

The present half-pay in the Royal Navy should be called non-effe tive, as in the Army, and to be seven-tenths of the full-pay.

Inspectors-General of Hospitals and Fleets are not allowed any tabl money, although their position almost of a necessity requires them entertain the medical officers of the ships stationed in their locality, well as other officials. After three years' service as Inspector, the lative rank is that of a Rear-Admiral and Major-General; their allo ances should then amount to £200 *per annum* at the very least.

I do not consider the proposed pay at all too liberal, consideri that in the Royal Navy it is possible to reach the rank of Captain the age of 25; and a Captain's full-pay ranges, according to his se ority, from £410 to £602 *per annum*, with an addition of comm money of from £127 to £328 *per annum.* A Rear-Admiral, when Co mander-in-Chief on a foreign station, receives as his daily pay £1, per annum, with a table-allowance in addition of £642, making a t of £1,737 *per annum*; every Rear-Admiral on full pay receiving less than £1,642 10s. *per annum*, exclusive of about £200 for servan lights, fuel, etc.

OBITUARY.

JOHN JONES PHILLIPS, M.D.

WHILE still young, with the tide of success fast rising, with much good work performed and more pledged, this physician has been suddenly called away. On Tuesday evening last he was busy seeing patients, correcting proof, and working with more than usual health and spirits, and on Thursday morning he was dying.

A Welshman by family and birth, he was educated at Mill Hill School, matriculated in 1860, and was articled to Mr. Pye-Smith, who has had the rare fortune to see four of his pupils become physicians to Guy's Hospital.

After taking his degree at the University of London, he was appointed Demonstrator of Anatomy to the Guy's School; and in 1869 was elected to the post of Assistant Obstetric Physician. Fortunate in so early an advancement, for he had only entered the Hospital nine years before, he devoted himself with untiring energy to the branch of the profession he had chosen. Zealous and assiduous in his hospital work, he was popular with the students, both as a clinical teacher and as Secretary of the Pupils' Physical Society; he was highly esteemed by all his colleagues, and to many of them his sudden loss is that of a personal friend. Beside his work at Guy's, he was Physician to the Hospital for Sick Children, and to the Royal Maternity Charity; he was secretary, first to the Hunterian, and afterwards to the Obstetrical Society, which offices he filled with remarkable tact and fidelity; and, besides contributing papers to the *Obstetrical Transactions* and the *Guy's Hospital Reports*, he had lately undertaken the joint editorship of the latter publication. Meanwhile he had settled in Finsbury Square, and very soon attained a share of private practice, which was already becoming large and was remarkable at so early an age. This may be partly ascribed to peculiarly favourable opportunities, but much more to the personal charm of his address, his knowledge of his work, the anxious care he gave to every case, and the unaffected kindness of his heart.

While still a student, Dr. Phillips learned that he was the subject of organic disease of the heart; and the mitral murmur which was then discovered was never forgotten by his more intimate friends, who watched his multiplicity of labours with just anxiety, and often, but in vain, suggested a more sparing expenditure of strength.

Though of delicate appearance, he did not experience any serious symptoms, until a few months ago, when an attack of aphasia and other indications gave him a warning of danger. Under the care of his friends, Dr. Hilton Fagge and Dr. Daldy, these symptoms, however, soon passed off, and he continued with a gentle obstinacy to increase rather than curtail his engagements. While thus cheerfully and courageously working "while it was day," he was overtaken by the last attack with unexpected suddenness.

He had been sleeping some distance out of town for several successive nights, in attendance on an anxious case, and, when he reached home on Wednesday morning (January 20th), he complained of headache and sickness; and, though he saw some patients in his house, was not able to go out, and went to bed early. Symptoms of cerebral disturbance, which were significant enough, probably appeared less important to him from their having passed off so readily a few months before; and, forbidding his servant to call in any of the friends close at hand who would have been eager to give what help could have been possible, he went early to bed, saying that he should be better after a night's rest.

When called next morning, he was unconscious, and the colleagues, who were soon around his bed, found him in deep coma, with contracted pupils, stertorous breathing, and paralysed limbs. The old apex murmur was still audible, and there can be little doubt that embolism, or a fragile state of the arteries, had led to extensive cerebral hæmorrhage, filling the ventricles and pressing on the medulla. He never regained consciousness, and died about three in the afternoon of the same day.

He had lived only thirty-one years, and died in harness, without time for painful forebodings on the sad consciousness of failing powers. His career was too short for more than promise of what he would have done in the profession had longer time been granted; but it was not too short to win high esteem and warm affection from those who knew him best. One who was intimate with him as a student and a colleague can bear witness that he never met with a more amiable, right-thinking, pure-minded, Christian man.

"Purpureus veluti flos succisus aratro."

HENRY JOHN LUCAS, M.D.

ON Monday, December 29th, 1873, at his house, Glan-yr-afon, Crickhowell, died Henry John Lucas, M.D., aged 69. Dr. H. J. Lucas, the second son of the late Henry Lucas, M.D., of Brecon, was born at Carmarthen, on July 3rd, 1804. He was educated at the Grammar School at Bath, and at Edinburgh University, where he graduated as M.D. in 1825. After leaving Edinburgh, he and his brother, the late Dr. Prestwood Lucas of Brecon, went to Paris, where they completed their course of medical study, in company with their college friend, Dr. Charles J. B. Williams, attending the clinical lectures of Laennec, Trousseau, Louis, Velpeau, and Piorry. About the year 1828, Dr. Lucas received his commission as assistant-surgeon in the Royal Artillery, and served for about six years with that force in Ceylon, at Gibraltar, and elsewhere. In 1834, he joined his father, who was then residing at Brecon, where he remained two years. He went to live at Crickhowell, in 1836, and he practised there as a physician until the time of his death. He married, in 1838, Elizabeth, eldest daughter of the late Rev. G. J. Bevan, Vicar of Crickhowell, by whom he leaves issue, three sons and five daughters. Dr. Lucas was a member of the Royal College of Physicians of London (1860). He was consulting physician of the Brecon Infirmary and the Crickhowell Dispensary, and was on the commission of the peace for the county of Brecknock. In his death, the neighbourhood in which he lived has sustained a severe loss, not only as a medical adviser, but as a true friend.

CHARLES MENDS GIBSON, F.R.C.S.

MR. GIBSON died on January 13th, 1874, at Amélie-les-Bains, Pyrenées Orientales. He was born at Plymouth on April 23rd, 1808. He was a student at St. Bartholomew's Hospital, and became a Member of the Royal College of Surgeons in 1832, a Licentiate of the Society of Apothecaries in 1831, and a Fellow of the Royal College of Surgeons in 1852. For twenty-seven years he was Resident Medical Superintendent of the Bethel Hospital for Lunatics, in Norwich, at the end of which time, owing to failing health, he retired in favour of his nephew. He was then appointed Honorary Consulting Surgeon to the institution. For many years he was a Director of the Norwich Union Life Office, and was also one of the Trustees of the Norwich Charities.

Mr. Gibson was a very skilful surgeon, and was eminently successful as a lithotomist. His consistent Christian life and kindly genial manners endeared him to all with whom he came into contact. The immediate cause of death was severe hæmoptysis.

GEORGE STICKINGS, M.R.C.S., L.S.A.

THE late Mr. George Stickings was born on November 23rd, 1800, and died at Wye, Kent, on January 9th, in the seventy-fourth year of his age. He was the son of a medical gentleman, and practised for forty-nine years as a surgeon at Lenham, Kent, where he was much respected for his strict integrity, skill, and kindness to all, especially the poor. Illness compelled him to resign his practice in 1869, when he made Wye his place of residence. The cause of death was softening of the brain. He married Georgiana, youngest daughter of the late Thomas Mercer, Esq., a cousin of Turner, the great landscape-painter. He had five sons and five daughters. On leaving Lenham, his friends presented him with a handsome testimonial.

JOHN CHRISTOPHER DAVIE, M.R.C.S.ENG., HADDENHAM.

MR. DAVIE, who died at Haddenham, Cambridgeshire, aged 69, on December 31st, was a native of Cheltenham, and a pupil of Mr. Fletcher of Gloucester. He commenced his professional studies at the Gloucester Infirmary, and thence proceeded to St. Bartholomew's Hospital. He became a Licentiate of the Society of Apothecaries in 1826, and a Member of the Royal College of Surgeons in 1827. He was a contributor to several medical periodicals. For the last eight years, he had not followed the active duties of his profession, having resigned his practice to his son-in-law, Dr. Nichol. For two or three years, he had suffered from spasmodic asthma. The immediate cause of his death was diarrhœa and phlegmonous erysipelas of the leg.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College, on January 20th.

Baker, Benjamin R., Andover, Hants
Bennett, Henry S., Finsbury Square
Bubb, Benjamin, Cheltenham
Campbell, William M., M.D., Liverpool
Crowther. Arthur B., L.S.A., Hobart Town, Tasmania
Duran, Charles, Costa Rica
Edwards. Octavius, Hereford
Harris, Vincent D., Bristol
Hartley, Robert, L.R.C.P., Lytham, Lancashire
Hebb, Richard H., Newton Valence
Ilott, Herbert J., Bromley, Kent
Johnson, John James, L.R.C.P., Newcastle-upon-Tyne
Lloyd, John D , L.R.C.P., Hilsey, Gloucestershire
Müller, Augustus, Amoy
Paley, William E., Peterborough
Pike, Joseph B., Leicester
Seaton, John J. J., Sunbury, Middlesex
Smith, William, L.R.C.P., Ashton-under-Lyne
Stevens, Alfred F., Stoke Newington
Stewart, Robert W., L.R.C.P., Stoke, Devonport
Sutcliffe, E. C. T., Staleybridge
Talbot, Joseph B., Brierley Hill
Thomas, Herbert H., Hebden Bridge
Thompson, Thomas W., Tavistock Square
Ward, Lloyd B., L.R.C.P., St. John's Wood
Wilkins, James S., L.R.C.P., Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Surgeon: £65 per annum. Applications, 13th February, to F. Barlow, Sec.
ARDNAMURCHAN, Argyleshire—Medical Officer for the Districts of Sunart, Ardnamurchan, and Moldart: £100 per annum, house, and garden. Applications, 2nd February, to Wm. Ralston, Inspector of Poor, Ardshealach, Strontian.
ARMY MEDICAL DEPARTMENT—Surgeons. Applications to T. G. Logan, Director-General.
BRITISH ORPHAN ASYLUM—Physician.
BURY, Lancashire—Medical Officer to the Police.
CALNE UNION—Medical Officer and Public Vaccinator for the whole Union: £200 per annum, and fees. Applications, 3rd February, to H. S. Heath, Clerk.
CALNE RURAL and URBAN SANITARY DISTRICTS--Medical Officer of Health: £50 per annum.
CAMBERWELL PROVIDENT DISPENSARY—Honorary Medical Officer. Applications, 31st instant, to James Wyeth, Sec.
CAMELFORD UNION—Medical Officer for the Camelford District and the Workhouse: £45 and £10 per annum. Applications, 5th February, to C. C. Hawker, Clerk.
CAXTON and ARRINGTON UNION—Medical Officer for the Wimpole District: £41 : 4 per annum.
DERBYSHIRE GENERAL INFIRMARY, Derby—House-Surgeon: £100 per annum, increasing to £150, apartments, board, etc. Applications, 7th February, to Samuel Whitaker, Sec.
EDMONTON UNION—Medical Officer for the Cheshunt District: £70 per ann.
GUY'S HOSPITAL—Assistant Obstetric Physician.
HOLLINGBOURN UNION, Kent—Medical Officer and Public Vaccinator for the Headcorn District: £44 per annum, and fees. Applications, 4th February, to Edward Hoar, Clerk, Maidstone.
HOSPITAL FOR SICK CHILDREN—Assistant Physician.
INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications, 16th February, to Major-General Pears.
LIVERPOOL EYE AND EAR INFIRMARY.—Honorary Surgeon. Applications, 3rd February.
MALE LOCK HOSPITAL, Dean Street—Dispenser.
METROPOLITAN HOSPITAL, Devonshire Square—Assistant Physician.
MIDHURST RURAL SANITARY DISTRICT—Medical Officer of Health for the Tillington Subdistrict.
MIDHURST UNION—Medical Officer for the Tillington District: £60 per ann.
NAVAL MEDICAL SERVICE—Surgeons. Applications, 12th February, to A. Armstrong, Director-General.
NEWTOWNLIMAVADY UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Newtownlimavady Dispensary District and Bridewell: £105 per annum, and fees. Applications, 9th February, to W. S. Fleming, Hon. Sec.
NORTH LAMBETH, STOCKWELL, and NORTH BRIXTON DISPENSARY—Resident Dispenser: £100 per annum to commence, furnished apartments, etc. Applications, first week in February, to E. G. Syms, Hon, Sec., 28, The Grove, Clapham Road.
NORTH RIDING INFIRMARY, Middlesboro-on-Tees—House-Surgeon: £100 per annum, lodging, board, etc. Applications, 9th February.
NORTHUMBERLAND PAUPER LUNATIC ASYLUM, Cottingham, Morpeth—Resident Medical Superintendent: £400 per annum, furnished house, etc. Applications, 9th Feb., to Wm. Dickson, Clerk to Committee, Alnwick.
NOTTINGHAM GENERAL HOSPITAL — Physician. Applications, 10th March, to E. M. Kidd, Sec.
PETWORTH UNION—Medical Officer for the Second District: £65 per annum, and the Workhouse, £20 per annum.
ROYAL INFIRMARY FOR CHILDREN AND WOMEN, Waterloo Bridge Road—Two Physicians.
ROYAL MATERNITY CHARITY—Physician.
SALOP AND MONTGOMERY COUNTIES LUNATIC ASYLUM—Assistant Medical Officer: £80 per annum, board and lodging.
ST. MARYLEBONE GENERAL DISPENSARY, Welbeck Street—Physician-Surgeon. Applications, 4th February, to Peter Matthews, Sec.
SHEFFIELD GENERAL INFIRMARY—Assistant House-Surgeon: £65 per annum, board, lodging, etc. Applications, 10th February, to Joseph Kirk, Sec.
SOUTHWICK URBAN SANITARY DISTRICT—Medical Officer of Health. Applications, 3rd February, to J. C. Wilford, Clerk, Sunderland.
ST. MARY'S HOSPITAL, Paddington—Aural Surgeon.—Lecturer on Materia Medica.
STRATFORD-ON-AVON UNION—Medical Officer for the Workhouse; £40 per annum.
THE FRIENDS' RETREAT, near York—Medical Superintendent. Applications, 10th February, to Jonathan Burtt, Treasurer, Belle Vue, Heslington Row, York.
UNIVERSITY OF DUBLIN—King's Professor of the Institutes of Medicine: £100 per annum, and fees. Applications 1st February, to J. Magee Finny, M.B., or Joseph Carson, D.D.
WARRINGTON DISPENSARY AND HATTON'S CHARITY—Resident Surgeon-Apothecary: £180 per annum, £12 for servant's wages, furnished residence, fuel, and lighting. Applications, 2nd February, to Joseph Davies, Hon. Sec.
WEST BROMWICH UNION, Staffordshire—Medical Officer for the E. District, Oldbury: £65 per annum
WESTMINSTER HOSPITAL—Assistant-Surgeon. Applications, 10th February, to F. J. Wilson, Sec.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BRACKENRIDGE, David J., M.D., elected Assistant-Physician to the Royal Infirmary, Edinburgh, *vice* Thomas R. Fraser, M.D., resigned.
HARRER, Charles J. J., L.R.C.P.Lond., elected Honorary Medical Officer to the Eastern Dispensary in connection with the German Hospital, *vice* *A. Rasch, M.D., resigned.
MORGAN, Wm. Lewis, L.R.C.P.Lond., M.R.C.S., appointed House-Surgeon to the Radcliffe Infirmary, Oxford.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

SPURGIN.—On January 25th, at 14, Henrietta Street, Cavendish Square, the wife of Frederick W. Spurgin, L.R.C.P., of a son.

MARRIAGE.

FOX—STEPHENS.—On January 17th, at Stokefleming Church, by the Rev. E. St. Aubyn, Rector, assisted by the Rev J. Priestley Foster, Vicar of Townstal and St. Saviour's, Dartmouth, Cornelius B. Fox, M.D., of Chelmsford, to Annie Frances, youngest daughter of Vice-Admiral Stephens, Warfleet, Dartmouth.

DEATHS.

BEATTY, James, M.R.C.S.Eng., at Oldbury, Worcestershire, aged 54, on Jan. 9th.
*BYWATER, Robert Turner, L.R.C.P.Ed., at Coniston, Lancashire, aged 49. on January 19th.
CREERY, Andrew, L.R.C.P.Ed., at Dungloe, county Donegal, aged 30, on December 30th, 1873.
LEE, Newton B. C., M.R.C.S.Eng., at 26, Hanley Road, Hornsey Rise, aged 52, on January 19th.
THOMAS, William Williams, M.R.C.S.Eng., at Llanfair Caereinion, Montgomeryshire, aged 41, on January 3rd.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Prescott Hewett, London; Dr. Broadbent, London; Dr. Cobbold, London; Dr. George Johnson, London; Mr. Erichsen, London; Dr. Edis, London; Our Manchester Correspondent; Mr. T. Holmes, London; Dr. J. M. Gibbes, Napier, New Zealand; Dr. Ancell Ball, Spalding; Mr. W. Thorn, London; Dr. Wynn Williams, London; Dr. R. Barnes, London; Dr. Aveling, London; Our Dublin Correspondent; Mr. R. Smith, Sandown; Dr. Jackson, Danville, Kentucky; An Associate; Mr. O. T. Woods, Hatton, Warwick; Professor Vanzetti, Padua; The Secretary of the Pathological Society; Dr. Fox, Cockermouth; Mr. J. Smith, St. Helier's; Dr. Leet, Dublin; Dr. Sutton, London; Mr. T. Clarke, Coniston: The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Mr. Bartleet, Birmingham; Dr. P. M. Deas, Macclesfield; Mr. N. H. Stevens, London; Mr. W. F. Wade, Birmingham: Mr. C. Feldman, London; Dr. W. Hope, London; Dr. P. S. Fentem, Bakewell; The Rector of Petworth; Mr. T. M. Wills, Liverpool; Dr. F. Page, Newcastle-upon-Tyne; Mr. F. M. Beaumont, Coventry; Mr. J. Crookes, Brigley; Mr. W. M. Knipe, Melbourne; Dr. Powell, London; Dr. Davey, Northwoods; Dr. Jagielski. London; The Secretary of the Harveian Society; Mr. J. Ewens, Cerne Abbas; etc.

BOOKS, ETC., RECEIVED.

Die Krankheiten des Weiblichen Geschlechtes, vom Klinischen, Pathologischen, und Therapeutischen Standpunkte aus dargestellt. Von Dr. Hermann Beigel. Zwei Bände, Erster Band. Erlangen: F. Enke. 1873.
Diseases of the Chest: being Contributions to their Clinical History, Pathology, and Treatment. By A. T. H. Waters, M.D. London: J. and A. Churchill. Liverpool: Adam Holden. 1873.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Broadbent: Lettsomian Lecture, "Syphilitic Affections of the Brain, Meninges, and Cerebral Arteries."

TUESDAY.—Pathological Society of London, 8 P.M. Mr. Brudenell Carter: Intraocular Growth of uncertain character. Mr. Nunn: Tumour which was attached to the Cervical Vertebræ. Dr. Peacock: Dissecting Aneurism of Aorta. Mr. Sidney Jones: Cancer of the Breast. Mr. Gowlland: Three Cases of Villous Tumour of the Rectum. Mr. Howard Marsh: Sarcomatous Growths from the Bladder and Vagina of a child two years old. Dr. Silver: Specimen from a case of Acute Leucocythæmia.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Dr. Playfair, "On Puerperal Thrombosis"; Dr. Saboia, "On a new operation for Atresia Uteri": Dr. Steele, "Two Cases of Dystocia from Contracted Pelvis": and other communications.—Royal Microscopical Society, 8 P.M. Anniversary Meeting.

THURSDAY.—Harveian Society of London. 7.15 P.M.: Special Meeting of Council. 8 P.M.: Mr. J. A. Lane, "On a Case of Dislocation of the Hip"; "On a Case of Fracture of the Humerus at the Anatomical Neck" (the patient will attend); Mr. Julius Collins, "On a Case of Hirsute Growth covering both sides of the Thorax" (the patient will attend); Mr. W. Towers Smith, "On a Case of Traumatic Pneumonia."

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Authors desiring reprints of their articles published in the Journal, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

We cannot undertake to return Manuscripts not used.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

Communications respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

The Medical Press and Circular.

The hints for the preservation of health of British troops in Ashantee, which we lately printed from the MS. of a distinguished medical officer who forwarded them to us through Dr. Farquharson, have, we are glad to see, been well appreciated. Their authorship, however, is the subject of a spiteful little combination of fiction with untruth by the *Medical Press and Circular*. The writer in the *Medical Press* takes occasion, on behalf of publishers, to plead that they may, if they please, send medical books for review to popular papers. No doubt they may; but we are of opinion that respectable medical publishers generally do not, except at the request of authors. Whether they do or not, we think that daily papers are poor judges of medical treatises: and that, *pace* the *Medical Press*, if such a custom exist with any firm, it is best honoured in the breach.

Dr. Jagielski.—Duly received.

A B C (Chatham).—We fear that our correspondent's kindly suggestion cannot well be acted on. Although it may be that "the Journal finds its way everywhere", it is intended for professional readers only; and the engraving of a water-bed should not, we think. be considered shocking to the eyes of any one who takes up a medical journal.

Inquirer.—Tables showing the relations between the centigrade and Fahrenheit's thermometers are given at the end of the New Sydenham's Society's translation of Wunderlich on *Medical Thermometry*, and in Dr. Thudichum's treatise on the *Pathology of the Urine*. Tables for the conversion of French into English weights and measures are also given in Dr. Thudichum's book, in Spiers' *French and English Dictionary*, and in *Whitaker's Almanack*.

Correspondents are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

Mr. Ardley.—It is not in our power to comply with Mr. Ardley's request. The letter was not suitable for publication, and was destroyed as such.

A. B. had better place the matter in the hands of an agent.

The Registration of Midwives.

Sir,—In the Journal for November 22nd, you express a desire to learn the experience and opinions of provincial Associates on the above question; since, as you truly observe, "it is in the large towns and rural districts that midwives are most employed, and that the necessity is most felt for improving their education, and more especially regulating their competency and mode of practice". I have waited till now, in the hope that some more experienced than myself would have favoured you with their experiences and opinions; but as it is evident that the subject is to receive serious attention from the medical department of the Privy Council, as well as the profession and the public generally, and as I have within the last few years had many opportunities of observing the effects of midwives' midwifery in this large town, I send you a few remarks on what seem to me the points most worthy of attention.

That many mothers are lost annually, in consequence of gross ignorance and most culpable neglect on the part of midwives, is so well known that all I could say would be a simple repetition of an old and very sad story; while the number of infants lost for want of timely application of the forceps, early rectification of malposition, etc., is quite appalling. It is clear, therefore, that a reform is needed, but what this is to be is not so clear. But for their reckless improvidence, the working-classes could always command skilled medical attendance, with great advantage to themselves as well as benefit to the profession. The employment of midwives is, therefore, not required on account of poverty, but improvidence; and in no case is this shown so strikingly as in the case we are considering, since women are perfectly well aware months beforehand that they will require the attendance of a doctor or midwife, and in all large towns there are many practitioners willing to attend for a fee quite within the reach of labouring men; but, in spite of this, midwives are employed to a very large extent, with the results I have given above. There are, it is true, some few midwives who can be trusted to attend a case of labour which proves to be in all respects a natural one, and also to diagnose and seek medical assistance for abnormal cases. But these are exceptions, which prove the rule; and I have often had occasion to note how completely an experienced midwife has been bewildered by what would have been plain to the merest tyro of a student. I think, therefore, that everything should be done to diminish rather than increase the number of labours attended by midwives; and I hope to see all future lying-in charities established on the provident system, providing medical, not midwives', attendance, as it is, to say the least, a questionable sort of charity for ladies and gentlemen subscribers to give poor women that sort of attendance to which they themselves would not trust.

But, so long as midwives are employed, can nothing be done to remove some of the evils which exist? I think I can best answer this by giving in detail two cases which occurred during the present year in this town.

1. The wife of an engine-fitter was attended in her fifth labour by a midwife, who early in the labour found it a case of arm-presentation. Although repeatedly urged to have a doctor, she declined, saying "she could manage it herself"; and for several hours made fruitless efforts to deliver. A surgeon was called in by the husband (against the midwife's wishes) seven hours after labour commenced, and he found the patient moribund. He succeeded in delivering her of a dead child, but she died soon afterwards. An inquest was held, and the midwife censured. But now she spread a report in the neighbourhood that it was the doctor, not she, who had caused the woman's death, and was only restrained by a threat of legal proceedings. This woman had received no instruction whatever, and was worse than ignorant, being presumptive, rash, and equally stupid and obstinate, refusing to see that there was any blame due to her.

2. The wife of a labourer was attended in her seventh labour by a midwife who first saw her shortly before midnight. About four in the morning hæmorrhage occurred, and the patient became very faint. A doctor was applied to, but no mention was made to him of the serious nature of the case, and he naturally declined to go unless he were paid. No further efforts were made, and the poor woman was delivered of a dead child at ten o'clock in the forenoon, and died soon afterwards. Within a radius of half a mile there were scores of doctors, who would, I am sure, willingly have attended, had they been asked. From the evidence adduced at the inquest, it was clearly a case of placenta prævia. The midwife stated that she had never been instructed, but had practised for eleven years; and she acknowledged to me that she could neither read nor write.

These two cases are, I fear, not exceptional, but only specimens of what occur very frequently in the practice of the lower class of midwives, who are not connected with any charity, have received no instruction, and who avoid rather than seek medical assistance in cases of difficulty. The midwife in the first case was, as it seems to me, clearly open to the charge of manslaughter: but there is much reluctance shown here in sending such cases for trial, since a conviction rarely takes place. In the second case, the midwife was less culpable; but had she possessed the most ordinary knowledge of her duties, and been able to state clearly the nature of the case, there would have been no difficulty in procuring medical attendance. Humanly speaking, these two women's lives might have been saved but for midwives' midwifery.

It is this irresponsibility of midwives which is so dangerous, since neither is the midwife deterred from practising again, nor is any warning held out to others of her class. It is only a "nine days' wonder", and all is forgotten again. I think, therefore, that the scheme of the Obstetrical Society is capable of doing great service. I do not fear that licensing and supervising midwives' practice will lead to their being more extensively employed than now—quite the reverse. For, supposing the supervision to be worthy of the name, there are, according to my experience, very few midwives who could continue under it, even supposing that they had undergone instruction and passed a satisfactory examination. So far from the obstetric being that department of medicine most suitable for women, it is, in my judgment, the one for which they are least suited. And it is because I believe that the registration of midwives will lead to their almost total extinction, that I wish the scheme all prosperity. I am, etc.,

Liverpool, Dec. 23rd, 1873. Fred. W. Lowndes.

Notices of Births, Marriages, Deaths, and Appointments, intended for insertion in the Journal, should arrive at the Office not later than 10 A.M. on Thursday.

Professor Vanzetti (Padua).—We greatly regret to be unable to comply with the request, as many of the numbers of the Journal of the last and previous years are out of print. The rest of our esteemed correspondent's wish will be carried out by the manager.

The British Medical Benevolent Fund.

We have to acknowledge a vote of thanks from the Committee of the British Medical Benevolent Fund. It is an incumbent duty to render assistance to that excellent institution, and we feel it a pleasure to be able from time to time to advocate its claims.

Treatment of Hooping-Cough.

Sir,—For a long time I have used with great success a mixture composed of chloral hydrate, 18 grains; dilute nitric acid, 25 minims; ipecacuanha wine, $1\frac{1}{2}$ drachms: syrup and water, $1\frac{1}{2}$ ounces. The dose for a child from two to four years old is a teaspoonful every three or four hours. If the tongue have been furred and the bowels disordered, I have substituted carbonate of soda and nitrate of potash for the nitric acid, and have given a dose of rhubarb and grey powder at bedtime. Some years ago, I was in the habit of using tincture of belladonna, but much prefer the above formula. I am, etc., James Crocker.

Bingley, January 23rd.

Paralysis of the Bladder.

Sir,—In 1869, I sent some notes of "A Case of Paralysis of the Bladder after Retention from Enlarged Prostate, cure by Injection of the Tinct. Ferri Perchlor.," to the *Medical Times*. Since that date, I have had two similar cases, where the same treatment has been successful, after the simple washing out the bladder with cold water and a solution of Condy's fluid (with the other usual means) had failed. In every case I felt the bladder contract on the catheter as the fluid escaped; and I feel sure the perchloride of iron was the cause of that contraction. In the two first cases, the injection was repeated, causing some little pain. In the third case, where the paralysis had not existed so long, a single injection sufficed. Now, without contending that there is any very perfect analogy between a bladder paralysed by over-distension and a relaxed and bleeding uterus, I do believe that the local application of the perchloride of iron has the same effect in the latter case, as I am sure it had in the former.

My attention has been called to the use of tinctura lyttæ as a topical application in uterine hæmorrhage, by a case to which I was called last week. I was sent for, about 9 A.M., to a woman living about three miles away. I was informed the child had been born since 3 A.M., but the after-birth had not come away. On my arrival, I found the woman pale and collapsed; no pulse at the wrist, and only slight pulsation of the abdominal aorta. The old midwife informed me "the cord was very rotten, and had broken off." I found, on examination (as I expected from previous experience of "midwives' rotten cord") that the placenta was closely adherent. With some little difficulty, I turned out the clots, and peeled off and removed the placenta; but could get no contraction of the uterus. As the woman was "in extremis," I determined on injecting a solution of perchloride of iron; and put, as I thought, about an ounce of the tincture into half-a-pint of water. After syringing the uterus with this, I found the hæmorrhage stop; but, to my surprise, no firm contraction ensued. I kept up external manual pressure on the uterus and abdominal aorta; administered ammonia, beef-tea, etc., and the patient gradually rallied. On looking at my bottles, I found that I had, in my hurry, used tinctura lyttæ, instead of tinctura ferri. The woman has gone on very well up to the present time (five days), and bids fair to make a rapid recovery. I do not think the entire stoppage of hæmorrhage was due to the removal of the placenta, as there was no firm contraction; even, after the injection, the os was quite patulous.

Without venturing to give an opinion as to the value of lytta from this single case, I shall feel myself justified, should another opportunity unfortunately occur, in giving it another trial. I am, etc., C. H. Watts Parkinson.

Wimborne, January 12th, 1874.

Sanitary State of Cromer.

Sir,—In the Journal of December 20th, 1873, you published Mr. Wanklyn's analysis of the water taken from two of the pumps in this place, from which a large portion of the inhabitants obtain their water-supply. I am not going to question the correctness of Mr. Wankly's chemical analysis, and I shall leave the vexed question of "nitrates" to be fought out between him and Messrs. Voelcker and Letheby; and if Mr. Wanklyn had not accompanied his report with injurious and unnecessary comments, I should have made no complaint. But as Cromer depends very much as a health-resort, upon its character with the public, I must ask you to publish, as the answer to Mr. Wanklyn's charges, what has been the actual death-rate for the last eight years, which is as far back as the records of the Burial Board will enable me to go.

	No. of burials.		No. of burials.
1866	9	1870	15
1867	19	1871	24
1868	15	1872	16
1869	16	1873	23

The population of Cromer, according to the census of 1871, was 1365. These figures, therefore, will give an annual death-rate of 12.52 per 1000 of the population. I believe this will compare favourably with the healthiest places in the kingdom. I am, etc., James Cooper.

Colne Lodge, Cromer, January 20th, 1874.

Curious Will.—Dr. Ellerby died in London in February 1827. He was a member of the Society of Friends. He passed for being a very eccentric character, and all his habits bore the stamp of originality. In his will are to be found some singular clauses. Among them, the following:—"Item.—I desire that immediately after my death my body shall be carried to the Anatomical Museum in Aldersgate Street, and shall be there dissected by Drs. Lawrence, Tyrrell, and Wardrop, in order that the cause of my malady may be well understood. Item.—I bequeath my heart to Mr. W., anatomist; my lungs to Mr. R.; and my brains to Mr. F., in order that they may preserve them from decomposition: and I declare that if these gentlemen shall fail faithfully to execute these my last wishes in this respect, I will come—if it should be by any means possible—and torment them until they shall comply." This threat did not much alarm the above-named parties, for it appears that they unhesitatingly renounced their several legacies.—*Illustrated London News.*

Notice to Advertisers.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. Fowke, not later than *Thursday*, twelve o'clock.

Mr. Smith (St. Helier's) will find, on reference to standard works, that the symptom of convulsions at the sound of falling water, which he has observed, is not an uncommon one in hydrophobia.

Asylums for Imbeciles.

Dr. W. C. Cummins.—Besides the Institution for Imbeciles at Normansfield, Hampton Wick (Dr. Langdon Down's), there are similar ones at Belvedere, Bath; at Liberton, near Edinburgh; at Colville House, Lower Norwood; and at Baldovans, Dundee.

Dr. Fox's manly and candid letter disarms resentment. We thank him for so frankly withdrawing expressions which were utterly unjust and entirely contrary to the facts. Dr. Fox is doing in his district excellent work, to which we have already adverted; and we shall receive with satisfaction his reports and comments.

A Circular.

"Notice.—W. J. Bridger, Surgeon, etc., having purchased the practice of the late Dr. Pinchard, of Cottenham, begs most respectfully to inform the inhabitants in and around this vicinity that he is fully prepared to carry on the practice with care and assiduity from his residence, the High Street, Cottenham, Cambs."—(Cut from Cambridge paper.) Mr. Bridger's advertisement only requires the addition of "Orders promptly attended to—Families waited on daily", to be quite tradesmanlike. These advertisements are becoming very general.

Treatment of Hooping-Cough.

Sir,—In reply to your correspondent "Inquirer", I have found the following mixture most beneficial in hooping-cough; say, for a child two years old. Sodæ bicarb. gr. iij; extr. conii, gr. j; vini ipecac. min. v; aquæ cinnamomi, drs. ij; to be taken every six hours. As soon as the child expectorates freely without much distress, small doses of alum prove very efficacious in lessening the inordinate secretion of mucus. I generally prescribe 2 grains of sulphate of alumina, with 10 minims of syrup of orange and two teaspoonfuls of water, every six hours. I shall be glad to learn Inquirer's experience of this treatment after a fair trial.

I am, etc., Maurice G. Evans, M.D.

Glastonbury, January 20th, 1874.

Rusticus (Altrincham).—We really fear that Mr. Harry Lobb is incorrigible. His advertisements have already attracted the censure of his College; but, apparently, without avail. "Hypogastria", the advertisement states, "is universally tabooed by the profession." "Hypogastria is curable"; therein lies a difference, for apparently Mr. Lobb is not.

On reading Prescott's *History of the Reign of Ferdinand and Isabella*, it is there stated that during the religious wars between the Spaniards and the Moors in the fifteenth century, that the arrows of the former were in some instances poisoned with the juice of monkshood (aconite), and that the effect was neutralised by the Moors washing the wound with the juice of "quince". May this not be a hint worth observing at a time when the antidotal effects of poison are being experimented on? J. Gardner, M.R.C.P.Ed., etc.. Box.

Nitrite of Amyl in Epilepsy.

Sir,—I should feel thankful for information as to the administration of nitrite of amyl in epilepsy, as to quantity, continuance, etc.; also, as to the symptoms of sufficient administration; and any other information your correspondent could kindly afford, to Inexperience.

The Physician's Opera-Glass.—The following story is told of the latter by a French journal. "A physician, officially connected with the prison of La Force, and much beloved by his light-fingered patients, perceived on leaving the Variétés one evening that his pocket had been picked, and that his opera-glass was gone. Next day, on meeting the denizens of La Force, he expressed his displeasure at the occurrence. 'It is all very well,' said he, 'for you to say I am popular among you, but I am treated just as others are. Some of your friends contrived to relieve me of my opera-glass last night at the Variétés.' 'That was only because they did not know you, doctor,' replied a prisoner. 'Who was on duty at the Variétés last night,' he inquired, turning to a comrade. The answer was given in a whisper. 'You shall have your glass to-morrow,' he added. Next day, a person called on the physician's wife. 'Here,' said he, 'are all the opera-glasses stolen two nights ago at the Variétés; please to point out the doctor's.' The lady having done so, the obliging pickpocket handed it to her, restored the others to their cases, and disappeared."—*Pall Mall Gazette.*

The Varieties of Phthisis.

Sir,—It would be a great favour to many busy practitioners if an experienced physician would lay concisely before them, in the pages of your valuable Journal, some practical hints on the method of distinguishing between the varieties of phthisis. That there are varieties of the disease everyone admits; but what they are it is exceedingly difficult to gather. What is wanted is not a string of intricate pathological distinctions applicable only on the *post mortem* table, but a brief, intelligible statement of the different forms founded upon the history and the physical signs; such a *résumé*, in short, as would guide the anxious practitioner, while still standing at the patient's bedside, in arriving at a definite and rational line of treatment. I am aware that papers have appeared on this subject in the Journal, but the matter seems to have dropped without having excited anything like the attention it deserves. I am, etc., M.B.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian: The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail; The Blackburn Times: The Glasgow News; The Glasgow Herald: The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

CLINICAL LECTURE
ON
THE HOSPITAL PLAGUES.

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the London Hospital, and to the Hospital for Skin-Diseases.

GENTLEMEN,—I wish to give you in the present lecture a sort of bird's-eye view of certain diseases which are apt to occur with especial severity and more than usual frequency in hospital practice, and which have been aptly termed the plagues of the hospital surgeon. I allude to those which are known under the names of erysipelas, pyæmia, septicæmia, and hospital gangrene. We have on many former occasions discussed each of these maladies separately. I propose now to give you a sort of recapitulation of the remarks which, in a more diffuse manner, have been many times repeated at the bedside. In beginning, let me say that it is hopeless to get clear ideas on this rather complicated subject, unless we carefully define the terms that we use. I must beg you to try to keep in mind throughout the lecture the special explanations of terms which I shall give.

We will take first the commonest, and for that reason the most important, of the diseases in question, Erysipelas. By this term, we designate a peculiar form of inflammation which shows a remarkable tendency to spread over large surfaces, subsiding where it commenced, and advancing to adjacent parts. It is characterised by free fluid effusion producing soft œdema, by paralysis of the blood-vessels producing vivid redness, and by fever disturbance or pyrexia, which is proportionate to the extent of skin involved. In connection with the tendency to fluid effusion, vesications are frequently seen under the epidermis, and pitting on pressure is always noticed. The area of inflamed skin with capillary paralysis is usually abruptly defined, and a well-marked margin is consequently a very characteristic symptom in most cases. A typical example of erysipelas (or, perhaps, we had better say, of erysipelatous inflammation of the skin) may be recognised at a glance by the vivid redness, the spreading edge, the vesications, and the puffy swelling. There may be minor degrees of erysipelas in which the characters are ill marked, there may be peculiar forms in which one or more of the usual symptoms are absent, but, for the present, I will speak only of what is the rule. Now, I am anxious that you should understand clearly my position, when I assert that erysipelas is simply a peculiar type of the inflammatory process, and not a specific disease. The distinction is of the utmost importance. A specific disease is one which can be bred only by the implantation of its seeds. Small-pox, measles, and syphilis are specific diseases; and they can be produced, as everyone knows, only by the introduction of their specific germs. You may know a specific disease by its having a special course and observing definite stages. It takes time to develope, the incubative stage; then has a stage of outbreak, usually attended by a skin-rash, the exanthem or efflorescence stage; and, lastly, has, after lasting for a definite period, its stage of steady decline. Unless you interfere with its evolution by treatment, these stages will be, within certain limits, of the same average duration in all persons. That a specific disease is a blood-malady, will be proved by the symmetry with which its manifestations are produced; and, lastly, by the fact that the patient's body remains for a longer or shorter period, but often for life, insusceptibile of a repetition of the phenomena. Now, keeping these tests in mind, everyone must acknowledge, after five minutes' thought, that erysipelas is not a specific fever. It observes no definite stages, can be produced *de novo*, is never symmetrical, except by accident, and, so far from protecting the patient's system, leaves him more susceptible than before. In the exanthemata, the skin-eruption is produced by the blood-disease, and does not appear until after the febrile disturbance has set in; whilst in erysipelas the blood-changes are secondary to the skin-inflammation, and the pyrexia does not precede the local disease. To group erysipelas with the exanthemata, simply because it is attended by redness of the skin, is to take a jump in classification little less bold than that ventured by the man who, seeing an ass for the first time, declared that he had "now found the father of all the rabbits." We must not be guided by length of ears alone, but must be content in a painstaking manner to estimate all the features of peculiarity which are presented for our consideration. I most sincerely hope that our systematic works, most of which still speak of erysipelas as a specific fever, will desist from doing so, or else justify the term. It is no question of mere words; for our notions as to the cause, the method of prevention, and modes of treatment, will depend upon whether or not my assertion is correct.

You will meet with erysipelas in our wards chiefly under two forms —what is called idiopathic or medical erysipelas, and surgical or traumatic erysipelas. The two are in most cases very different; the latter being a very serious, and the former a comparatively mild disease. Idiopathic erysipelas almost always begins on the head or face, and rarely spreads lower than the shoulders, and it often occurs over and over again in the same patient, each attack being milder than its predecessors. For the most part, it is first attacks only which are attended by any danger to life. As regards the causation of idiopathic erysipelas, one fact is certain, and from it, I think, we may venture to infer a good deal. It is undoubtedly very often caused by exposure to draughts. In almost all first cases, this influence as an exciting cause has been recognised, and those who are liable to recurrent attacks usually know well what to avoid. It is rare, indeed, to find anyone who suspects stomach-disturbance or any other derangement of general health as the cause. It may occur to those who are apparently in perfect health, and, indeed, all the facts with which I am acquainted justify the conclusion that it is a local inflammation produced by a local cause. If the evidence in this direction is strong in the case of medical erysipelas, it is yet more so as regards the traumatic form, for here we have existence of a definite local lesion. Now, although traumatic erysipelas is in undoubted connection with and dependence upon the existence of wounds, yet it is not specially associated with severe wounds. The most trivial break of surface may suffice, if certain other conditions are added. What are those conditions? The following may, I think, be enumerated:—1, exposure of the unhealed wound to cold: let a patient with a scalp-wound and a bald head sleep with an open window above, ten to one but the result will be erysipelas—this is what we have just asserted to be true of the idiopathic form, which follows exposure to cold air, especially if it take place during sleep; 2, excessive irritation of the wound—thus it is highly probable that tight stitches are occasional causes, and that wounds attended by contusion or laceration, such, for instance, as saw-cuts, are more liable to erysipelas than others; 3, the introduction of irritants, and, above all, of the secretions of unhealthy wounds. This involves the doctrine of contagion; and respecting it, I hold strongly that there cannot be the least doubt that the secretions of erysipelas are capable of conveying the disease from patient to patient. All living pus, indeed all living secretions produced by inflamed parts, are probably capable of producing, when transferred under favourable circumstances and to appropriate soils, inflammations similar to those from which they had their origin. The truth of this we see exemplified every day in the case of gonorrhœa, gonorrhœal ophthalmia, purulent ophthalmia, catarrhal ophthalmia, and many other diseases. Its assertion involves the idea of specificity only in a very minor degree; and, at any rate, it is but a specific local disease, not a blood-malady, which is the product. In this sense, we assert the contagiousness of erysipelas. It is probably very contagious, that is, a very small quantity of the *materies* may suffice, and it is by no means certain that it may not sometimes spread through short distances by aërial infection. The frequency with which a patient in a bed adjacent to one suffering from erysipelas contracts it, is familiar to all surgeons. The cases, however, in which surgeons engaged in dressing erysipelas have been the means of producing metritis and puerperal fever in their midwifery patients, are amongst the most instructive. In these, we are obliged to believe that the contagion may cling about the hands of the surgeon for days together, and in spite of repeated washing, or possibly that his coat-cuffs may be its domicile. Surely, we cannot hesitate to admit that what has been so well proved in the case of the accoucheur may be possible also to the nurse, the dresser, or the operating surgeon, and that the hands of all these may, without any unusual degree of carelessness, become the means of conveying contagion.

Guided by the considerations just stated, we seem to have clear indications for the prevention of erysipelas in hospital practice. We have first to prevent its autogenetic production by placing all wounds under favourable conditions as regards freedom from irritation, and, above all, not risking any exposure to draughts of cold air; secondly, if, in spite of all precaution, cases have arisen in our wards, or if we have been compelled to admit them from without, it is our duty to guard against the contagious spread of the disease by most carefully isolating all its subjects. No one who has anything to do with healthy wounds ought to go near erysipelas cases.

If you ask me whether erysipelatous inflammation is productive of blood-poisoning, I answer, No, not as a rule. It causes over-heating of the blood and it irritates the nervous system, and is thus productive of the usual phenomena of pyrexia; but these are always proportionate to the extent of the local disease, and they subside with its subsidence. There is not, as a rule, any coagulation of the blood in the veins, and thus no risk of blood-poisoning in the worse sense of that term. Most erysipelas patients recover. If death occur, it is usually due to great extent of disease, to the importance of the part implicated, or to unusual severity in the type of the inflammation, causing gangrene, etc. In a few cases, however, we must admit that symptoms of what is called septicæmia are developed, and in a few others those of pyæmia.

We will now pass to the consideration of these latter maladies. In reference to Pyæmia, I believe you will find all authorities agreed that, when a patient suffers during life from repeated rigors, and presents after death numerous abscesses in the viscera, this term is applicable. These two things generally go together; when rigors are numerous and well marked, internal abscesses will scarcely ever be wanting. There are, however, a great number of cases which are called pyæmia in which these conditions are ill marked, and some in which it is extremely difficult to say whether the term ought to be used or not. The decision will rest upon the occurrence or otherwise of abscesses. In proportion to the proved multiplicity of the suppuration, will the pyæmic nature of the malady be established. We must ask next what is the cause of the abscesses; and to this the reply is, that they result from the embolic arrest of fragments of material detached from primary phlebitic clots. This material is not of the nature of an inorganic or even merely fibrinous plug; but, owing either to its being living, or to its being in process of decomposition, it is capable of setting up suppurative action at the site of its arrest. We have now, I think, advanced a very definite step in our conception of what pyæmia is. There is no pyæmia unless fragments are in circulation capable of acting, when detained, as inducers of inflammation, and these fragments in turn can be derived only from the interior of diseased veins. The phenomena of pyæmia have their origin in disease of the veins. We will not stop to ask whether the lining membrane of veins can suppurate or not; it is sufficient for our argument that all admit that the veins can inflame, and that, as one of the results of their inflammation, clots or concrete masses may form within them, which, in turn, may break up and furnish emboli of the most dangerous kind. We admit most fully that it is absolutely impossible to distinguish a pus-cell from a white blood-corpuscle; that, indeed, they are probably identical organisms; and that thus no one can possibly prove the presence of pus in the blood. This is a mere matter of detail. We know quite enough to admit of our defining pyæmia as the disease produced by the circulation of embola derived from the interior of an inflamed vein. It would, perhaps, be better to call the malady phlebitic blood-poisoning; but the name "pyæmia" is in possession, is fairly well understood, and will probably keep its place, with the conventional limitation of its meaning just suggested.

Now, in hospital, we meet with some splendidly definite examples of phlebitic blood-poisoning (=pyæmia). They occur in connection with contusions of bone, which have been followed by osteitis and death, and are especially common after severe lacerations of the scalp. They occur, also, where bones have been sawn across in amputations, or broken in compound fractures. They are met with also after operations on veins, ligature of piles, phlebotomy, tying of varicose veins, and the like. Lastly, we meet with them occasionally in connection with carbuncles and other unhealthy forms of skin-inflammation. They are rare after operations which do not involve either veins or bone. Now, the reason why bones and veins are classed together in this association is easily given. In the cancelli of bones are large venous channels, and when the surrounding bone is in process of death, there is great risk that these channels may become diseased, and that plugs may form within them. The slowness of the process of death in bone favours this result, for the more rapid the death of an inflamed part, and the separation of its structure from the living, the less the danger of absorption of its fluids. In the most characteristic cases of pyæmia, the patient often appears to be going on very well until the day of the first rigor; and this rigor, in all probability, denotes the formation of the first abscess. Thus the inflammation of the bone and vein, or of the vein only, which was to cause the patient's death, may have been latent, and the first symptom to excite alarm may be one proving that blood-contamination has taken place, and that embola, derived from an inflamed vein, are in circulation. It is by no means a matter of mere chance as to where these embola stick fast. They will probably, if large, be filtered out by the first capillary which they encounter; but if they have once passed through the lungs and heart and gained the systemic arteries, they may then be expected to stop wherever the capillaries are smallest. If there be any part which has been injured, and where already, as the result of contusion or fracture, some blood-vessels are stopped, there very probably an embolon may be arrested and do its work. The capillaries of the lungs and liver are very likely to stop them, and so also the small vessels in proximity with the cartilages of the joints.

Now, as regards the autogenetic production of pyæmia, no doubt can be felt that most of the examples of it which we see are of this kind. We admit into hospital many of the worst cases with pyæmic symptoms already well marked. Young children with acute periostitis (osteitis) of the long or flat bones, and men with laceration of the scalp and contusion of the skull, who have not thought themselves sufficiently ill to seek admission until the first rigor occurred, such are our usual subjects. On the other hand, although I firmly believe that many pyæmic cases originate in hospitals in connection with contagion, yet it is much more difficult to prove this than in the case of erysipelas. Many of the cases beginning in hospitals are also probably in no way connected with hospital influences, and would have occurred just the same had the patient been treated at home. Still I repeat, whatever causes a wound, in connection with a broken or cut bone or which involves veins, to become unhealthy, increases the risk that pyæmia may result. Not improbably it, like erysipelas, may be produced by contagion from the surgeon's hands or instruments.

In reference, therefore, to the prevention of pyæmia, it may be asserted that the majority of cases are not susceptible of prevention in any way, whilst certain others may be prevented by precisely the same measures hinted at in the case of erysipelas. Nothing can be more absurd than to speak of pyæmia as if it were a disease of hospitals only, for it occurs in private houses, and is, indeed, common in the lower animals (*e. g.* sheep and lambs) treated in the open field. If, however, pyæmia be found to be frequent in a hospital, if it occur after operations, then at once a suspicion should be aroused that it is not now autogenetic, but the result of contagion.

There are numerous points of much clinical interest in connection with pyæmia which I must for the present pass by; such, for instance, as the remarkable difference in the rapidity of development of the symptoms in different cases—the difference between the cases in which external abscesses form and those in which the abscesses are in the viscera. I must, however, before leaving the subject, remind you that the form of phlebitis which causes pyæmia is very different from another form which we not unfrequently witness in connection with varices, in which fibrinous plugging takes place. In these latter, there is no danger of softening or decomposition of the plug, and scarcely any as to its mechanical detachment. The plug which results from traumatic phlebitis is very different; it is much softer, and it is loaded with cell-elements in addition to the fibrine. It is also attended not unfrequently by an almost gangrenous condition of the coats of the vein.

I have next to try to give you some idea of the class of cases to which we give the name Septicæmia or blood-poisoning. In these, the patient often dies very quickly, say within a few days of the injury, and long before phlebitic pyæmia could run its course. A rigor usually ushers in the attack, but it is not repeated, as in pyæmia; and, at the necropsy, congestions of the various viscera are found, but there are no isolated abscesses. Thus we may infer that this condition is not consequent upon phlebitis, or, at any rate, not upon the detachment of embola. This inference is supported by the fact that these cases do not follow operations on the veins or bones at all specially, but occur mainly after injuries to soft parts, or as the result of gangrenous inflammation of them. The phenomena of a severe case of septicæmia would suggest the inference that all the blood had passed into a state bordering on decomposition; and nothing is more remarkable than the extreme rapidity with which putrefaction sets in after death. It is sometimes very difficult to tell whether the symptoms during life are due to blood-poisoning or to nervous shock; indeed, it is quite an open question, whether nerve-shock does not take a large share in the production of the blood-changes which we name septicæmia. An elderly gentleman fell and dislocated his thumb. It was reduced; but the next day he was sick and shivery; and on the next day he was very ill, and had a scarlet efflorescence on his chest and abdomen. His thumb became gangrenous, and he died on the fifth day. Was this blood-poisoning, or merely nervous shock from the commencing gangrene? In another case, I amputated through the leg in a case in which the femoral artery was obliterated. Gangrene of the stump set in, and extended rapidly to the knee. The man was sick, delirious, and with a pulse at 160. Was he suffering from blood-poisoning as the result of absorption from the gangrenous part, or was he merely the subject of nervous shock? I amputated again high up in the thigh; his symptoms at once subsided, and he recovered. The event seemed to prove that, after all, it was nothing but shock; yet, had I left the limb on, no doubt he would have rapidly died, with the usual phenomena of "septicæmia." Thus we may admit that there is some difficulty in rightly interpreting the cases in which violent constitutional disturbance occurs in connexion with advancing gangrene, or severe inflammation threatening it. These supply us with a considerable proportion of the cases of so-called septicæmia. Almost always, indeed, the local inflammation runs high. Of course, with gangrene, or with very violent inflammation, it is always possible that the fluids may be taken up from the dying parts, which may act as blood-poisons; but, on the other hand, as we have seen, it is possible to explain the symptoms in another way.

The cases in which occasionally surgeons or students die rapidly after dissection-pricks or wounds received in operating, are good examples of what is meant by septicæmia, as distinct from pyæmia; and I may remark, that not unfrequently there is evidence of violent implication of the lymphatic system. Now and then, but I think only rarely, a patient dies of septicæmia after an operation. In this disease, the convalescence may, in case of recovery, be protracted; but the outbreak of the symptoms is never long delayed, and in this respect the malady contrasts strongly with what is the case in pyæmia.

What the precise nature of the deleterious *materies* in septicæmia may be, whether living or dead, we know not; but this we assert, in contradistinction to pyæmia, that it is fluid, and has no tendency to cause embolic abscesses. Although it is not unfrequently seen after wounds which might be supposed to be possibly contaminated by some decomposing animal material (dissection-wounds, etc), yet we must clearly understand that it may originate where nothing of the kind was possible, as, for instance, after pricks with sewing-needles and the like. As to any predisposing condition of the general health, we can assert nothing. It is sometimes even imagined that what is called septicæmia may occur without any wound at all, but simply by cutaneous or pulmonary absorption. Thus you will see that the maladies grouped under this name differ considerably amongst themselves, and that their exact nature is far from being as yet well understood. From this, the vaguest group of our hospital plagues, I now turn your attention to the most definite.

The malady to which we give the name of Hospital Gangrene is one easily diagnosed, and in the large majority of cases its cause can be assigned with confidence. It prevails, when it does occur, as an epidemic; and, beyond all reasonable doubt, the cause of its spread is contagion. That the secretions from a sore in a state of phagedænic inflammation will breed phagedæna, as well in the subject of the disease as in others, is, I hold, most certain. It is by acting on this item of knowledge that we seek to cure the disease; and we must work in the same direction, if we wish to prevent it.

There are, I expect, but few present who have ever seen an example of hospital gangrene. It is not a malady which occurs sporadically; we have no single cases now and then on which to demonstrate its characters; and I am thankful to say we have, in this hospital, had no epidemic for many years. I recollect three epidemics of it, two of them in this hospital. It is a horrible plague, and, on the last occasion, it spread so extensively, and persisted for so long, that we were obliged to desist from operating, excepting in the most urgent cases. Wound after wound was attacked, and in patients of the most various states of health. At length, after having been with us, I think, nearly a year, it ceased, and we have not, so far as I know, had a case since. Cases of phagedæna, in connection with syphilis, we have had plenty of; but in no case have wounds in non-syphilitic persons been attacked, and it now never for a moment enters into our calculations of the risks of an operation. The hospital has been more crowded than ever; our cases have been of the same kind as formerly, and drawn from the same classes; but of hospital gangrene, we see nothing. I attribute this immunity to our care in isolating all venereal examples of the disease. In connection with this statement, let me repeat what I have often before said, that I cannot help suspecting that hospital gangrene usually starts from syphilitic cases. We have abundant, almost every-day proof that the syphilitic inflammation can originate it. It may attack the primary sore, the secondary eruption, or the tertiary ulcer. Without going to the length of denying that it may arise from other causes, I will simply say that I have never seen examples of its autogenesis under other conditions. To this, I may add that the last epidemic of it in this hospital began in a corner of Mellish ward, close to the bed of a young man who had a phagedænic syphilitic sore. During the last few years, I have often stated my opinion on this point to you; I have even gone so far as to suggest that syphilis may, for practical purposes, be considered the parent of phagedæna. You may judge of the extreme interest with which, about a year ago, in conversation with Mr. Pollock of St. George's Hospital, I learnt that he entertained the same opinion as to the source of origin of the last epidemic of gangrene from which they suffered there. Mr. Pollock, without knowing my belief, told me that he had always suspected that it started from a syphilitic case which had been admitted into an open surgical ward.[*] Without being able to state that any observations have as yet been made of the disease, as met with in army hospitals, which support my opinion, I believe I may suggest that there are none which confute it, and that the conditions of these hospitals are usually such as to make it quite possible. Nothing is more certain than that overcrowding, neglect of dressing, and a bad dietary are usually quite inadequate to the genesis of hospital gangrene. If once began, they all, as we may imagine, facilitate its spread, but something else is required to start it. I have suggested a possibility as to what that originating influence is, and it will be for future observation to confirm or refute the conjecture.

And now, gentlemen, I must conclude this very fragmentary lecture by an attempt to sum up my conclusions. I have tried to insist that, in investigating the hospital plagues, we must keep clearly in mind two things—the causes of their origin (autogenesis) and the causes of their spread. Respecting one of the four, septicæmia, my suggestion has been that it rarely spreads as an epidemic, and that most of its examples are, in a certain sense, autogenetic. It may occur almost as easily out of hospitals as in them. With the other three, the case stands, however, very differently, since all of them may spread by contagion, and may become prevalent as genuine plagues in institutions where surgical cases are congregated. Pyæmia may arise by autogenesis whenever a vein inflames or is injured, or whenever a bone is contused, or when decomposing matter is left in contact with the uterine sinuses. It is common, and will always be so, in spite of all our precautions, both in hospitals and out of hospitals, in association with such causes as these. It may spread as an epidemic, if patients, with wounded veins, or broken bones, or torn uterine sinuses, be exposed to the contagion of erysipelas, or to the influence of certain other animal poisons. By preventing such risk, we may prevent pyæmia from becoming prevalent beyond a certain point. There is no hope of exterminating it, and there is, further, no reason to think that it is in any special way connected with the health of the patient, the food which he eats, or the air which he breathes. Erysipelas is very easily produced *de novo*, and also very easily spreads by contagion. In preventing both its autogenesis and its spread, the surgeon has much power and much responsibility. He must see that his patients' wounds are kept as healthy as possible; that their secretions are not allowed to accumulate, and they are not exposed to the influence of draughts. Probably, numberless cases originate in hospitals in connection with exposure to open windows, which would be avoided in private houses. But the surgeon's main duty is to prevent its spreading by contagion, by scrupulously sending every case of erysipelas out of the ward, and by insisting that his dressers, nurses, etc., avoid, as far as possible, all risks of transference of secretions. As seldom as possible should his hands be allowed to touch an erysipelatous surface, and the most careful precautions, as regards washing, should always follow. If engaged in operating practice or in obstetrics, he should, as far as practicable, decline to see erysipelas cases. In reference to hospital gangrene, we have seen that its autogenesis is common in connection with syphilis, and very rare under other conditions, and that our duty, in order to prevent it, is to exclude syphilitic phagedæna from surgical wards.

Briefly, then, as regards the prevention of the epidemic spread of these pests, I have to beg you to believe in CONTAGION, *and in nothing else.* Give your patients good food and good air; they will be the better for what you can do in these directions; but, if by attention either to diet or to ventilation, you hope to prevent a single case of erysipelas, pyæmia, or hospital gangrene, you are leaning on a reed. There is but one means by which this may be done, by which your wards may be kept healthy and your patients saved, and that is the prompt and systematic isolation of all contagious cases.

Jacobi's Food for Infants.—Dr. J. D. Nourse writes in the *Ohio Clinic*, that a lady in his practice having lost three children within six months of their births from chronic diarrhœa as a consequence of artificial lactation, he urged her to try the food recommended by Dr. Jacobi of New York, in the case of an infant three months old, who was having from twelve to fifteen discharges every twenty-four hours as the result of artificial feeding, and to all appearance would die. The mother had a dread of diluted milk in any form, and in this case, but without success, was using cracker-water, diluted cream, etc. She gave the food as directed; and, after two months' use, the child was growing and hearty, without diarrhœa. Dr. Nourse has recommended it in several other cases, and is confident it is the best artificial food that can be used. It is prepared as follows. Crack a teaspoonful of barley in a common coffee-mill, then boil it fifteen minutes in a gill of water, adding a pinch of salt. Then strain, and, for a young child, add half as much cow's milk as you have barley-water, and, whilst tepid, nurse from a nursing bottle. Sweeten lightly with sugar. If the bowels be costive, use oatmeal in place of barley. Keep the bottle clean.

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[*] I have Mr. Pollock's permission to give publicity to this statement. I may take advantage of this note to state also, that the term *Hospital Plagues*, which heads my lecture, is not original, but is one amongst the many singularly telling epithets which we owe to my former teacher Sir James Paget. For the term autogenesis, in the sense in which I have used it, I think I am indebted to Dr. Barnes.

LETTSOMIAN LECTURES
ON
SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

Lecture II.—*Concluded.*

Syphilitic Affections of the Medulla Oblongata and Pons.—The intracranial prolongation of the spinal cord forming the medulla oblongata and pons Varolii is complicated in its structure and function, not only by the separation of the nerve-nuclei from each other, in accordance with the specialisation of their functions, but by the change in the relations of the grey matter and tracts of white fibres with each other, the decussation of the motor tracts, and the connection of the cerebellum with the spinal axis which is here effected. The consequences of lesions here are, therefore, more varied, and the causes which may give rise to them are increased in number. These parts, for example, may be affected by disease in the cerebellum, or by aneurism of the basilar artery.

The increased dimensions of the spinal axis, moreover, permit unilateral limitation of a morbid change; and this is not uncommon, although the two halves are fused together, while unilateral mischief is rarely seen in the cord, which is almost completely divided longitudinally by the fissures. Possibly, however, the vascular membrane which dips into the fissures is more efficient in communicating a morbid change than the nervous structures.

The general results of disease in the medulla and pons are some interference with the sensory or motor tract, proceeding from the cord to the sensori-motor ganglia, together with disturbance or abolition of the function of one or more of the nerve-nuclei. It is seldom that we can come to the conclusion that there is disease here from sensory or motor paralysis of the limbs alone, or from affections of the nerves which have their origin in the intracranial part of the spinal axis alone, although this may be done occasionally when two nerves are simultaneously paralysed, the nuclei of which are conjoined or in close proximity, while the nerves take a different course after their emergence from the centre, as in the case of the sixth and seventh. The grouping of symptoms arising from the inclusion in a diseased area of several nerve-nuclei may be very varied; usually, the symptoms afford the means of making a very precise localisation of the lesion by the application of anatomical and physiological knowledge. Of course, disease here is attended with great danger to life, the slightest interference with the reflex centres of the respiratory and cardiac movements being fatal. Sudden death is, therefore, common. The nature of the morbid change will be arrived at by considerations such as those made use of in determining the probable cause of paraplegia. A slow, but irregular, progress of the affection will favour the hypothesis of syphilis; but the morbid changes resulting from syphilis do not specially affect the surface of the medulla and pons, according to Dr. Moxon's dictum, but rather the substance.

The progressive labio-glosso-laryngeal paralysis, which is the counterpart of locomotor ataxy, is not syphilitic; but it is quite possible for syphilitic change to involve the same parts of the medulla, and give rise to analogous or even identical symptoms. The course of the disease will, however, be different.

Case I. *Paralysis (Hemiplegic) of Left Face; Lateral Deviation of Eyes to Right; Impairment of Articulation and Deglutition; Loss of Sensation in Right Face; Sudden Death; Syphilitic Tumours in Pons and Medulla Oblongata.*—William T., aged 46, was admitted into St. Mary's Hospital, under my care, on August 4th, 1871. He had been a soldier, and had served twenty years in India, enjoying while there good health; but, since his return, four years ago, he had suffered from his liver. He had syphilis in India. On his fore-arms and legs were numerous large scars, as of rupia; his complexion also was sallow, and his appearance that of syphilitic cachexia. On June 20th, while cutting grass, at 10.30 A.M., the sun being rather powerful, he said the sun struck the left side of his face; he felt queer, did not fall, but had to go indoors, and he was never able to work afterwards. He suffered from pain in the head, giddiness, double vision, and a feeling of coldness down the right side. There was no vomiting. The face was drawn at the time, but had become worse since.

On admission, there was marked loss of power in the left side of the face; the wrinkles were smoothed out; the mouth was carried to the right; the distortion was always evident, but was worse when he opened the mouth, or tried to show the upper teeth. Both eyes were closed in the usual winking movements; he could not close the left eye alone. The uvula was drawn to the right, and this side of the palatine arch was lower than the left. He complained of difficulty in masticating his food. This was referred to the right side of the mouth. (No note of the condition of the masseters and temporals was made.)

Deglutition was embarrassed. The tongue was protruded straight, but his articulation was thick and indistinct, and the voice had a very nasal twang. There was no difficulty in the articulation of any particular letter as the alphabet was gone through. He had double vision, especially for distant objects, and a slight want of parallelism between the two eyes was evident. (In two different observations, this was described as internal strabismus of the left eye, and that the right was carried too far outwards.) A more noteworthy fact, however, was that there was lateral deviation of both eyes to the right. He could not bring the left outwards at all beyond the median plane of the orbit; the right he could bring slightly to the inner side of the median plane, but very little.

He said the right hand was dead, but there was no perceptible difference in power between the two hands when they were tested. He used the two legs equally well when in bed, but, when made to walk, he complained of giddiness, walked slowly, feebly, and unsteadily, staggering mostly to the right. He complained that, when shaving, the right side of the face felt like a board, while the left, in which the motor paralysis was present, felt natural; and it was found that a prick or pinch was much less felt on the right than on the left forehead, cheek, and chin. He said also that he felt less distinctly on the right than the left fore-arm; but the difference, if real, was very slight. Smell and taste were unimpaired, as also common sensation in the tongue; he had been a little deaf in the left ear before the attack. He had continuous severe pain in the head; sometimes all over, sometimes in the occipital and frontal regions, sometimes in the right half. He had a singing noise also in the head; he dozed rather than slept. The ophthalmoscopic signs were negative. There was no albuminuria; no heart-disease. The diagnosis given was syphilitic tumour in the pons and medulla.

He remained in the hospital nearly three weeks, taking iodide of potassium in doses gradually increased from six to sixteen grains. The headache was greatly relieved; he walked better and with less staggering, and his articulation was better; but the motor paralysis on the left side of the face, and the loss of sensation over the area of the right fifth, remained, as did also the lateral deflection of the eyes.

He insisted on leaving the hospital on August 23rd. During the night of August 30th, he got out of bed to smoke, and was found dead in his chair in the morning. The body was taken to the Marylebone Infirmary, where an inquest was held, and I unfortunately did not hear of his death till the examination had been made. I had the head reopened, however, and carefully reinspected the brain. It was reported to me that the dura mater and arachnoid over the top of the hemispheres were adherent; the dura mater unduly vascular; the arachnoid opaque over the hemispheres, but not at the base. There was fluid in the ventricles, the parietes of which were soft, but apparently only by *post mortem* change. The only other morbid appearance found was that, when an incision was made along the median line of the pons and medulla, two small tumours were seen near the floor of the fourth ventricle. They were described as yellow in colour, like a corpus luteum, and of firm consistence, and they slipped easily out of the cavities in which they were contained. I did not see the tumours, but, in my re-examination of the parts, I found one cavity which would have held a pea in the substance of the pons, near the floor of the fourth ventricle, the lower margin of the cavity being well within the lower edge of the pons—the upper not quite reaching the centre of the pons—it was near the median line. Below this, and separated from it by nervous substance, was another somewhat larger cavity in the substance of the medulla, also near the floor of the ventricle. This cavity had not such well-defined walls as the other. A careful examination of both crura and of the hemispheres failed to reveal any other lesion.

There can be no doubt that the lower of these tumours was the cause of the dysphagia and of the sudden death, as it was in close proximity with, and probably involved in a greater or less degree, the reflex centres for deglutition, respiration, and the cardiac movements, the nuclei of the glosso-pharyngeal and pneumogastric nerves. It is unfortunate that I am not able to speak more positively with regard to the absence of other lesions, so as to be in a position to discuss more confidently the relation of the upper tumour to the motor paralysis of the left face and of the eyes, and to the loss of sensation in the area of the right trigeminus. If the paralysis of the face and eyes had been due to lesion in the facial nucleus or nerve, and in the sixth nucleus or nerve of the same side, there would have been no difficulty in recognising one or other of the tumours as the probable cause, by involving the common nucleus of the sixth and facial nerves. But both the facial and the ocular paralysis were such as are met with in hemiplegia, and not such as are seen in Bell's paralysis, on the one hand, and in lesion of the sixth nerve, on the other; the action of the left orbicularis oculi was not affected, and there was lateral deviation of both eyes to the right, and not simply internal strabismus of the left. The lesion, then, was either in the right corpus striatum or in the course of the fibres passing from the left facial and sixth nerve-nuclei to the right corpus striatum, and almost certainly after their crossing to the right half of the pons.

I have not previously met with lateral deflection of the two eyes, except in hemiplegia, and usually in severe attacks. In my own experience, it has commonly been associated with lesion of the anterior part of the corpus striatum externum, and accordingly I examined most carefully these ganglia and the crura cerebri, but without finding any evidence of disease. I am inclined to consider the upper of the two tumours as the cause of the anæsthesia in the right side of the face, by encroaching on the nucleus or fibres of origin of the right trigeminus; and of the left facial and ocular paralysis, by cutting across the fibres between the common nucleus of these nerves and the right corpus striatum just as these fibres crossed the median line. I am the more disposed to take this view, on account of the persistence of the lateral deviation of the eyes, this being usually a fugitive condition when it is due to lesion in the corpus striatum, the reason for which I have explained elsewhere.

CASE II. *Slight Right Hemiplegia of Gradual Access; Impaired Articulation; Peculiar Affection of Respiration; Sudden Death.*—Ross C., a sweep, aged 39, became an out-patient at St. Mary's Hospital January 30th, 1865. He had gradually been losing power in the right limbs for a year, and the leg, hand, face, and tongue trembled. His speech was slow, and his utterance thick. The right pupil was smaller than the left. He was "very heavy for sleep," and would often fall asleep in his chair, and, while sleeping, his wife said he turned blue, and at length woke up suddenly, appearing bewildered, and often laughing. The articulatory defect was greater than was warranted by the degree of paralysis of the limbs, and was of a kind which suggested lesion of the medulla as the cause. The partial asphyxia which occurred during sleep also pointed to the medulla as the seat of some disease which made the reflex respiratory movements insufficient, and rendered supplemental voluntary respiration necessary. He had had syphilis, and iodide of potassium, in eight-grain doses, was given three times a day, and a Plummer's pill at night. He improved considerably, his speech became less thick, he regained almost full power in his right limbs, and was able to resume work. On March 9th, he paid his last visit to the hospital, and was remarked by his wife to be in very good spirits on account of his improvement. In the course of the day, he took beer to excess with a friend, in celebration of his recovery, went home, lay down on the bed, fell asleep, and was found dead.

I heard nothing of this till three or four weeks later. A *post mortem* examination had been made and an inquest held, the cause of death assigned being heart-disease. I afterwards saw the medical man who had made the examination, and found that the opinion given was an inference from the mode of death, and was not based on definite change in the heart. No morbid appearance had been found in the brain, but there had been no special examination of the pons and medulla.

In the following case, the diagnosis is less certain, both as to the seat and character of the disease; but there was a distinct history of syphilis.

CASE III. *Left Hemiplegia with Tonic Spasm; Impaired Phonation and Articulation* (*Partial Paralysis of the Eighth and Ninth Nerves*).—The patient, a schoolmaster, aged 32, came under my care at St. Mary's Hospital, October 15th, 1871, suffering from a peculiar form of hemiplegia, with impairment of articulation and other symptoms, which will be described in detail. The hemiplegia was on the left side, and was accompanied with a degree of rigidity of the affected limbs; these had not wasted at all, but were firm and well-nourished. He had considerable power and range of movement in the left arm, could carry the hand to the head, and use a fork for eating; but all movements were slow, vague, and wanting in precision, and extension of the elbow especially was difficult, on account of tonic contraction of the biceps. The act of walking was very clumsy and slow, and he often stumbled. The left leg was stiff, the toe turned in, and scraping along the floor, the knee unbending, the hips raised. He could not raise the foot to a chair, or flex the knee; the ankle also had little motion. There was no marked evidence of unilateral paralysis of the face, but the lower lip had a tendency to hang, did not act properly in articulation, and could not be made to assist in producing a whistle. There had previously been dribbling of the saliva. The tongue also was large and unwieldy, and not well under command. The speech was very peculiar. Phonation, the laryngeal part in speech, was imperfect, and the voice was squeaky, forced, and unnatural, requiring great effort; but he could produce a loud, deep *Ah!* In speaking, the mouth was expanded greatly laterally and the jaw depressed much more than usual, while the tongue was seen to be almost passive. His enunciation was slow and laboured, the words being brought out one by one, each with a distinct effort. The articulation was indistinct; he could go through the alphabet, but did not pronounce any consonant perfectly, those requiring the action of the lips and of the tip of the tongue being most imperfect. In speaking, the pronunciation was less distinct than in naming individual letters; and a *v* in his own name was always dropped. When he was asked to read, the articulation became worse and worse till, in two or three minutes, the words could not be distinguished. The intelligence was apparently unaffected; he read much, construed Greek well, wrote good letters; but his emotional condition was peculiar, as he was liable to an uncontrollable laugh, in which the expiratory phrase was a continuous squeak, unbroken by the successive explosions of ordinary laughter, quickly subsiding into a mere hiss, which was prolonged till it almost became alarming, when there would be a loud inspiration. The left ear was rather deaf; the optic discs were normal. Since his illness, the patient had become very stout.

The history of these symptoms was as follows. Syphilis was contracted four years before the patient came under observation. A year afterwards, left hemiplegia came on suddenly in the night; motor power was absolutely lost at first, but gradually returned, so that in six months he was able to walk. Twelve months after this attack, the speech gradually became indistinct, and in six months he could not speak at all. At this time, deglutition was very difficult; he swallowed solids better than fluids, these escaping by the mouth; the saliva also dribbled. The difficulty of swallowing was probably lingual, and not pharyngeal, consisting in a failure on the part of the tongue to bring the food within the grasp of the constrictors. Remains of this difficulty were, indeed, still to be observed. Afterwards, he gradually improved up to the point which he had reached when he came under observation. Under the influence of iodide of potassium and galvanisation of the affected limbs, further improvement took place, both in speaking and walking; but it appeared to me that irremediable damage had been inflicted.

The principal facts, in addition to the history, on which I based the conclusion that the disease was syphilitic, were the gradual paralysis of the tongue, lower lip, and larynx, its arrest, and the subsequent amendment. It is this grouping of the paralysis which localises the lesion in the medulla, the nerve-nuclei for the movements of all these parts being within reach of a single lesion in this situation. Disease of the motor tracts of both sides above the pons may affect speech greatly, and produce a relaxed condition of the labial muscles; but I have only met with the same peculiar modification of laryngeal phonation in one other case, and in this the evidence of disease in the medulla or lower part of the pons was complete, as there was cross paralysis; hemiplegia of one side, and facial paralysis of the other, with impairment of voice.

The hemiplegia was probably due to thrombosis of a branch of the right middle cerebral artery, and had nothing to do with the loss of speech which occurred twelve months later.

Syphilitic Affections of the Cerebellum.—The symptomatology of disease of the cerebellum is singularly obscure, corresponding, however, in this respect with the state of our knowledge of the physiology of this nervous centre. I still adhere to the theory of its action, which makes it the seat of the higher and more complex co-ordinations of movements. It is not the sole organ of muscular co-ordination, as was at first inferred from the experiments of Flourens. The spinal cord co-ordinates in a distinctly purposive manner movements which respond to tactile or other cutaneous impressions; but, when movements have to be guided by vision, some special and more complex apparatus is needed to bring muscular actions into relation with visual impressions, which are so far removed in character from tactile impressions (the immediate guides of muscular action), and are correlated with them only by inference and experience. This is essentially, though in a superficial and imperfect way, the view held by Mr. Herbert Spencer, and repeatedly expounded and illustrated by Dr. Hughlings Jackson, namely, that the cerebellum is to space-relations what the cerebrum is to time-relations. Dr. Ferrier's interesting experiments, which appear to make of the cerebellum simply a motor centre for the movements of the eyes, receive no support from the facts of pathology, and his results will probably find some interpretation more consistent with these.

As in the cerebral hemispheres, so in the cerebellum, there may be extensive disease without obvious symptoms, or the symptoms may be such as will indicate only the existence of intracranial mischief, but afford no indication whatever of the seat of the lesion, namely, pain in the head, vomiting, and blindness; pain, however, being more constant as an accompaniment of cerebellar than of cerebral disease.

The special symptoms of disease of the cerebellum, when such exist, are a peculiar staggering gait and a vague purposeless character of the movements generally, together with a marked loss of vigour and energy. A want of control and co-ordination of muscular actions is evident, but it differs from that due to loss of spinal co-ordination, and it is not increased by closing the eyes. In the later stages, evidences of pressure upon the medulla, or of general intracranial pressure, due to effusion into the cerebral ventricles, may be superadded.

In the cases of disease of the cerebellum which I have watched to a fatal termination, and in which I have made *post mortem* examinations, the cause has not been syphilitic; and in the case I am about to relate, which I considered to be one of syphilitic affection of the cerebellum, no examination was made.

CASE III. *Headache; Fits of Uncertain Character; Hemiopia; Later Slight Right Hemiplegia; Sudden Death.*—Robert K., aged 26, shoemaker, first came under observation on December 7th, 1865. He had had syphilis seven years previously; six months before, and again recently, had had a fit, no account of which was obtained. Before the fit, he had had pain in the head, and at times saw double. The headache, which was frontal in situation, continued, was worse at night, but was especially exacerbated when the patient stooped or rose from the sitting posture. At times, he was giddy, but he did not fall. Ever since the fit, he had been "dark on the right side," *i.e.*, while he could see an object directly in front or to his left, he could not see anything to his right, and it was found, on testing the two eyes separately, that the inner side of the right retina and the outer side of the left were blind. He saw a little better with the right than with the left eye; the pupils were equal. The patient was a well-built and well-nourished young man, inclined to be stout; pale, but not anæmic-looking, with a depressed expressson. Besides the pain, he complained of feeling weak, low-spirited, and deficient in energy. The bowels were open; the appetite failing. He was ordered a couple of aperient pills and four grains of iodide of potassium, with ammonia and gentian.

On the 14th, he was worse; had pain over the brow and in the mastoid regions. When he rose from the sitting posture, his strength seemed to leave him altogether. Vision was as before; the right pupil was a little larger than the left; sleep was imperfect; his appetite was good; his bowels were confined; the stools were of clayish colour; tongue white. The iodide was continued. He was ordered to take, twice a day, a quarter of a grain of pilula hydrargyri, two grains of compound rhubarb pill, and two grains of extract of taraxacum.

December 18th.—He was worse; and quinine was substituted for the iodide of potassium by the clinical assistant. He improved for a time after this change, and, on January 1st, had much less pain in the head, the state of the vision remaining the same, and the right pupil being still larger than the left. The headache, however, returned, and, on January 8th, liquor potassæ arsenitis, in doses of four minims, was given with calumba, in the place of the quinine; aloes and soap pill having also, on the 4th, been substituted for the pill previously taken. He took the arsenic for a month, improving on the whole; but, at the end of this time, he was made sick by it, and it was discontinued. After this, he continued to attend the hospital with the greatest regularity for more than a year, taking nearly all this time ammonia, with gentian and an aloetic pill. The vision was restored, and the headaches ceased, returning only at intervals. For a short time (about February 1867), he complained of tingling in the right face and pain in the right shin, the first of these symptoms acquiring significance from the subsequent history.

In this case, there was no doubt, from the first, as to the existence of some intracranial lesion. The fits alone would not have been conclusive; but the association of these with the peculiar affection of the sight left no room for uncertainty. The situation of the lesion could, moreover, be approximately fixed. The blindness in the left half of the two eyes, of the inner part of the right retina, and of the outer part of the left, showed that the left optic tract was involved at some point between the commissure and the corpora quadrigemina. The diagnosis I formed provisionally was, that there was a tumour in the cerebellum, giving rise to pressure on the optic tract, as in a case I had previously watched to a fatal termination; this conclusion being favoured also by the want of energy, which is a common result of disease of the cerebellum, and by the giddiness. It seemed reasonable to suppose that it might be syphilitic, and iodide of potassium was given at first; but, improvement following the substitution of quinine, it was discontinued before an adequate trial had been made. After an interval of two years, during which the patient had been seen occasionally, he again came under observation on April 29th, 1869. He then complained that his head felt queer, and had done so for some time. At times he staggered, as if drunk, and a weakness of the right side had gradually come on. This he felt most after walking, and he noticed that he dragged the foot, wearing out the right boot at the toe very rapidly. The right arm was weak. There was evidence of slight paralysis of the muscles of the right side of the face, and articulation was indistinct. Sensation was not apparently impaired. The right pupil was a little larger than the left; both were small. The expression of his face was that of great depression of spirits; he sighed frequently and deeply. He was unable to stick to work, earning only three shillings to six shillings a week, instead of eighteen shillings to twenty shillings; he was indisposed to go out, and would sometimes remain in bed all day. He ate and slept well. The bowels were confined.

The treatment adopted was iodide of potassium, beginning with six grains gradually increased to sixteen, aperient pills, and a succession of blisters behind the left ear. He attended at the hospital for two months, and seemed to improve a little; he gained strength in the arm, dragged the leg less, spoke more distinctly, and did more work; but was never able to go on with it steadily through the day. He was lost sight of at the end of June, and, as was learned subsequently, became an outpatient at the Epileptic Hospital.

He died in January, 1870, and, from his father, the following particulars were obtained. For four months before his death, he scarcely did any work; would begin, but would cut the "uppers" all to pieces; he could not control his movements. He appeared "lost," was unable to give his attention to anything, and was extremely irritable. His appetite was enormous, and he became very fat, but was extremely weak. When he stooped, his face would become so red, that it seemed as if all the blood in his body rushed to his head. On the day before his death, he did one or two odd things, and went home to bed, where he was found next morning, at 10.30, lying in a torpid condition, but answering when spoken to. He refused to rise, and struck violently at a man who tried to drag him out of bed, Later in the day, he had a sort of fit, which consisted in violent movements of the legs only, and he became unconscious, lingering in this condition for four hours, and "dying from the feet upwards," *i.e.*, the feet became cold and the legs motionless. It may be conjectured that the immediate cause of death was hæmorrhage into the membranes at the base of the brain and round the medulla, though a sudden termination is not uncommon in disease of the cerebellum, independently of any such accident, in consequence of its proximity to the medulla. No *post mortem* examination was made.

In my next lecture, I shall consider the syphilitic affections of the brain: the most interesting and important part of my subject.

AMPUTATIONS IN PRIVATE PRACTICE AND IN HOSPITAL.

IN the BRITISH MEDICAL JOURNAL for January 24th, I observe in Mr. Erichsen's lectures on Hospitalism, that he remarks, in speaking of smashes, such as are seen in railway accidents, occurring in the middle or upper third of the thigh, and in which amputation is performed, that "he is not acquainted with a single case in which such an operation has succeeded in general hospital practice". A short account of the following case, not in hospital practice, from memory, may be interesting. On November 27th, 1872, I was called to C. R., aged about 26, who was at work at one of the iron girders of a bridge on the Whitby and Lofthorne Railway, when it suddenly tilted, falling with the edge across the upper part of the left thigh, cutting to the bone, and causing a comminuted fracture. He was three miles from my house. On my arrival, I found him suffering much from shock. He had lost a large quantity of blood, which had been stopped by tying a handkerchief tightly round the thigh above the wound. He was removed to his home; and, having procured assistance, I amputated, making the anterior flap from the upper part of the wound, and a long posterior flap by transfixing. A fragment about three inches long was removed, which extruded close up to the trochanter. His pulse flagged very much during the operation, but he rallied considerably before I left him. I was sent for late in the evening, as the stump had been bleeding. I found there had been considerable loss, but it had ceased; and as there was no more during the time I remained (about two hours), I did not remove the dressings. Next day, he was in a very good state; and, with the exception of once or twice some tendency to erysipelas, he went on well. One or two small pieces of bone exfoliated about six months afterwards.

T. TINLEY, L.R.C.P.E., etc.

A LECTURE
ON THE
TREATMENT OF THREADWORM.

Delivered at the Medical College of the Middlesex Hospital.

By T. SPENCER COBBOLD, M.D., F.R.S., F.L.S.,
Lecturer on Parasitic Diseases.

GENTLEMEN,—If, in the curative treatment of ascarides, or oxyurides, as they are more properly termed, you cannot expect an amount of success equal to that which ought to be obtained in the case of tapeworms, it is at least some satisfaction to know that the worst of cases may be overcome by perseverance in the application of appropriate remedies in combination with the employment of hygienic measures. In the case of children, these troublesome little threadworms are not difficult of eradication, but with adults it is far otherwise. The condition of grown patients, advanced in years, is often such as not only to prevent the administration of sufficiently active drugs, but also such as to render even the best remedies practically inoperative, so far as the parasites themselves are concerned. Patients also will come to you, especially ladies, requesting both immediate and permanent relief; some of them, at the same time, taking care to impress upon you the impossibility of their swallowing active aperients or cathartics.

It is instructive to notice the variety of results obtained by experienced practitioners in the treatment of threadworm. Some give the matter up in hopeless despair of affording more than a merely partial benefit, whilst others allege that they are always successful. One writer in the *Boston Journal* for 1859, tells us, as the result of forty years' experience, that he has never known assafœtida and aloes to fail in their treatment; and others have asserted as much in reference to the employment of various preparations of steel. For my own part, I may say that I have ransacked the *Pharmacopœia* for permanently effective remedies, but I have satisfied myself that no single drug, or any combination of drugs, can be employed with any certainty of perfect success. You cannot find any remedial agent that exerts what may be called a specially poisonous or specific action upon the threadworm. However, in the case of the large roundworms, that is, the ascarides properly so called, the action of santonine is almost that of a genuine specific. It is, indeed, a valuable lumbricifuge; but, as an oxyurifuge, I confess I am at a loss to understand why its action is so much extolled abroad. I have used it extensively, and can only report unfavourably of its action in oxyurides. On the other hand, all the larger kinds of nematode worms are readily poisoned by it.

As to the time-honoured employment of injections of infusion of quassia, or of lime-water enemata, or of others containing salt, castor-oil, santonine, and what not besides, all that can be said of them, in the case of adults, is, that they undoubtedly afford partial relief; but, in view of contributing to a permanent cure, they avail nothing. Even the employment of long elastic syringe-tubes will not enable patients to reach the true seat of the helminths; and one cannot but perceive the inconvenience, to say nothing of the danger, of recommending their use. I see by a statement, reproduced in a recent number of the *London Medical Record* (vol. i, p. 747), that Professor Mosler recommends the employment of large enemata for the treatment of entozoa in general, and for the expulsion of oxyurides in particular. In the case of imperfectly expelled tapeworms (which he believes to possess the power of anchoring themselves afresh in the colon after expulsion from the small intestine), he even recommends the use of milk-and-water enemata up to the amount of three pints. I will only digress so far from the matter immediately before us, as to say that I have repeatedly expelled heads of tapeworms from the colon without giving injections; and I must say that I cannot bring myself to believe in the supposition of any true re-anchorage occurring in cases where the head of the worm has been dislodged from the smaller bowel. In this connection, you will not have forgotten the case of the young daughter of a physician, where I had only the upper part of the head itself left to operate on, and yet I succeeded in dislodging it. The four suckers were so slightly connected, that they separated from each other in the water of the phial during gentle agitation. The case was one, the treatment of which had previously baffled several experienced medical practitioners.

Notwithstanding recent investigations, and the clearly enunciated conclusions based on them, I find that all our ordinary manuals, handbooks, vade-mecums, and such like generally useful treatises, continue to encourage the old and erroneous notion that the threadworms reside in the rectum and sigmoid flexure of the colon. Thus, even a writer in the *Lancet* of last year (February 10th, 1872, p. 185), says:—"As oxyures infest the lower bowel, they are best reached by enemata." Of course, if this were the whole truth, the injections of quassia and salt, recommended by Mr. Date, would alone suffice to get rid of the parasites. The fact is, however, that the entire length of the colon is the territory inhabited by the threadworm, the cæcum itself constituting the parasites' true head-quarters. Knowing this, therefore, to be the case, and likewise understanding, as we now do, how these entozoa originally gain access to their human bearers, it is clear that we are in a position to treat the threadworm helminthiasis on thoroughly rational principles. Injections, as I have said, cannot be conveniently employed to wash out the contents of the arch of the colon and cæcum, and therefore we must, in the main, rely upon the operation of medicines taken by the mouth. From the very first, I have insisted upon this mode of procedure, employing injections only for the purpose of dislodging such oxyurides as have been driven down to the lower bowel. When it comes to the question of the choice of drugs, you will find that a great variety of medicinal agents may be used with good effect. Some seem to answer better in particular cases than in others. Speaking generally, I give a preference to active saline cathartics repeated for several days in succession, followed by the use of cold water enemata. Small doses of chloric ether and sulphate of iron are eminently serviceable additions, and the same may be said of aloes, with or without assafœtida. In cases where these drugs are objected to, I have employed various active mineral waters with good results. Bitters of all kinds are useful, and patients who object to salines will swallow any reasonable amount of the infusion of gentian and other pure vegetable tonics. As a rule, oxyurifuges should be administered in the form of copious draughts, and the oftener they are repeated, for a short interval, the more effective will they prove in the end. The rapid passage of the drugs through the bowel will, if several times repeated, carry most of the parasites sufficiently low down to be within reach of the clysters; and the prevention of the return of the parasites to the upper part of the colon is one of the practical points worth looking to. The employment, therefore, of enemata, after the exhibition of remedies by the mouth, cannot fail to prove beneficial.

I am free to admit that, do what we will, some cases prove obstinate and apparently incurable. How are you to account for this? Is it really true that the disorder may baffle your best efforts? In one sense, it may be that you can never succeed; in another sense, you may have been successful without knowing it. What is the probable explanation? I think it is as follows. Real cures are oftener effected than is commonly supposed. Thus, many patients will say that they have not seen a threadworm for the space of six weeks, or even for three months, when, all of a sudden, their enemies return. In these cases, I believe that fresh invasions have taken place, the patients having in the interval swallowed new germs, or more strictly eggs, derived from oxyurides infesting either themselves or some other persons. Obviously, therefore, if you accept my assurances on this score, it is part and parcel of adequate treatment to recommend such prophylactic measures as shall be likely to reduce the liability of re-infection within the lowest possible limits. Clearly, it avails little to effect a perfect cure, if, within the space of a few weeks, and time after time, the disorder be contracted afresh.

In this view, I am in the habit of enforcing the utmost attention to cleanliness, not only as regards the person of the patient himself or herself, as the case may be, but also in respect of household arrangements. Frequent lavements, purity of the water used for drinking and other domestic purposes, local washings after defæcation, frequent changes of linen, especially bed-clothing, the removal and beating of the bedroom carpets, washing of the floors, particular care in the selection and cleansing of dessert-fruits and fresh green vegetables used as salads, etc., avoidance of the latter, as food, as much as possible—in short, every kind of procedure which shall operate to prevent the re-introduction of the eggs of these very common entozoa. Carry out these indications more or less completely, and you may then have the pleasure of finding that, in some cases at least, a permanent cure has been effected. Of course, in not a few instances, it is absolutely useless offering advice of this character, since some obstinate individuals will only condescend to take a vermifuge that can be lodged within the circumferential limits of an ordinary pill, whilst others will stoutly object to employ those hygienic measures, upon the adoption of which so much success depends. No doubt, the carrying out of certain of these precautions may be attended with inconvenience; nevertheless, so far as my experience goes, the daily performance of local ablutions is, after a while, quite sufficient to prevent any recurrence of the disorder.

In conclusion, I will only add the expression of my deliberate belief, that the close attention now given to sanitary matters by our medical officers of health and others cannot fail, before long, to effect a considerable diminution in the prevalence of certain kinds of parasites and their associated parasitic diseases.

ON THE MEDICAL SERVICES OF THE NAVY AND ARMY FROM THE ACCESSION OF HENRY VIII TO THE RESTORATION.

By WILLIAM R. E. SMART, M.D., C.B.,
Inspector-General, Royal Navy.

BEFORE the reign of Henry VIII, England possessed nothing worthy of being called a fighting navy. That which best deserved the title was the flotilla of the Cinque Ports, which rose to importance under the later Saxon kings, and retained supremacy on the narrow seas under the Normans and Plantagenets, satisfying their warlike necessities up to the reign of Edward III, whose wars for the throne of France demanded a fuller national naval organisation, to include every seaport of the kingdom. Then the merchant navy of England was impressed for the king's service, to convey men, stores, and provisions to France; and, although many great naval fights are recorded, as that of Sluys, which opened France to the invader in A.D. 1340; Winchelsea, which freed our coast towns from hostile incursions in 1340; and Rochelle, which preluded the withdrawal of the English army from France in 1372; yet, strictly speaking, those battles were fought by land forces embarked in ships, which were simply laid alongside the enemy by the mariners. Naval affairs were in small request in the wars of the Roses; but Edward IV prepared for the invasion of France by the same means as Edward III. He possessed, however, ships of his own, which, in times of peace, he chartered for gain to merchants, after the practice of the Senate of Venice, whose great carricks thus employed were annual visitors to the shores of England and Flanders. It is important to notice that these Italian vessels carried surgeons, with a physician, so early as A.D. 1320 (*v.* Arch's Venet., in State Calendars, published by Br. Mus.); and, as this was provided for on trading voyages, it follows, *à fortiori*, that the same vessels, when engaged in war, would have the same regard paid to their wounded by the Senate of Venice.* It would appear that these very vessels ultimately became the models for our first Royal Navy under Henry VIII, whose predecessors had on several occasions pressed them into their service when lying in our harbours. The other republics of Italy would observe the same rules in their ships and galleys; and M. Jal (*Arch. Navale*, vol. ii, p. 333) adduces a proof that *master surgeons* were sometimes present in Italian fleets at an early date, accompanying the admiral in his ship or galley similarly to the physician. This is found in a MS. dated A.D. 1337, in the library of the Doria Palace at Genoa, being an agreement (or indenture) between Philip de Valois and Anton d'Oria to furnish forty Genoese galleys, each armed with two hundred and ten men, among whom there would be, according to Italian practice, a "barbiero" and a "barbieroto", or a surgeon and his mate; in addition to which, it was specified that the admiral should have with him a "maestro di cirurgia" of his own country, whose monthly pay from the King of France was to be "10 golden florins a month"; while the noble admiral was paid 100 florins, of which eight weighed one ounce of gold, the equivalent of £3 : 17 : 6 of our currency. Multiplying that sum by twenty-five, for the difference of the worth of money, we find the Italian master surgeon to have received, relatively to the pay of Philip Beauvais, surgeon of Edward the First's army in Scotland, A.D. 1300, £1,562, against £841 : 13 : 4 a year of our present currency.

It cannot be doubted that certain medical arrangements were resorted to by the English as soon as a Royal Navy of exclusively fighting ships was formed, and in their merchant-ships engaged in the Levant trade which sprang up in the days of Henry VII.

As to the quality of these surgeons, it would be as inconsistent to suppose that they were the master surgeons of London of their day, as it would be to expect that in our day the *élite* of the surgical profession would adopt a sea-life. Nevertheless, there is reason to believe that some men of good surgical repute devoted themselves to sea-service so early as the reign of Queen Elizabeth.

When that great monarch Henry VIII grasped the idea that the power of his kingdom would be best shown in the character of his navy, he began to carry it out in accordance with precedent with regard to manning the ships built in his dockyard by Italian shipwrights. We have seen that, in the decay of the feudal system, our kings formed armies for foreign service by legal agreements with the territorial lords, which were styled "indentures", by which they engaged to raise forces under their command, for which they received the king's pay. The earliest instance of such a practice in naval affairs is found in the reign of Henry VI, A.D. 1460, when Sir Baldwin Fulford, Kt., contracted with the king to supply "1000 mene, well and sufficiently arraied and harneyssede for the warre, and competent number of ships for the same," on the daily pay of 2s. for himself and 6d. for the masters, and 2s. 3d. a week for the men. The first fleet of Henry VIII was *manned* on the same principle: the ships belonged to the king, who entered on an agreement by indenture with a renowned sea-captain, Sir C. Howard, to man them, receiving from the king their gross pay in advance, and distributing the same. That memorable indenture specifies only two classes of seamen—masters or captains, and common men—and shows their respective rates of pay. Consequently, it is certain that the surgeons in that fleet were rated and paid as common men. As far as concerns their pay, this practice continued until the reign of Charles I; and, as concerns their rating, it was unaltered until A.D. 1704, when surgeons first received the rank of warrant-officers, in common with pilots, boatswains, gunners, and carpenters. The low rate of pay offering no inducement to the medical men of that day to serve in the Royal Navy, it was supplemented, according to the custom of the army, by a donation of *twopence a man per month*, in consideration of which the surgeon was bound to provide the instruments of his calling, together with surgical remedies, exclusive of drugs for the treatment of medical cases. This donation from the seamen became in part—*i. e.*, as much as the surgeon could make it so—a perquisite of the surgeon; and in 1672 it was made, in proportion of one-half, his by right as an emolument, and in 1704 entirely so, until 1805. According to modern ideas, this was an undignified, and would be a degrading, plan of payment for services rendered, but it was not thought so when first instituted; and it may have been of very ancient date, when personal services were ordinarily rewarded by those who benefited by them. As an early and very high example of this, we find in the Black-Book of the Admiralty (*Circiter*, 1360, Edward III, 11th clause): "And for that the admiral is the governor of the mariners, and ought to govern and maintain them in all their laws and customs, and defend them from all injuries against all; and, if there should be need to sue for their wages and to obtain payment, the said admiral shall have and take from each pound paid of wages to the mariners, 4d., for which 4d. the admiral ought by night, at his mast-head, all the time that he is on the sea, to carry two lanthorns, so that all the fleet may know and understand by the light the course of the admiral, the which course they shall keep," etc.

In this we recognise the personal offices of the admiral towards the seamen, the manner in which he was rewarded for these responsibilities, and the material he was bound to provide to ensure the safety of those sailing under his orders.

Now, to compare small things with great and noble, if we consider the personal offices of the surgeon to the wounded of the crew, and the material he had to provide for their benefit, it may be readily conceived that the established rule of rewarding personal services by gratuities from those receiving them would be extended to those who had the cure of the bodies or the souls of the mariners, who received the same daily pay from the king as the mariners themselves; and thus it came about that, as soon as ships carried priests and surgeons, their daily pay was supplemented by the gratuities of 4d. a month for the former and 2d. for the latter, in recompense of personal services to be rendered them. The most learned naval archæologists have confessed that the origin and date of this custom are sunk in the obscurity of the Middle Ages; and therefore I must propose this as only a probable explanation of a difficult subject. It was convenient to the king's treasury that the seamen should bear these burthens, voluntarily assumed; and in the case of surgeons it was not annulled before 1805, and in that of chaplains till 1812. In the navy, the sum was deducted from the wages as they accrued; and surgeons joining ships were permitted to draw money in advance, *by imprest*, to enable them to furnish their surgical chests; while in the army it would seem to have been paid by the soldier on receiving his pay into the hands of the surgeon.

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* The antiquity of the practice of carrying in ships an attendant on the sick, is proved in chap. 264 of the *Consolato del Mare*, or nautical laws of the Mediterranean in the Dark Ages, where the "Metge", the old Catalan corruption of "Medicus", is mentioned; but no allusion to the "barbiero" is found there.

B. Crescentio, pontifical engineer, in his *Nautica Mediterranea*, p. 94 (Rome: 1607), one of the best authorities on all relating to nautical affairs of the Middle Ages, states, at p. 94:—"Vi è un Medico in tutta l'armata, e in ciascuna galea un Barbiero, chi governa gli ammalati conforme dal Medico gli viene ordinato." And Pantero, in his *L'Armata Navale*, p. 126, 1614:—"Il barbiero come ufficiale molto necessario per curar gl'ammalati et efferiti deve esser molti sicuro, et esercitato nell' arte de la chirurgia."

The custom, as far as relates to the army, is similarly obscured by the mists of antiquity; but there it has analogies as respectable as those of the navy, for it is recorded that Thomas de Brotherton, uterine brother of Edward I, as Marshal of England took from every merchant or sutler buying or selling in the army, from every prostitute, and from those who erected lodges or stalls, the sum of 4d. for every week or part of a week. That this custom prevailed in the reign of Henry VIII, is proved by a later manuscript (Cotton, Nero D, 6), in which it is defined "*what the mareshal shall have of every artificer*". Thus, "the mareshall should have of every merchant, armourer, taylor, *barber*, and every man that buyeth or selleth in the field, every Saturday, in and for assigning of them their places for keeping of their shoppes, *four pence;* and likewise he shall have of the said persons sojourning but two or three days in one place."

Independently of this exposition of compulsory revenue derived by the great officer of an army, in recompense for services rendered, this interesting document throws light on the economy of the camps (*temp.* Henry VIII); and shows that, whatever surgical staff and means were provided by the kings, there was in camps another body of practitioners under the designation of "barbers", who exercised their legal practice of surgery in private capacity, and paid the marshal for the privilege. Of these men, that trusty old surgeon, Thomas Gale, who served in the army of Henry VIII at Montreuil in 1544, and at St. Quentin in 1557, wrote as follows: "I remember, when I was in the wars at Montreuil, there was a great rabblement there, that took upon them to be surgeons. Some were sow-gelders, and some horse-gelders, with tinkers and coblers." These affected to make miraculous cures; but the Duke of Norfolk, the general, observing that his soldiers were dying of small wounds, directed Gale and other surgeons to make inquiry into the practices of those men, on which he states: "We made search through all the camp, and found many of the same good fellows, who took on them the name of surgeons, not only the name, but the payes also." Finally, "this worthy rabblement was committed to the Marshalsea, and threatened to be hanged unless they confessed to what they really were."

In explanation of what the newly created company of barber-surgeons did for the king's service, he writes: "I have myself holpe to furnish out of London in one year 72 surgeons, who were good workmen, which served *by sea and land*, and were well able to serve, and all Englishmen. Now, there are not 34 of all the whole company of Englishmen, and yet the most part of them be in noblemen's service, so that if we should have need, I do not know where to find 12 sufficient men."

As Thomas Gale died in 1572, his testimony may be taken as authentic on the state of medical affairs in the army in the time of Henry VIII until the early part of the reign of Queen Elizabeth; and from it we learn that the most efficient of the surgeons of the royal services were those furnished by the company of barber-surgeons of London.

The next reliable authority is William Clowes, who served in Queen Elizabeth's navy and army, became surgeon of St. Bartholomew's and Christ's Hospitals, and finally surgeon to the queen. In 1596, when holding the latter high appointment, he published a work entitled, *A Profitable and Necessary Booke of Observation for all those that are burned with the flame of Gunpowder, and also for the curing of Wounds made with Musket and Caliver, Shot, &c.*, which may be accepted as the earliest English work on military and naval surgery. In this he details some cases highly creditable to the naval surgery of that age; and pays great respect to some surgeons who made long voyages, but of others in that service he writes with great indignation in these words:

"Many good ships are, as it were, become cages for such unclean birds the more is the pitie."

"It is most truly said there is no coine so current but hath in it some counterfeits, which make it suspitious; so is there no profession so good but hath also some counterfeits, which breed in it disgrace; and none so much, I suppose, as there bee in some these daies, that take upon them the honest title and names of *travelling surgeons*—nay, these are idle and ignorant menslaiers, or wandering runagate surgeons, that I speake of, which very boldly, with most glorious facings, challenge unto themselves to be the onely Masters of Chirurgery in the world, because they have a little travelled. Neverthelesse, a number of these old, arrogant, and frivolous fellows are known to be men altogether ignorant of the art, both in reason, judgment, and experience; howbeit, some one of them will use more comparisons, prating and babbling words, than foure wise men would willingly answer; and you shall also further know them by this note: They are most commonly unfurnished of all good medicines, either medicinal or instrumentall, unlesse it be some such paltrie stuffe which a man would scarce lay to a gauld horseback, with other furniture answering to the same. And so they are no more able to performe any good cure they take in hand than they be able with one puffe of their winde to turn about a millstone, for their cures at their comming home are plain demonstrations of their beastly ignorance, and thus they bring themselves to ignominie and shame, and the worthy artist into very great discredit. Therefore, friendly reader, let this be a warning unto thee, to take heede of these uncleane birds, who doe daily abuse many worthy persons, captaines, gentlemen, masters of ships, and merchants of good account by reason of the shamelesse braggings and boastings of their great, divine, magnificent skills in physike and surgerie, wherewith we say they are adorned, and exceed all others, under color hereof, by their fraud and subtill means; they have beene and daily are entertained to be *principall surgeons for great ships of war*, and charge of numbers of men: and having received aforehand towards the preparation and furnishing of their surgeric chests of some £20, and of some £40 and £50; but in conclusion, they falsified their promises, for shortly after they had received their money, they lay aloofe off, lurking for opportunitie, and so in the end ran away, and could not bee found nor heard of, untill the captaines that hired them had set saile and gone forwards in their great and long voyages without any surgeon at all. But, good reader, what hath ensued hereof? Truly, many a brave souldier and mariner hath perished, and sometimes the generall and captaines themselves, and so by this meanes, partly, the whole voyage hath beene overthrowne, by reason they had no helpe or succour, either of physike or surgerie, to relieve or comfort them. But what remedie or redresse I know not, they are no changelings, for still they persevere in their wickednesse, without check or controlment. The like broode of abusers and abuses I read of in some sort in a certain history, which lately came to my hand, and it is published in the French tongue, by a most famous surgeon in France, one Gulemew (Guillemeau), surgeon to the French king, and it is written by him, etc."

[*To be continued.*]

ON THE USE OF IPECACUANHA IN INFANTILE DIARRHŒA.

By ROBERT FARQUHARSON, M.D.,
Physician to the Belgrave Hospital for Children.

ALTHOUGH ipecacuanha had long been known to possess some influence in checking excessive intestinal evacuation, it is only within the last few years that its powers in this direction have been accurately defined. Mr. Docker was, I believe, the first to point out that this drug may be relied upon as a true specific in cases of acute dysentery; and ample confirmatory evidence has now established the fact beyond all possibility of doubt.

Dr. Ringer, in his suggestive work on *Therapeutics*, tells us of the signal service rendered by small and frequently repeated doses of the wine in various forms of infantile diarrhœa; and Dr. Thorowgood, in the last volume of the Clinical Society's *Transactions*, has furnished the details of two cases of very inveterate dysenteric diarrhœa, rapidly cured by powdered ipecacuanha. Acting on the hints supplied by these able observers, I have recently been giving this remedy a full and impartial trial in a considerable number of cases of diarrhœa at the Belgrave Hospital for Children, and with results so satisfactory, that I feel myself justified in laying my experience briefly before the profession.

Without entering at present into the wide field of the varieties of this troublesome affection, or the endless forms of treatment which have been proposed, I shall, in the first place, lay down the familiar proposition, that many of these cases are due to the irritation of some unwholesome or ill digested article of diet. If, therefore, we can see our little patients early enough, the common sense indication is clear, and we can usually effect what we may really flatter ourselves is a cure, by prescribing some mild aperient. But it is very rarely that our services are required at this manageable stage; and, as a general rule, domestic, and, perhaps, even more skilled, treatment has been exhausted in the endeavour to check what has now become a chronic diarrhœa. The time for elimination having gone by, for it is hardly reasonable to suppose that irritating matters can linger about the intestines after days or weeks of active purging, we are bound to try the other remedies at our disposal. Now, as a rule, I have found that the diarrhœa of children does not bear astringents well.

Temporary benefit may seem to be derived from one or other drug of this class; but, after a few days, the purging returns as badly as before, and the patients suffer, as they often do, under the ill considered use of strong tonics, with headache, dryness of tongue, and slight feverish symptoms. We are, therefore, compelled to change our treatment from time to time; and, even after a careful trial of various and widely contrasted pharmacopœial preparations, we may find that we are making no progress, and that the patient is being gradually exhausted by a number of dark, loose, and offensive evacuations. Ipecacuanha will here do us good service, and a very few doses will usually not only greatly improve the character and consistence of the alvine discharges, but greatly diminish, or quite check, their abnormal frequency without causing subsequent torpor of the bowels.

Dr. Ringer has well shown that in those few cases in which the drug does not absolutely stop diarrhœa, it causes the motions to become more solid and of natural colour, and that, no matter whether they be originally brown, green, or yellow, this beneficial result is produced. But my experience leads me to add, that ipecacuanha is not only quite useless, but may even do harm in those cases where the evacuations are whitish and watery. It is not uncommon, however, during cold or damp seasons of the year, to meet with diarrhœa in which dysenteric symptoms prevail, and where a previously healthy child is suddenly seized with purging of blood and slime, attended by great abdominal pain, tenderness, and tenesmus. We will here find that ipecacuanha exerts almost a specific action; and I have even found that a single dose of one grain has been sufficient to bring about most marked improvement in these troublesome symptoms.

I will now relate a few short cases in illustration of the preceding remarks.

CASE I.—Rosina W., aged 10, had been under my care as an out-patient at the Belgrave Hospital for some little time for diarrhœa, which had latterly assumed a dysenteric character. Six or seven loose and slimy motions, mixed with blood, were passed daily, and the pain and straining were so great as to reduce the girl's strength in a very considerable degree. Varied treatment having failed to give relief, she was ordered, on October 13th, a grain of powdered ipecacuanha and three grains of tragacanth powder thrice a day. On the 16th, the pain was quite gone, the number of evacuations was reduced to two in the day, and their consistence and quality were greatly improved. The ipecacuanha was increased to two grains; and on the 20th she was discharged well.

CASE II.—E. B., aged 4, a pale languid child, came under treatment in September for chronic diarrhœa, the motions being very frequent, and consisting of whitish slime. Astringents with opium were here quite useless; and no progress was made until ipecacuanha was prescribed in doses of a quarter of a grain, gradually increased to one grain, when all the symptoms rapidly subsided.

CASE III.—J. S., aged 3, was in hospital for a severe attack of broncho-pneumonia. The case went on most favourably until December 18th, when she was attacked by diarrhœa, consisting of a large number of dark offensive motions. The temperature went up several degrees, and the child was becoming much weakened by the discharge; but four powders of half a grain of ipecacuanha were sufficient to check what might have become a formidable complication.

CASE IV.—L. T., aged 5, came under observation at the Belgrave Hospital, on January 29th. He looked extremely anæmic and feeble, and was the subject of mitral disease; but, in addition to this, his mother stated that he had suffered for some months from chronic diarrhœa, the stools being almost hourly, and consisting of blood and mucus. A grain of powdered ipecacuanha was ordered to be taken thrice a-day; and on the 22nd I was gratified to learn that the diarrhœa had quite ceased.

Did space permit, or were it in any degree necessary for complete proof, I could adduce many more cases from a considerable experience of the use of ipecacuanha in children's diarrhœa; but I venture to think that those I have just related are sufficient to show how valuable this remedy really is. It will be observed that I have invariably made use of the powder in preference to the wine; and this I have done, not only because Dr. Ringer has quite established the merits of the latter preparation, but because its powers were recently developed in the most satisfactory way by the rapid recovery of a very severe case of tropical dysentery under the care of my colleague Dr. Anstie. I was, therefore, desirous of testing the true efficacy of the powder; and my comparative experience has shown me this, that it is more certain, as well as more rapid in its action, is better borne by the stomach, and, from its form, is more readily taken by children. I have often found the wine to fail where the powder has subsequently done good; and, as a general rule, I find it advisable to begin with doses of not less than from half a grain to one grain. Usually, there is a remarkable toleration of the drug, and I have frequently given five grains to quite young children without provoking even the slightest nausea. The combination with compound tragacanth powder, as proposed by Dr. Thorowgood, is a very good one; and, if a mixture be preferred, we may construct a very palatable prescription, with mucilage, hydrocyanic acid, and syrup of orange-peel, with, perhaps, a little compound tincture of cardamoms. The hydrocyanic acid I am inclined to look upon as of some little importance, as a trial of this remedy, in conjunction with ipecacuanha wine in cases of whooping-cough, has convinced me that it neutralises in some measure the emetic action of the ipecacuanha; and, although I have just stated that the use of the powdered drug in comparatively small doses very rarely irritates the stomach, it may cause this unpleasant action now and then, and the combination just referred to may be of service in those more serious cases where the remedy is employed on a much larger scale.

MORTALITY AFTER AMPUTATIONS.

By ROBERT HAMILTON, F.R.C.S.,
Surgeon to the Royal Southern Hospital, Liverpool; etc.

THE views set forth by Mr. Erichsen on Hospitalism, in the pages of the BRITISH MEDICAL JOURNAL, will be read by all hospital surgeons with extreme interest. The distinguished position held by the writer, and his long connection with University College Hospital, together with the fact that he is the author of one of the most popular and widely known works on surgery, all combine to invest his opinion with very great weight.

The following statement, contained in Mr. Erichsen's lecture, at page 97 of the BRITISH MEDICAL JOURNAL of January 24th, arrests the attention, as it seems to discourage any interference on the part of the surgeon in those terrible railway accidents now so common, where one or more limbs have been frightfully mangled.

Mr. Erichsen says: "In extensive crushes and disorganisations of the lower extremity up to or even above the middle of the thigh, such as are now unfortunately frequent in railway accidents, in which the mangling of the limb more resembles that produced by a cannon shot than by an ordinary injury of civil life—in these cases, amputation at the thigh, or at the hip-joint, is the only available operation. Is it ever successful? I am not acquainted with a single case in which such an operation has succeeded in general hospital practice. For my own part, I shall never again amputate in that situation for such injuries."

This is strong and decided language. During the earlier part of my hospital experience I might have acquiesced in it; but some cases, of late years, have shown me that a careful removal of all disintegrated tissue does not add to the shock, and certainly places the patient in a more favourable position to rally. In a paper, which appears in the *Liverpool and Manchester Medical and Surgical Reports* for this year, on the after-treatment of large amputations, I have related three cases of extreme injury, where shock ought, and probably would, have proved fatal, if it had been supplemented with operative interference conducted in the usual manner. That they survived, I feel sure was as much due to the extreme care not to do anything which might intensify the shock the system had sustained; and, though immediate amputation was resorted to, yet this was done in a way that brought no fresh complement of abnormal action for the weakened vitality to contend against.

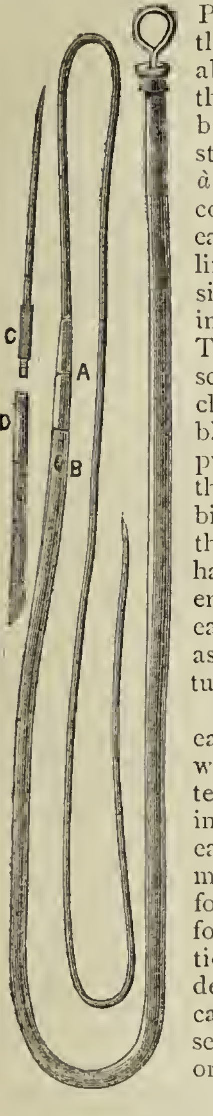
In one case, a young man had fallen in a railway cutting, and the wheels of several trucks had passed over his right thigh, crushing it completely through the middle third; all below was a disorganised mass. He lay unnoticed for more than half-an-hour; and, when taken up and brought into the hospital, his state of collapse was extreme; he was pale, pulseless, and cold; life seemed almost to have ebbed away. He lay on a stretcher on his stomach. Without the slightest disturbance, the stretcher was placed on a truck, the latter was raised by the lift to the operating-theatre, and there, without even turning him on his back, I proceeded to remove the injured limb; first securing the artery, then sawing off the bone in its upper third, and making the best flaps I could; when that was accomplished, I stopped. No attempt was made to bring the flaps together with sutures, but the stump was lightly covered with cotton-wool. After a time, he was carefully lifted on to a bed; occasional teaspoonfuls of brandy and water, or of iced water, were given him. In about twelve hours, he began to show signs of rallying. His progress after that was most satisfactory. He recovered with an excellent stump.

The only other case I will relate is that of a little girl of eight years. She was knocked down by a tramway-car, and both her arms were crushed, torn, and reduced almost to a pulp, each hanging merely by shreds of skin and muscle; both humeri were broken into splinters and one leg was broken. Here, with the same care to disturb her as little as possible, I removed, within an hour of the accident, the mangled limbs. On the one side, only the head of the bone could be left in the glenoid cavity covered with the remains of the deltoid muscle, but the latter was short of skin-covering; on the other side, three inches of the humerus were left but with a bare allowance of skin. The state of collapse passed away in twenty-four hours, and the child made a good recovery.

Two other cases, equally severe, have occurred to me; both recovered. I therefore must dissent from Mr. Erichsen's opinion, that cases such as he has alluded to "are hopeless alike, whether they are left or subjected to the knife."

A DESCRIPTION OF THE "SONDE À VIS PORTANT UN CONDUCTEUR".

By W. F. TEEVAN, B.A., F.R.C.S., Surgeon to the West London Hospital, etc.



THIS useful instrument, unknown, I believe, in this country, but used by Mr. Stokes of Dublin, and by American surgeons, was introduced into practice many years ago by M. le Docteur Ch. Phillips of Paris; and when I mention that that gentleman was sent for by M. Nélaton when he was unable to pass an instrument, and that he succeeded where the great master of surgery had failed, I think it will be deemed unnecessary for me to say much for an instrument coming from such an authority. The *sonde à vis portant un conducteur* is, as its name expresses, composed of two parts—a flexible bougie and an elastic catheter. The bougie tapers away at one end to a fine line, whilst its other extremity (A) enlarges to about the size of No. 2, and is fitted with a screw, which works into a socket on the vesical end of the catheter (B). The ends (C and D) of the bougie and catheter are screwed together like the bamboo rods used by the chimney-sweeps. The bougie is first passed into the bladder, and the catheter is screwed on to it, and then pushed slowly into the bladder, causing the whole of the bougie to enter that viscus, where its great flexibility allows it to coil up and remain quietly, without the patient being aware of its presence till the catheter has effected its object of drawing off the urine. The entire instrument is then withdrawn, or the catheter can be unscrewed to leave the bougie *in situ*, to serve as a guide for the next occasion, or to dilate the stricture.

The instrument is most useful. Firstly, for those cases of enlarged prostate and tumours of the bladder where the urethra is so tortuous that no ordinary catheter can be passed. The slender bougie can be wriggled in first, and so guide on the catheter. Secondly, for cases of stricture where the difficulty arises not so much from the tightness of the stricture as the deformity of the canal (Delpech). Thirdly, for the performance of internal urethrotomy in the deeper portions of the urethra. When the *sonde à vis* has demonstrated that the bougie is in the bladder, it can be unfastened from the latter, which is then screwed on to the urethrotome to conduct it into the organ.

ON THE ESSENTIALS FOR EFFICIENT SANITARY WORK IN RURAL DISTRICTS.

By FRANCIS T. BOND, M.D., B.A.Lond.,
Medical Officer of Health, Gloucester Union of Sanitary Authorities.

THE success of sanitary, as of all other work, depends, in a large degree, upon its being commenced upon a proper basis. To lay an unsatisfactory foundation for the edifice of sanitary reform is attended by a double disadvantage; not only is the building itself insecure, and at all times untrustworthy, but the mere inertia of the materials which are piled upon it may prevent its subsequent reconstruction, except with an amount of difficulty which would be practically prohibitory. Even if the medical officer of health has himself the courage, after making a false start, to "try back" and to adopt a new plan of action, his Authority, and its other officials, are pretty sure to offer opposition either of an active or passive kind. Hence, it behoves him, for both his own satisfaction and protection, to decide carefully at the outset what scheme of organisation he will adopt with the view of enabling him to make himself thoroughly well acquainted with the sanitary state of his district, and to exercise that supervision over the steps that may be necessary for its improval, which it is his interest, no less than his duty, to maintain.

There is one condition which is essential to the organisation of all sanitary work, and that is an efficient sanitary survey. Without such a survey, the knowledge of the medical officer of health can be neither exact, comprehensive, nor trustworthy. Without it, neither he nor the Authority can know what is the general state of the district, either at the outset, or at any subsequent period of their operations; and the advice which he may give to that body is always liable to be upset by the dogmatic assertions of prejudiced opponents, for want of being founded upon the solid basis of statistical facts. I am led the more strongly to insist upon the importance of a point which I should have thought self-evident to every intelligent person who has a real wish to forward the cause of sanitary improvement, because I know of cases in which considerable opposition has been made to the institution of a detailed sanitary survey by persons of intelligence, and even of reputation as authorities on sanitary matters, on the ground that it was superfluous and inquisitorial. Any person who maintains this position is evidently ignorant of the very elements of sanitary work. I will say nothing of the opposition which is occasionally offered to a survey by those who do not profess to be either acquainted with or interested in sanitary improvements. Such opposition is to be expected, and, where met with, may be taken as a good criterion of the difficulties which may be afterwards experienced in the more arduous work of rectifying sanitary defects. The readiness with which a Sanitary Authority adopts a recommendation by its medical officer of health for a detailed sanitary survey of the district, and with which the inspector proceeds to carry it out, is the best touchstone of the zeal with which both will support the further course of action which should follow upon the completion of the survey. I will now proceed to discuss the features which it appears to me important that the survey should embrace, and the method of proceeding which should be adopted by the medical officer of health in dealing with them. My opinions are founded upon the experience of a large district,* as well as upon that of other medical officers of health with whom I have communicated.

I think it desirable to express a very strong opinion at the outset upon the expediency of keeping the details of the sanitary survey quite distinct from those of the action taken in dealing with nuisances; and I do so because, in certain forms which have been largely circulated amongst Sanitary Authorities, the two are jumbled up together in a way which shows entire want of practical experience on the part of those by whom they have been drawn up, and which cannot fail to lead to inextricable confusion in attempting to use them as a complete record for either purpose. The sanitary survey is, and should be, only a record of facts, for the information of the Sanitary Authority and of the medical officer of health. In addition to it, there should be a distinct form for the registration of nuisances. Such a form will be a record of action on the part of the Sanitary Authority, the medical officer of health, or the inspector of nuisances, and to attempt to combine the two can only lead to carrying out neither of them satisfactorily.

The following are the provisions for information which the sanitary survey should include. I will take them in their order, each being supposed to be represented by a column of appropriate width.

1. *Consecutive Numbering*—from one upwards.
2. *Cross-reference to Record of Nuisances*, so that it may be seen at a glance whether any nuisance which the survey indicates as existing on the premises has been transferred by the inspector to the record, with the view of its being dealt with.
3. *Date of Inspection.*
4. *Situation and Description of Premises.*
5. *Names of Occupier and Owner.*
6. *Number of Rooms and Inmates*, with subdivisions for enumeration of living-rooms, sleeping-rooms, and inmates. In this column, the inspector should indicate whether the occupants consist of more than one family, or not, by adding to the number of the inmates (2 *f*, 3 *f*), etc., and, in case of lodgers, by appending (1 *l*, 2 *l*), etc. Where he has reason to consider that overcrowding exists, he should give the cubic capacity of each room, and the number of persons sleeping in each bedroom. It is of no practical importance that he should do so in other cases, and only involves unnecessary trouble. It is well that the inspector should sum up the total of each column at its bottom, carrying the totals on from page to page; this gives him very little labour at the time, and will save a good deal to the medical officer afterwards.
7. *Nature, Situation, and Condition of Closet-accommodation.*—These three items will include all that it is necessary to know under this head. Under "nature" will be stated whether it is a common privy, with open or covered cesspool, an earth-closet, or a water-closet; under "situation," whether inside the house or out, and, if the latter, at what

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* I believe that my district is almost the largest in the kingdom, consisting of fourteen Sanitary Authorities, with a population of 130,000, and extending over 450,000 acres.

distance ; under "condition," whether it is full, offensive, or unobjectionable. Where the premises have no separate closet, it should be stated what place of convenience the inmates use ; and, where two or more adjoining houses use the same closet, it is convenient to include them in a bracket, so that the eye, in looking down the sheet, may readily recognise the fact.

8. *Nature of Water-supply.*—In this column, the inspector should state briefly whether there is a supply on the premises, and, if so, its position with reference to any possible source of contamination. If there is none, it should be stated whence the inmates derive their drinking-water. It is also important to note, when a well exists, whether it is used for drinking, or not. Where two or more adjoining premises use the same well, they may be bracketed, as in the case of the closets.

9. *Defects in Drainage, Ventilation, or General Condition of Premises.*—Here should be noted the nature of the drainage, if any, as well as any facts connected with dilapidation or faulty construction of the premises which may be prejudicial to health, such as dampness arising from want of spouting on roof, and badly-built walls or floors, defective doors or windows, etc.

10. *Existence of any Special Source of Actual or Possible Nuisance.*—This column is intended simply to register the existence of a nuisance at the date of the survey, or of what may at any time become one. In this latter category all pig-styes, whether with or without pigs, should be placed. The details of the nuisance, if one exists, should be entered in the special Record of Nuisances.

11. *Remarks by Medical Officer of Health.*—This is a very important column, which appears to have been omitted in all other forms which I have seen. It is essential, as enabling the medical officer to record the result of his personal observations on the premises ; or to enter the details of any examination of the water which he may have made ; or to note the occurrence at any previous or subsequent time of infectious disease on the premises.

Finally, a column for "Additional Observations" allows the entry of facts of a miscellaneous kind, such as the existence and character of public drains, wells, nuisances, etc., not immediately connected with any special premises. The forms* on which all these details are provided for are so large as to give ample room for any ordinary entries, whilst, by a very simple arrangement, they can be so folded as to be easily portable, and may be carried in a case for many miles under the arm without any inconvenience.

A few words will explain to those who have not adopted such a system of obtaining information as this the advantages which it presents. In the first place, it affords a good means of ensuring that the inspector visits every part of his district, and also of providing systematic work for him. From thirty to forty houses visited and carefully registered in this way make a good day's work in an ordinary rural locality. The survey, which (or a copy of it) should always be in the possession of the medical officer of health, enables him at any time to turn to any part of his district on the occasion of disease breaking out there, and, if necessary, to refresh his memory as to the actual state of it. It is, moreover, the indispensable basis of any report to the sanitary authority as to the sanitary condition of a locality. Thus, from the population column, the medical officer will be able to ascertain with exactness whether there is any tendency to general overcrowding or not, as evidenced by the relative number of premises with one, two, and more than two bed-rooms respectively, and the average number of occupants in each. He will, from the next column, be able to show the general state of the closet accommodation, and the numbers who use closets that are employed in common. From the next column, supplemented by his own personal examination of the principal sources of drinking-water in the place, he will be able to form an opinion as to the sufficiency of the water-supply both as to quantity and quality. These and other equally important facts will all be obtainable from the survey, and will be available, not only for the use of the medical officer himself, but also of the Sanitary Authority, to whom they will afford the best possible proof that the sanitary work of the district is being done systematically and efficiently. In fact, so strongly am I impressed with the value and indispensability of such a proceeding as a preliminary to all sanitary work, that I would strongly advise every medical officer of health to insist upon it as a primary condition to his own operations. He may possibly meet with some difficulty occasionally in enforcing it ; but, if he be firm, he will in most cases succeed. His greatest difficulty may possibly be with the inspectors, some of whom much prefer running about in a desultory way, looking up nuisances, and making ambitious reports on their own account to the more prosaic and exacting duty of house to house visitation which the survey involves. But it is wonderful how soon an inspector learns the importance of accuracy in his work when he finds out that his medical officer has the power, and exercises it, of going over his work, and that he does not hesitate to note any errors or omissions that he finds. And it is this which makes the survey so valuable: it is the best means which the medical officer, especially in large districts, has of keeping his staff up to their work and of ascertaining exactly what they are about.

I will say nothing here on the subject of the other element of sanitary inspection, viz., the Record of Nuisances, except to refer to two features which such a record ought to possess, but in which all of those which I have yet seen are defective, viz., each entry ought to contain a full account of all the proceedings adopted in respect of the case to which it refers until it is taken into a court of law ; and the Record ought to have a separate column for observations by the medical officer of health.* Such a column is important for two reasons: firstly, because it affords a means of either supporting or checking, as the case may be, any suggestions for abatement offered by the inspector ; and, secondly, because it enables the medical officer to record his opinion formally in all cases in which the sanitary authority may desire to have it in a written form.

Armed with these two weapons for sanitary warfare, it will be the fault of the medical officer of health himself if he cannot carry on his campaign successfully. But, whether he succeed or not in achieving all the objects which he may at the outset of his labours consider desirable and practicable, he will at any rate have laid a solid foundation for his work, without which he may at any time find it collapse under his hand.

CASE OF OCCIPITO-SPINAL MENINGITIS, ACCOMPANIED BY DOUBLE FACIAL AND GENERAL PARALYSIS.

By THOMAS STRETCH DOWSE, M.D., F.R.C.P.Ed.,
Medical Superintendent Central London Sick Asylum, Highgate.

THE following case is of especial interest, inasmuch as the signs and symptoms clearly indicate that the patient was suffering from inflammation of the basilar cerebral meninges, as well as of the spinal cord, with general peripheral inflammation of its substance, terminating in complete resolution. And, furthermore, although its etiology at first sight leads one to suppose its origin to be catarrhal and idiopathic, yet the clear history of syphilis, coupled with the results of the treatment, cannot fail to convince one that the syphilitic cachexy influenced to no small degree the condition of the patient and the course of the disease.

T. G., aged 28, was admitted into the Highgate Infirmary, said to be suffering from acute rheumatism. He was a strong, muscular, big-boned and well-made man, with a phthisical family history, and of fair rheumatic diathesis. There was an account of his having contracted syphilis eight years before, which never showed itself in a tertiary form ; and, from his own statement of the excellent health which he always enjoyed, it could not have taken much hold upon him. One month before his admission, he was working for some days in the rain, and wore his wet clothes continuously, which produced some constitutional disturbance, as of a severe cold, when he was suddenly seized with a feeling of "pins and needles" in both hands and feet, accompanied with numbness and a sense of heaviness, with cramps and darting muscular pains. On this account he could neither walk, unless he had hold of something to support him, and for the same reason he could not feed himself.

Upon admission, he had the characteristic smell of acute rheumatism. There was no marked arthritic pain or synovial effusion. Temperature 102 ; pulse 115 ; respirations tranquil. The countenance gave indication of facial paralysis, which was more marked on the right than on the left side. He was unable to close the lid of either eye, and there was excessive lacrymation, with diplopia. Food lodged between the teeth and the cheeks ; and when he endeavoured to blow a whistle, they remained flaccid and immovable. The state of akinæsthesia was less marked on the left side of the face, and existed to a less extent all over this side of the body.

There was akinesis of both upper extremities, with absence of co-ordinating power. When asked to grasp one's hand, he did it feebly ; and when he attempted to pick up a pin, or put a cup to his mouth, he invariably fell short of the mark. The state of paresis of the lower extremities was much more marked than in the upper. He was unable to raise the limbs to the extent of a few inches without the greatest difficulty, and complained that they felt as though made of lead: they were hyperæsthetic and hyperalgic. He suffered intense agony from cramps in the muscles of the thighs, with numbness and pricking pains in the legs and feet.

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* They may be obtained of Headland, printer, Gloucester, and are in use in various parts of the kingdom.

* Records for nuisances prepared in this way may also be obtained of Headland, of Gloucester.

The boundary line between complete and partial anæsthesia was upon a level with the umbilicus; and in this region he said that it felt as though a cord was bound round him. There were occasionally clonic spasms, but these were unfrequent. There was incontinence of urine for twenty-four hours, which passed off and did not return. The bowels were most obstinately confined. There was no especial tenderness down the spine; no intolerance of light. [This sign, though not authentically recorded, I have invariably found to be pretty conclusive evidence as to the seat of the cerebral meningeal lesion. There is not, as a rule, photophobia in basic meningitis; but when the meninges covering the superior cerebral convolutions are inflamed, and more particularly when the inflammatory action becomes intraventricular, then intolerance of light is always attendant, and furnishes a marked symptom.] He occasionally complained of great pain and heaviness in the occipital region. He was especially deaf upon the right ear; and, although his intellect was clear, there was at times considerable amnesia and thickness of speech, which never amounted to aphasia. The progress in the acute stage was exceedingly interesting, and for about three weeks his condition varied little from that just described; the temperature ranging from 101 to 105 degrees, and in proportion as it decreased, so sensibility and voluntary power began to return. The subsidence, however, of the ravages produced by the nature of the malady and the repair of the degenerated tissues was extremely gradual, so that for months he was unable to walk unaided.

When he was discharged, six months after he was first attacked, he appeared to be perfectly well. The facial paralysis, as well as that of other parts of the body, had completely gone. He closed his eyes, masticated his food, moved his arms, and walked almost as well as ever he did. At times he staggered momentarily, but this seemed to be due more to the atonic condition of the muscles than from any central ataxic cause, as the other signs of locomotor ataxy were absent. The deafness of the right ear, however, remained persistent.

After the more acute symptoms had subsided, large doses of iodide of potassium were freely administered, as well as the syrup of chloral and bromide of potassium to relieve pain.

For some time after he first got out of bed, his legs were of no use to him; the muscles were lax and devoid of tone; but by the aid of cold douches to the spine, and persistent rubbing as well as galvanism, with strychnine injections, he progressed rapidly, and left the institution perfectly well.

CASE OF INTESTINAL OBSTRUCTION IN COLIC: EVACUATION OF FLATUS BY PUNCTURE: RECOVERY.[*]

By SAMUEL MARTYN, M.D., F.R.C.P.,
Physician to the General Hospital, Bristol.

ON July 16th, 1873, I was called to Mr. B. B., a short, strongly built man, aged 60, who, up to the time of this attack, had been in good health. In his family, there is a strong gouty tendency, but he has never suffered in that or any other important way, unless from occasional bronchial catarrh. As this gentleman was a deaf-mute, we had to converse on the fingers, which was a little difficult, owing to his having very imperfect sight. Mr. B. had had diarrhœa for a few days, referred to taking fruit. Just now, he was found in an attitude described as "doubled up" on the staircase, with extremely violent colic. He made constant efforts to pass a stool, but the greatest straining produced no result. Pulse 60. Tongue very furred. I ordered a dose of castor-oil, two successive doses of chlorodyne, and fomentations of "liquor papaveris."

July 17th. In the morning, the symptoms were equally violent, the pain occurring in paroxysms at short intervals. He rolled on the floor. Pulse 50-60. I gave one-fifth of a grain of morphia subcutaneously. At 10 P.M., he again had a dose of castor-oil, a quarter of a grain of morphia subcutaneously, and fomentations.

July 18th. He slept a few hours after the sedatives. When seen, at 5 A.M., he had been since three again in violent pain, diffused over the central region of the abdomen chiefly, with tenesmus. His urine was normal. The long tube passed nine inches, when the orifice brought back blood and mucus; an enema was, therefore, given, with turpentine, oil, and egg, but soon returned. Morphia was injected subcutaneously. At 10 P.M., the pain was as violent, but he slept a little between the attacks. He took a little fluid food. Pulse 60. Tongue very furred. I ordered two drachms of brandy at intervals, and a pill of extract of opium and extract of belladonna every fourth hour.

July 19th. He had been drowsy between the attacks, which continued the same. There was universal abdominal distension, with flatus, and incessant short sharp borborygmi, with metallic ring. He took only a little milk and yolk of egg.

July 20th. The abdominal tension had increased to a distressing extent. Pulse 100. Respirations 33. The peristaltic movements, which had been very distinct, seemed arrested by the tympanitic distension. The colonic regions were now the most amphoric. Failing again to introduce the long tube, on account of opposition at the brim, or sigmoid flexure, I punctured the descending colon with a smallish trocar, and evacuated much flatus, so that the left abdomen became markedly softer. Half a grain of opium was given.

July 21st. The pain was still very severe. The abdomen was not quite so tense, but again very large. Pulse weaker, intermittent, 80-100. The legs were cold; the tongue was dry and furred. He had not slept. He took iced milk and soda-water with champagne, alternately. I gave one-third of a grain of morphia subcutaneously, and half a grain of opium.

July 22nd. He had scarcely any sleep last night. This morning an enema of turpentine and oil returned. A dose of chlorodyne gave some freedom from pain, but no sleep. This evening he was evidently in extreme danger. Pulse very weak, thready and irregular. Face dusky. The abdominal wall now projected at a right angle from below the costal cartilages. No peristaltic action could be felt, and the borborygmi had almost ceased. I then made two punctures, one into the transverse and the other into the ascending colon, with the effect of an immense exit of air. [Each puncture emptied the part only in its immediate vicinity, probably up to the nearest flexure. Thus, the ascending colon remained perfectly distended after the transverse had collapsed. I may note that I incised the cutis first, and found that, when the tension had been lessened by one puncture, a second required a very quick and perfectly vertical impulse to penetrate.] The abdomen became completely soft, and peristalsis was soon felt commencing in the still large and tense coils of the small intestines. The pulse improved at once; and circulation and respiration appeared much relieved; in fact, he implored by gestures to have more punctures made. I gave one-third of a grain of morphia subcutaneously.

July 23rd (one week since attack). After the morphia, last evening, he dozed at intervals between moderately severe attacks of pain; and, shortly after midnight, he passed a large motion, followed in the course of some hours by two others, all semifluid, with admixture of small hard masses. He was now not in much pain. His abdomen was soft. There was no tenderness near the punctures. Pulse 80-100. Temperature 100.3. His tongue was very furred. He took milk a little thickened, and brandy with soda-water, alternate hours. A third of a grain of morphia was injected subcutaneously.

July 24th. He was improving. His bowels acted three times profusely. The tongue was cleaning. Pulse 80-100. Temperature 100.4 A.M., 99 deg. P.M. I ordered weak chalk mixture and chloral at night.

July 25th. He had slept fairly for the first time. The bowels were moved three times. The tongue was improving. Temperature 98.4.

July 26th. He was much better. Pulse 70. Tongue clean. Temperature normal. His bowels were still rather active. He was ordered aromatic iron mixture.

REMARKS.—From the last date, Mr. B. made a slow but steady recovery, the bowels remaining irritable for several weeks. Fruit and vegetables had to be excluded from an otherwise generous though simple diet.

The site of the obstruction can only be determined, inferentially, as not having been in the duodenum or jejunum, vomiting having been absent except quite at the first onset; while the colon, at first empty, became enormously distended at the worst stage. At that period, all expulsive effort had ceased, and overdistension may have paralysed the muscular walls. Probably a similar overdistension, with fæcal matter, of some coils of the ileum, may have induced, firstly, spasmodic colic (colica stercoracea flatulenta), and subsequently entire stagnation in that region. Uncomplicated colic rarely lasts so long; but when it does, has been known to issue in fatal intussusception. But, in this case, the patient having a very rigid chest, chronic bronchial irritation, and a weak heart, death would probably have been caused by interference with the circulation before either intussusception or enteritis had ensued. I imagine that powerful purgatives, by forcing still more fæcal matter into the overdistended and occluded part, would have been certain to do harm; while, peristaltic action being active and obvious enough up to the period of greatest distension, they could scarcely have done any good.

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[*] Read before the Bath and Bristol Branch.

The case is not free from the difficulties which always surround "intestinal occlusions," but I cannot resist attributing recovery to the re-establishment of peristaltic contractions by removal of general flatulent overdistension, and this in the absence of irritation by drastic purgative medicine.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

HOSPITAL FOR THE EPILEPTIC AND PARALYSED.

REMARKS ON COLOURED VISION PRECEDING EPILEPTIC SEIZURES.

By J. Hughlings Jackson, M.D., Physician to the Hospital.

It is said that, in cases of colour-blindness from disease, red is, in most cases, the first colour to go, and that the further progress in loss of colour-sight is towards the violet end of the spectrum. (In the great majority of cases of congenital colour-blindness, red is the fundamental colour not seen ; all people are red-blind in the most peripheral parts of the retina, and more extensively so to its nasal side.) Loss of power to see colours is one of the sensory analogues of palsy of muscles (of motor nerves). Now, just as palsies have mobile opposites in spasm, so, in opposition to loss of colour-sight, there are cases of development of coloured vision. (Of course, the physiological comparison is, strictly speaking, betwixt excitations in motor and sensory nerves.) Thus occasionally a patient, who is subject to epileptic or epileptiform seizures, may have, as a first symptom (so-called aura), a colour, or "all manner of colours," before his eyes. It is well, when the patient is intelligent, to ask which colour is first developed, and the order in which they come. Theoretically, one would expect that the first colour to be developed would be red, because it is the one first lost in cases of colour-blindness. For, returning to paralytic symptoms for an analogy, we find that those very movements which are first lost in destruction of nervous organs are those which are first developed in epileptic discharges of nervous organs. Dr. Hughlings Jackson thinks, so far as limited and recent inquiries enable him to judge, that red is usually the colour first developed when colour-development is a "warning" of an epileptic seizure. It is not always so ; one of his patients has blue vision before severe epileptic fits, and she has had attacks of the blue vision followed by temporary and complete darkness, without anything further. (Blue, according to Maxwell, is the fundamental colour most removed from red. Helmholtz adopts the theory of Thomas Young, that the three fundamental colours are red, green, and violet.) To ask patients to note the order of development of colours, would, however, avail little in the majority of cases ; probably, there is, in most cases, a development of colour rapidly becoming complex ("rainbow").

ON THE AFTER-EFFECTS OF SEVERE EPILEPTIC DISCHARGES : SPECULATION AS TO EPILEPTIC MANIA.

By J. Hughlings Jackson, M.D., Physician to the Hospital.

After epileptic spasm of muscles, if the spasm be severe enough, there is paralysis ; as, for instance, in epileptic hemiplegia. Is there loss of power to see a colour after strong and continued development of that colour? Dr. Hughlings Jackson has had no opportunity of testing this. It is most important to note the after-effects—the "paralysing effects"—of strong epileptic discharges. The presumption is, that strong discharges temporarily paralyse much of the centre in or through which the discharge spreads. For example, epileptic hemiplegia is probably the result of temporary paralysis of the corpus striatum, the centre discharged through.

There is no subject in the inquiry into epilepsy more important than the after-effects of epileptic discharges. Dr. Hughlings Jackson believes that, in epileptic mania, the maniacal phenomena occur when the discharge has ceased ; the discharge leaves the highest sensori-motor processes *hors de combat* (there is loss of consciousness). The mania he attributes to action of processes more automatic ; they act uncontrolled ; they are not "inhibited". By an epileptic discharge the patient is "reduced" to a more automatic condition of mind, just as in epileptic hemiplegia the patient is reduced to a more automatic condition of gross movement ; and as in epileptic aphasia, the patient is reduced to a more automatic condition of speech. In so-called masked epilepsy, he believes there is at the outset a transitory and unobserved fit. He does not believe that an attack of mania "replaces" an epileptic paroxysm.

REMARKS ON SYSTEMIC SENSATIONS IN EPILEPSIES.

By J. Hughlings Jackson, M.D., Physician to the Hospital.

The order of frequency in which the higher senses suffer in epilepsies is, Dr. Hughlings Jackson believes, sight, smell, hearing. An aura of taste is very rare ; a "sting," or other non-gustatory aura from the tongue, is not so uncommon. It is not easy to say where touch comes.

In our investigation of epilepsies, we must not pass over those sensations which Lewes calls systemic sensations, and which Bain calls organic sensations. Speaking of the error of restricting sensations to the reactions of the five senses, Lewes says, "Physiology teaches us that there is another, and, indeed, far more important class of sensations, arising from what I have proposed to call the Systemic senses, because, distributed through the system at large, instead of being localised in the eye, ear, tongue, etc., ... they make up the greater part of that continuous stream of Sentience, on which each external stimulus raises a ripple." It is probable that the "aura" from the neighbourhood of the epigastrium (sensation referred there, that is) is a crude and excessive development of visceral and other systemic sensations. However, if so, it seems strange that these sensations should, as is most common, occur in those cases of epilepsy in which loss of consciousness is, next to such warning, the first event in the paroxysm. For it implies that systemic sensations are first and most represented in the highest processes. Epilepsy, in which loss of consciousness is the first, or one of the first, events, is often preceded not only by development of systemic sensations, but is attended by pallor of the face. Indeed, the experiments of disease seem to show that the very highest processes (those underlying consciousness) sum up and re-represent all lower processes of the body. The epigastric sensation, so-called "aura," is variously described by patients. Some speak of it as a "fear :" a woman, nineteen years of age, said it was "a frightened feeling, as if I had done something wrong." Another patient said it was "an indescribable feeling of horror". Women at the change of life and other persons will complain that they feel depressed, and as if they had done something wrong ; and, when asked the seemingly ludicrous question, "Where do you feel it?" will put the hand over the epigastrium. The local physical sensation is usually described as a "sinking". These are, probably in most cases, referred sensations ; but, probably, organic changes in the abdominal viscera will provoke mental depression in the predisposed ; it is, indeed, almost proverbial that dyspepsia goes with melancholy, and sometimes with uncertainty of temper.

For what is called the physiology of the mind, the development of all kinds of sensations in cases of epilepsy, from the most impersonal (as of sight) to the most personal, the systemic, deserves serious consideration.

To show the importance of the Systemic Sensations, we will quote again from Lewes's *Problems of Life and Mind*, p. 134. After remarking that "their immense superiority as *motors* has been singularly overlooked", he writes : "They make up by far the larger portion of our sentient material, since from them issue the Emotions, Sentiments, etc.; combined, indeed, with the objective sensations, but subordinating these as means to their ends, inasmuch as we only see what interests us."

BELFORD HOSPITAL, FORT WILLIAM, N.B.

CASE OF FUNCTIONAL CARDIAC DISORDER CURED BY ADMINISTRATION OF DIGITALIS.

(Under the care of James W. Allan, M.B., C.M.)

Margaret McI., aged 12, was admitted to the hospital on September 18th, 1873, suffering from palpitation of the heart. The fluttering came on when she lay down on returning to rest, and when she got up in the morning ; running upstairs also induced it. The history of the case was briefly as follows. On one occasion the child was returning home, when a lame (?) man sitting by the roadside requested that she would help him up. She declined to do so, whereupon the fellow got up and ran after her. She got a dreadful fright, and dated her palpitation from that event. I came to the conclusion that the case was one of functional cardiac disorder. In the first place, a belladonna plaster was applied over the heart. Then antacids (calcined magnesia and aromatic spirits of ammonia) were given, on the supposition that gastric derangement might be present. No benefit was derived from these measures, however, and the same may be said of a somewhat prolonged administration of bromide of potassium. On November 6th, she was given a mixture containing forty-six minims of tincture of digitalis in an ounce of water, of which a teaspoonful was taken at bedtime. The digitalis acted like a charm. After a very few doses, she was quite free from the palpitation, and left the hospital on November 12th, perfectly well.

SELECTIONS FROM JOURNALS.

OBSTETRICS.

The Delivery of the Placenta by Suprapubic Pressure.—Dr. Goodell, in the *Transactions of the Medical Society of Pennsylvania*, writes that, judging from his own experience and from the number of laudatory papers on this subject, Credé's method of delivering the placenta, or some slight modification of it, bids fair to take the place of every other. The plan which he adopts is as follows. At the maximum of the first uterine contraction after birth of the child, the fundus of the womb is grasped through the abdominal wall, between the thumb in front and the fingers behind. It is then both forcibly squeezed, and at the same time pressed downward and backward. By means of this uterine expression, the placenta and membranes are usually at once detached and extruded; sometimes suddenly, just as the stone escapes when a cherry is compressed between the finger and thumb; occasionally it will require two or more pains to effect this. The sooner this plan is resorted to after the birth of the child, the more easy in execution will it be. Those who practise this method contend that it offers many advantages over any other. The risk of communicating any puerperal disease is lessened. The expulsion of the placenta and membranes by a *vis a tergo* is more likely to be complete than by traction on the cord, which cannot be broken, as no traction is made on it. Adherent placenta is less frequently met with. The introduction of the hand into the womb is avoided, and so also, as a consequence, is the ingress of air. Finally, the tonic and energetic contraction of the womb, following this manœuvre, prevents the occurrence of hæmorrhage or of unruly after-pains.

The Mechanism of Birth in Contracted Pelvis.—O. von Haselberg (*Berlin. Beiträge zur Geburtk. und Gynäkol.*, vol. ii; *Centralblatt für die Medicin. Wissensch.*, November 1) endeavours to explain why the head passes through the narrow pelvis more readily when the rest of the body has been expelled than when it comes first, and to lay down consequent indications for turning. Every obstetrician has met with cases in which the head, though presenting in a good position, cannot pass through a narrow pelvis, while, after turning, its escape is easy and rapid. The first indication of an attempt to explain this by the different relations of the diameter of the fœtal head is found in Lachapelle; and Von Haselberg has arrived at the conclusion, from his own observations and from measurements, that by turning a smaller diameter of the fœtal head is presented to the narrow conjugate pelvic diameter. When the head presents, it lies obliquely to the inlet of the pelvis, while the body follows it in a straight direction. But when the head follows the body, not only is the passage of the bitemporal diameter through the conjugate rendered possible, but, as the pressure is distributed more equally over both parietal bones, the effects of compression of the skull are less lasting and less injurious. With regard to turning, the author does not advise that it should be resorted to very early as a prophylactic measure; it is rather indicated when, with a relatively narrow pelvis and an oblique presentation of the head, no progress is made after labour-pains have continued several hours and the os uteri is fully dilated.

ANATOMY.

Direct Communication between the Arteries and Veins.—Hoyer, in an article in a Polish journal quoted in the *Centralblatt für die Medicin. Wissenschaften*, November 16, 1873, refers to some preparations which he exhibited at the meeting of German naturalists and physicians at Leipzig, in which he demonstrated the direct communication of arteries with veins. He was led to this by observing that, on injecting an alcoholic solution of resin mixed with vermilion into the arteries, the veins became coloured, though there was no trace of the passage of the injection through the capillaries. He was further convinced of the correctness of his observation when he added a spirituous solution of aniline blue to the alcoholic solution of resin: the veins were coloured, and microscopic examination showed that the injection had reached only the smallest arteries. For the purpose of demonstration, he gently injected rabbits' ears from the carotid artery with a mixture of Berlin blue and gelatine, then cut them off, and immersed them for some days in a solution of one or two parts of chromic acid and from five to ten of hydrochloric acid in a thousand parts of water. The epidermis and hairs were thus removed, and only the cartilage and vessels remained, which could be examined *in situ* with low magnifying powers. These preparations were also coloured with carmine and rendered transparent by alcohol and turpentine. Besides the ordinary connection between the posterior auricular artery and the anterior and posterior auricular veins by means of the capillaries—the commencement of which only was injected—there were also, but more rarely, seen vessels from three to five times as large as the capillaries, filled with injection, and connecting the arteries with the veins; they seldom ran straight, but generally formed complicated loops, and showed the structure of arteries quite as far as their entrance into the veins. Sucquet had already, in 1862, described the immediate communication of arteries with veins in the head, nose, cheeks, ears, the convexity of the elbow and knee joints, and on the fingers and toes. These direct communications do not exist in the thoracic and abdominal organs; but they correspond with the anastomoses of arteries and dilated veins in the corpus cavernosum penis. The function of those anastomoses, and their influence on the circulation, are not understood.

TOXICOLOGY.

Poisoning by Coffee.—H. Curschmann gives in the *Deutsche Klinik* for 1873 (p. 377-380) a careful report of the case of an anæmic woman, who, having a groundless idea that she was pregnant, took, for the purpose of procuring abortion, an infusion of 250 *grammes* of slightly roasted coffee in 500 *grammes* of water. Two hours and a quarter afterwards, her mind was confused; the countenance was pale and very anxious, and there was violent trembling of the limbs; she had very severe dyspnœa; the breathing was difficult and quick, while the state of the lungs was normal. The pulse was frequent and very tense, and the arteries were contracted; the action of the heart was violent; there were frequent diarrhœa with tenesmus, and frequent discharge of large quantities of urine of low specific gravity. In the evening, there was an improvement under the influence of morphia; and on the third day the patient had quite recovered. –*Centralblatt für die Medicin. Wissenschaften*, December 13, 1873.

PATHOLOGY.

Chronic Hæmorrhagic Peritonitis.—In two cases of severe ascites consequent on heart-disease, in one of which tapping was performed sixteen times in four months, and in the other twice, a remarkable and hitherto undescribed form of chronic peritonitis was found after death by N. Friedreich (Virchow's *Archiv*, vol. lviii). Its characteristic signs were the formation of easily removable layers of exudation-matter in the peritoneum; the small amount and slightness of adhesions; and enormous vascularisation and consequent tendency to hæmorrhage and the formation of pigment. In the first case, the hæmorrhage had led to the formation of prominent firm knobby tumours, at first sightly resembling melanotic sarcoma; in the second, it was limited to capillary extravasation. Microscopic examination showed that the layers of exudation lying nearest the intestine were the newest; here the ground-substance presented the most elementary forms of organisation and the highest degree of vascularity, though it was destitute of any of the characters of connective tissue. These, however, increased from within outwards, so that the outmost layer presented all the characters of perfect connective tissue. The author thinks that there is no doubt that the formation proceeded from without inward; that the younger layers were the offspring of the older ones; that the hæmorrhage proceeded chiefly from the former; and that the effused blood was encapsuled by the advancing organisation of the tissue, if it were not poured out into the peritoneal cavity or between the older formed layers. The connection with chronic hæmorrhagic pachymeningitis and hæmatoma of the dura mater is not to be mistaken, and is supported by the fact that in the first case the inner surface of the dura mater presented layers of false membrane which could not be distinguished either by the naked eye or by the microscope from the most recent of the exudations in the peritoneum. The cause of this affection is no doubt to be sought in the irritation of the serous membrane through the hyperæmia resulting from the dilatation of the vessels in consequence of puncture, after their compression by the ascites. This view is favoured by the clinical phenomena—slight peritonitis after paracentesis, and symptoms of congestion of the head when ascites is increasing.—*Centralblatt für die Medicin. Wissenschaften*, November 1.

PHYSIOLOGY.

The Delirium of Inanition.—The nature of the delirium of inanition was recently discussed incidently by Sir William Gull at the Clinical Society. Dr. Haust describes (*Le Progrès Médical*, Jan. 3) the symptoms observed in three patients who practically died from this cause, being the victims of cancer of the stomach. The first, a man aged 55, took only a few spoonfuls of thin soup daily for the last few weeks of his life. The second and third were women who were similarly starved for the last periods of their existence. In these three patients, there was observable during this period a gradual lowering of the temperature, which in the first instance fell to 95 deg. Fahr., and in the other two to 84.2 deg. These patients during the last days of their existence presented very similar disturbances of the intellect. Their physiognomy had a striking expression of studied satisfaction and dulness. The first patient would play with morsels of bread, and hide them under his pillow; then he fell for hours into a state of profound dulness. He was several times detected in the act of onanism. The patient, when roused from torpor, was constantly smiling in stupid fashion. This woman, when she was awake, had also an expression of great beatitude; she whistled, moved her fingers in rhythmical time, burst into loud laughter, or would remain for a long time together with her eyes fixed as in ecstasy. Larrey observed similar phenomena in individuals dying from the slow effects of cold.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 27th, 1874.

C. J. B. Williams, M.D., F.R.S., President, in the Chair.

THE USES OF CONIUM IN DISORDERS OF MUSCULAR MOVEMENT. BY JOHN HARLEY, M.D.

Dr. **John Harley** read a second communication on this subject, and gave further details of the cases described at the meeting on December 9th (see British Medical Journal, December 27th). The patients were again exhibited.—The **President** said that he had been in the habit of giving the extract as well as the juice of conium, and had never seen any narcotic or poisonous results. He had nearly abandoned its use in consequence of its small effects; he had, however, always used it in much smaller doses than those given by Dr. Harley.—Dr. **Buzzard** asked whether Dr. Harley had perceived any difference in the quality of the succus conii obtained from different druggists. He had given it at the Hospital for Paralysis in doses of an ounce and a half three times a day, to children eight or ten years old, and had never got any evidence of physiological effects. Cases of chorea had done well under its use; but this was not evidence of its therapeutic value.—Dr. **John Harley** said that, if Dr. Buzzard would use the juice prepared from fresh hemlock, physiological effects would be produced. His failure to produce results was to be ascribed to carelessness in the preparation of the remedy. At present, the supply of good succus conii was exhausted; and some druggists attempted to make it by dissolving the extract and colouring the solution with caramel.—Dr. **Cotton** had made some experiments on the inhalation of conium at the Hospital for Consumption, and had come to the conclusion that it was inert.—The **President** thought that it was rendered somewhat more efficacious for inhalation by the addition of liquor potassæ.—Dr. **George Harley** thought that it would be dangerous to allow the idea to go forth that conium could be given with impunity in the large doses described. The strength of the preparation depended on the season of the year at which it was obtained. He related some experiments which he had made, showing that conia, in the course of time, gradually lost its power, being exceedingly volatile and unstable. He could confirm the statement that conia did not affect the intelligence; dogs remained perfectly intelligent even when quite paralysed.—Dr. **John Harley** always tested fresh supplies of succus conii on himself. The principal results were disturbance of the action of the recti muscles of the eyeball and weakness of the knees. The conia in the succus was combined with a vegetable acid; and the succus was preserved good by being kept in a stoppered bottle.

CASES OF COMPLETE ECTOPIA VESICÆ WITH EPISPADIAS. BY JOHN WOOD, F.R.C.S., F.R.S.

Mr. **John Wood** showed two cases of complete ectopia vesicæ with epispadias, which had been operated on with success by his plastic method. The patients were brothers, aged 18 and 12 years respectively. The elder had a very wide interval between the pubic bones, the superior rami being separated to the extent of five inches, leaving a large mucous surface of the bladder and the orifices of the ureters uncovered, and discharging blood and mucus. In the younger, the defect was smaller and more favourable. Two plastic operations had been performed on each in King's College Hospital. The first consisted of a reversed flap of skin taken from the umbilical region, large enough to cover the exposed bladder, and turned down with its skin surface towards the mucous membrane. The skin of the flap was in this situation quite devoid of hair, as is usual in these cases. Two other flaps of a lancet-shape were then taken, one from each groin, with the bases downwards, and placed upon the raw surface of the reversed flap. They were held together by harelip-pins and wire sutures. The second operation was effected by the transplantation of the anterior three-fourths of the scrotum from below the malformed penis to its upper surface, covering in the urethral epispadiac groove and forming a very complete prepuce, through and under which the urine flowed, and completely enveloping the glans penis above and at the sides. The elder patient had had two attacks of erysipelas during the treatment, which prolonged the period of convalescence and necessitated his leaving the hospital for an interval. The younger, who was treated at the same time, proved somewhat intractable in the insertion and management of the India-rubber tube used in the after-dressings. The result was, in his case, a small slough at the point of junction of the flaps transplanted at the second operation, which left a fistulous opening. Upon this, two operations of a minor and trifling character had been since performed, and it was now contracted to a small chink. With this exception, the parts are all soundly healed, and were being gradually braced up and rendered more resisting by the contraction following the operation. The patients were about to have made a shield to fix on to the restored penis, and an India-rubber urinal attached, fastened to the leg like a railway urinal, an instrument which, in other cases operated on by Mr. Wood, had kept the patient dry and comfortable. A detailed description of the operations performed by Mr. Wood for this deformity is found in a paper published in the fifty-second volume of the *Medico-Chirurgical Transactions*, 1869, with coloured explanatory plates.—Mr. **Thomas Smith** asked Mr. Wood if he had found any means of removing the hairs from the inner wall, or of preventing the collection of phosphates.—Mr. **Wood** said that the only way to remove the hairs was by destroying the bulbs by nitric acid before the operation. In one of his cases, the patient plucked out the hairs as they grew, and had less trouble with them now than formerly. The accumulation of phosphates might be prevented by careful cleansing with a dilute solution of nitric acid.

CASE OF PRIMARY EXCISION OF THE ANKLE-JOINT; WITH OBSERVATIONS. BY HENRY LEE, F.R.C.S.

The author described what he believed to be the only case in which complete primary section of the ankle-joint had been performed; and advocated the plan, both in primary and secondary excisions of the joint, of dislocating the tibia and fibula *outward* so as to allow the articulating surface of the tibia to be removed with comparatively little disturbance to the surrounding parts. The articulating surface of the astragalus was also more easily removed in this way than by dislocating the bones of the leg inward, as had commonly been attempted in secondary excisions of the joint. In many of the so-called excisions of the ankle, the extremities of the tibia and fibula had alone been removed, and the articular surface of the astragalus had been left either partially or altogether. In other cases, where a complete secondary resection of the joint had been performed, the bones had been divided by a thin saw whilst they remained *in situ*; a proceeding, according to the author, involving considerable disturbance and risk to the surrounding parts. In other cases, again, an incision had been made on the outside of the joint, and a dislocation of the bones attempted; but this could not be satisfactorily accomplished so long as the internal malleolus was left. The plan advocated, therefore, was to remove the internal malleolus first, and then the tibia and fibula might be dislocated outward through the external wound with great facility, and without interfering with any important structures. Such a mode of operating had not, he believed, been hitherto described. The patient was exhibited at the meeting.—Mr. **Barwell** said that primary excision of the ankle had been performed in civil as well as in military surgery. It had been done successfully three times by Mr. Canton. He believed primary excision more likely to be successful than secondary. He differed from Mr. Lee as to the operation described by Mr. Holmes, which had been quoted with acknowledgment from him (Mr. Barwell). In the operation, the limb was dragged down by an assistant, so as to make a space between the tibia and the astragalus, and the surfaces of the bones were sawn off.—Mr. **Maunder** had performed excision in 1866 in the London Hospital, in a case of compound dislocation of the ankle. The bone projected on the inner side. He sawed off the end of the tibia, and then made an incision on the outer side and removed the surface of the astragalus. A month later, hospital gangrene attacked the part; amputation was performed, but the patient died of pyæmia.—Mr. T. SMITH believed that it was best to excise the external malleolus first.—Mr. JOHN WOOD had performed partial excision in a case of disease of the end of the tibia, by laying open the sinuses which existed, using the gouge to the tibia, and then shaving off the upper surface of the astragalus. He left the external malleolus, with the cartilage at the outer part of the joint. The case did well.—Mr. H. LEE replied.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, JANUARY 20TH, 1874.

JOHN WHITAKER HULKE, F.R.S., Vice-President, in the Chair.

THE report, by Dr. Burdon Sanderson and Dr. Green, on Mr. Coupland's case of suppurating lymphatic gland opening into the trachea, was read. There was nothing to add to the account already given. Degenerative changes were most marked, originating from separate foci. It was probably of tuberculous origin.

Lymphoma of the Neck.—Mr. LENNOX BROWNE exhibited a cast, photographs, and laryngoscopic drawings of a case of lymphoma displacing the trachea and larynx. The patient, aged 33, had, eight months previously to admission into the Middlesex Hospital, where she was under the care of Mr. Nunn, observed a large swelling on the right side of the neck. She was at that time about four months pregnant. The tumour occupied the whole of the posterior triangle of the neck, and appeared fixed at the clavicle; but there was dulness on percussion for three finger-breadths below this spot. The right mamma was enlarged, inflamed, and indurated; and the veins over it, as well as of the right upper extremity, were very turgid and prominent. There was also a general enlargement of the thyroid gland. With the laryngoscope, Mr. Browne found that the larynx was pushed entirely to the left of the median line. The epiglottis was not distorted, but the right ary-epiglottic fold was greatly stretched. The spleen was not enlarged; but the patient suffered from continuous slight diarrhœa; there was not the least dyspnœa. The interest of the case appeared to be the unusual displacement of the windpipe, with no disturbance of the respiration. At a later stage of the disease, when the deeper glands became involved, dyspnœa would probably be a prominent symptom.—Mr. MORRIS thought that the case was more of clinical than of pathological interest. It was a fellow one to Mr. Coupland's. The reason why so large a tumour displaced the larynx, without causing laryngeal symptoms, was, that there was no pressure. A much smaller tumour in the mediastinum would cause narrowing and constriction of the tube. There was another symptom besides dyspnœa and laryngeal spasm, namely, hyperæsthesia of the mucous membrane. When the tracheotomy-tube was introduced, the spasm was aggravated, but it was relieved when the tube was removed, the spasm recurring when the tube was reinserted after two or three days. Dr. Gairdner recorded a case, in his *Clinical Medicine*, where an aneurism caused pressure on the recurrent laryngeal nerve. The same condition of hyperæsthesia being present when tracheotomy was performed.—Mr. THORNTON observed that lymphoma generally displaced the trachea, whilst malignant growths encroached on the calibre of the tube.—Mr. HULKE thought it was impossible to form a certain opinion in all cases. There might be a strong probability of the nature of the case. He considered that the displacement was not very unusual.

The Grouse-Disease.—Dr. COBBOLD exhibited a specimen of *Strongylus*, which, he affirmed, was the cause of grouse-disease. He had examined numerous specimens from cases occurring in a recent epidemic at Nairn, where the deaths were attributed to liver-disease, but were in reality due to the presence of *Strongylus pergracilis*; numbers, varying from 10 to 100,000, of these being found in the cæcum of every bird. They had not previously been discovered, owing to the cæca, which averaged two feet long, not having been examined. The villi were gorged with the parasites. When these abounded, the bird was reduced to a mere skeleton, being almost unable to fly. Cattle, sheep, deer, and hares all had their parasites. Even reptiles and fishes were not free from them.—Mr. HULKE inquired what conditions were factors in the production of these parasites.—Dr. COBBOLD said that some seasons the disease was epidemic, in others not, depending upon climatic conditions. The previous season favoured their production.

Hydatids of Abdomen.—Dr. WICKHAM LEGG exhibited hydatids of the liver, omentum, and recto-vesical pouch. The patient, a man, had been deeply jaundiced for ten months. He had xanthelasma of the face; and, along the sides of the tongue, there were three or four yellowish white spots, somewhat raised, soft, and symmetrical. Thirty-six hours before death, he had delirium and coma. The temperature was 105.6. The urea and chlorides in the urine were normal in quantity After death, a large hydatid cyst was discovered in the great omentum and liver, pressing on the hepatic duct, which was immensely dilated. The gall-bladder contained some perfectly colourless fluid, which gave no reaction of bile. On dissecting out the hepatic ducts, they were found to contain a yellow fluid. The liver weighed 140 ounces, and was tough and slightly granular, the liver-cells being preserved intact. The arteries were free from atheroma. Respecting the nature of the xanthelasmic spots, the yellow colour was due to deposition of fat under the skin, and not to blocking up of the sebaceous glands. There was a local proliferation of connective tissue under the skin, which became filled with fat, the large cells being filled with granular matter. The yellow patches under the peritoneum were filled with true fat-cells, differing entirely from the xanthelasma of the skin.—Dr. MURCHISON stated that, five or six years ago, he recorded a case in the *Pathological Transactions*, where the appearances were similar to those described.—Mr. HULKE had never met with xanthelasma of the tongue, though xanthelasma was not very uncommon.—Mr. FAIRLIE CLARKE thought that this was the first case described affecting the tongue; there was no case on record. Mr. Hutchinson had pointed out how it became so after the lapse of a certain time.—Mr. HULKE observed that it was interesting, the connection of xanthelasma and jaundice. He had seen many cases of the former, where there was no jaundice.—Dr. HILTON FAGGE remarked that there was no instance of multiple xanthelasma recorded where jaundice was absent. In the *Pathological Transactions*, there were three cases recorded where xanthelasma resulted where the jaundice had been prolonged over twelve months.—Dr. LEGG, in reply, said that he was not ignorant of Dr. Murchison's paper. The spots were not perfectly symmetrical, one shoulder being implicated and not the other. Respecting xanthelasma multiplex being always accompanied by jaundice, Frerichs recorded a case where there was no jaundice.

Syphilitic Phthisis, or Interstitial Pneumonia.—Dr. GOODHART exhibited a specimen of syphilitic phthisis, or interstitial pneumonia, occurring in a woman, aged 50, who died from hæmoptysis. She had been ill twelve months, but had been worse lately. Both lungs were found, after death, to be in a state of fibroid phthisis. An aneurism had formed at the base of the lung, and had caused death. There was a gummatous patch in the liver. In another case, a youth, aged 20, fell in December, striking the left side of the chest, which occasioned pain for two days. He went to work for a week. The pain returned, and he died of gangrene of the lung and pneumothorax. *Post mortem*, the condition of the lungs was that met with in chronic pneumonia. There was thickening of the walls of the lungs and bronchial tubes. It was an acute and recent disease.—Dr. PAYNE said that, in his case, there was no history of syphilis. Conditions often mistaken for it were chronic bronchitis or chronic fibroid phthisis. The bronchial glands were not caseous or calcified. Gummata in the lungs were rare.—Dr. GREEN observed that there was no evidence to show that a syphilitic growth in the lung can be a cause of phthisis. There might be typical syphilitic gummata; but, putting these aside, was there fibroid phthisis? Fibroid deposit was very irregularly distributed, not uniform as in pneumonia, which affected the bases chiefly. In this specimen, he judged it to be syphilitic from its irregularity.

Cyst of Scalp Simulating Meningocele.—Mr. ARNOTT exhibited a cyst in a child's scalp simulating meningocele. In December, 1872, a child, six months old, was brought to him with what seemed to be a small dermoid cyst about the size of a bantam's egg, situated just in front of the anterior fontanelle. It was translucent, not pulsating, not reducible; the skin stretched over it was of a bluish colour. The mother stated that, at birth, the head was natural, and that, in about five weeks, a small swelling of the size of a hazel-nut appeared, which increased when the child coughed. Pressure was tried, and iodine employed, apparently with benefit. When the finger was pressed in, no bone could be felt. The child died collapsed from lung-disease. At the necropsy, the skin peeled readily off, disclosing a dermoid or sebaceous cyst containing opaque fatty material and coils of hairs. The fontanelle was closing. Giraldès had recorded a similar case, where the tumour was tapped, and fluid similar to that obtained from spina bifida drawn off.—Mr. HULKE observed that an error of diagnosis was very difficult to avoid. He had met with a case where a cyst at the root of the nose was connected with the brain. The patient went to another hospital, where it was diagnosed to be a dermoid cyst, and was removed, death ensuing in consequence. In Langenbeck's *Archiv für Klinische Chirurgie*, similar cases were recorded.

Fibroma of Ovary.—Mr. ARNOTT exhibited for Mr. LAWSON TAIT a fibroma of the ovary, which was solid, and weighed fourteen ounces, being one of the largest on record.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, FEBRUARY 7TH, 1874.

MR. LOWE ON THE MEDICAL POLICY OF THE GOVERNMENT.

MR. LOWE's address to the electors of the University of London is remarkable as the only address which has seriously touched the once much lauded sanitary policy as a matter of State concern. He said :—

"I must congratulate you on the sacrifice you have made in the past year of the power of conferring the right to the practice of medicine. Having merely the degree to give, it is highly honourable that the University has consented, for the good of the medical profession in general, to waive the right of conferring that degree, and to submit their graduates to the general examination to be administered to the medical profession. I have also to congratulate you on the great success of the Brown Trust—a matter which has given us infinite trouble in the Senate, and which now we may consider fairly launched in a way to be of the greatest service not only to the many objects for which the Brown Trust was assigned, but also for the study of pathology and medical science in every description. I am not able to judge, but I am told that the lectures of Professor Sanderson have been received with universal admiration. I may also mention what must be very agreeable to every humane person—the quantity of cures of suffering animals and the degree in which the services of the institution are appreciated by the public. The words of Coleridge, indeed, applied to this institution :—

> 'He prayeth well who loveth well,
> Both man and bird and beast ;
> He prayeth best who loveth best
> All things, both great and small ;
> For the great God who loveth us
> Has made and loveth all.'

"Gentlemen, it has been said often that the Government, of which I have the honour to be a member, is so stingy that it has not been able to do much for science and art, and that it has confined itself to the more material interests of the country. I think that charge can hardly be supported. In the first place, we sent out the *Challenger*. This is itself a matter of great moment, as we all want the solution of the great problem of the formation of the crust of the earth, and of the creatures which once inhabited it. Then, the Government has incurred a very large expense in making a complete survey of the transit of Venus. Besides that, the building in which we now have the honour to meet—buildings for the purposes of different scientific institutions and natural history—the buildings rising in South Kensington—all afford proofs of the desire of the Government, as far as possible, to develope the cultivation of science and art. We have established a sanitary department ; we have made the health of the people really a part of the duty of the Government, and appointed a responsible Cabinet Minister over it. We have, and I might take the credit to myself for it, given prizes and premiums for successful vaccination ; and those who are acquainted with the history of vaccination will know that it is not so much a case of a child being vaccinated, as being successfully vaccinated ; and by the system that we have introduced—that is, of payment by results—we hope to have efficiency in vaccination, and so diminish or check the ravages of small-pox. There is nothing for which the late Parliament deserves more credit, though it may seem a humble matter, than its having taken steps to put an end to the adulteration of food, especially that sold to the poor. I apprehend that service, though a humble one, is most valuable ; and, when people come to think of this matter apart from the heat and animosity of party, they will conclude that it is the best thing we have accomplished during the last Parliament. We are engaged in a contested election ; and, should fortune frown upon us, I have satisfaction in thinking—looking at the speech of Mr. Disraeli in Glasgow—that, whatever should become of the rest of our affairs, the sanitary matters will not be neglected. When Mr. Disraeli laid down the maxim of 'Sanitas sanitatum, omnia sanitas,' he thought that at least he was to have had scope for his genius. But I am sorry to say that neither in his printed address, nor in the several speeches he has delivered, nor in the speeches of any of his colleagues, has there been the slightest allusion to this all-absorbing topic. I cannot help thinking that 'sanitas' had been put for 'vanitas.' 'Vanus' means 'empty,' and the perfect emptiness of topics in the policy of the right hon. gentleman made him take hold of this one topic of 'sanitas' as the only one in his power."

We cannot but wish that Mr. Lowe's statements had been more closely approximative to the views taken by the ministers concerned. Were it true that Mr. Gladstone's Government had "established a sanitary department," and "appointed a responsible Cabinet Minister over it," we should feel that the country had been, and would now be, immensely indebted to it. Read by the sober light of facts, the Government has detached the Sanitary Department of the Privy Council from its former connections, and has subordinated it to the destitution department. It has placed over it a minister who has obstinately and scornfully refused to recognise it as a department, and who has persistently treated it as a subordinate part of the organisation for the relief of destitution. Mr. Stansfeld has deliberately slighted and snubbed the officers of the Health Department, and would, if he could, crush that department. He has made Mr. Henley, Mr. Wodehouse, Mr. Doyle, and the rest of his Poor law inspectors, the leading authorities in dealing with local sanitary boards ; and lest he should be compelled to recognise Mr. Simon as the head of a department, he has studiously avoided consulting him on all important occasions. There can be no doubt that the weight of medical influence in the present election has been and is in favour of the Conservative candidates ; and for this Mr. Gladstone is mainly indebted to the arrogance and the blundering of Mr. Stansfeld, and to the weak attempts of Mr. Cardwell to avoid rendering substantial justice to the Medical Department of the Army. We cannot affect, looking to those great social interests of which we are interpreters and advocates, to regret the result, or to see that a ministry which has done so little justice to these great questions is now in serious difficulties. These interests have, we believe, at present more to expect from Conservative than from Liberal enlightenment.

THE RECRUITING QUESTION.

WE fear that the science of arbitration is not yet sufficiently advanced to render it advisable for any first-class power to dispense altogether with a standing army. But unless England means to abandon even that moderate pretension to military supremacy which her insular position requires, she must now look the question of voluntary enlistment fully and fairly in the face. The present condition of recruiting has frequently come before the public within the last few months ; and, making every allowance for party misrepresentation and exaggeration, it is very evident that the difficulty of procuring a supply of eligible candidates for the ranks is rapidly becoming serious. As an authoritative exposition of the views of a sagacious and experienced observer, we therefore desire to draw the attention of our readers to the lecture delivered by Dr. Leith Adams, F.R.S., at the Royal United Service Institution, on Monday evening, and hope that the abstract furnished in our columns may be the means of directing renewed professional interest to this difficult subject. After the delivery of the address, free discussion was invited, and a discursive but exceedingly interesting debate followed, in which several well-known officers delivered their opinions in the most graphic manner.

It was generally agreed that the question must really be resolved into one of *£ s. d.*, or in other words, how can we best compete with the labour-market and its many substantial inducements. It is clear that the ploughman or hedger of former days, who eagerly proffered his services for a scale of remuneration distinctly in excess of what he could obtain by agriculture, is no longer able to satisfy himself that the army is superior to well-paid work at home, or to the gilded hopes of a competence in other lands. It is manifestly absurd also to suppose that the artisan or collier will accept a pittance tenfold less than his present daily fee; and, as a matter of fact, a large proportion of our present recruits consist of starved-out clerks and shopmen, with general nondescripts, and a few decayed gentlemen. Having here the elements of insubordination, discontent, and physical incapacity, we cannot be surprised that the result is desertion, crime, and invaliding; and, although one of the speakers was able to assure the meeting that the class of recruits now enlisted in London for the light cavalry is unusually superior in quality, we know that this experience is special, and that regimental commanding officers are almost universally grumbling at the wretched material supplied.

Now, the remedy for this unsatisfactory state of affairs must unquestionably be sought in attempts to raise the position and status of the British soldier. We cannot attempt to compete with the attractions of civil employment in actual money, but we can give money's worth; and, above all, we must try and make the post of private or non-commissioned officer appreciated as an honourable social distinction. Let the man who may one day shed his blood for his country enjoy the same *prestige* in his class as the officer does in the higher sphere to which he belongs, and we may one day see the honour of wearing her Majesty's uniform competed for even in its lowest grade. In order to reach even one stage, however, towards this possibly utopian goal, we must provide, not only cheerful employment and abundant means of self-improvement for the soldier, but we must also throw open very widely the list of posts and lucrative occupation which must exclusively belong to him when he retires. Let our working classes see that the best chance of advancement in life is really to be attained through the ranks, and that, although every private in our service may not carry a field-marshal's baton in his knapsack, he may at all events find there the key to a much higher and more satisfactory existence. Let us restore pensions, which have always proved a strong inducement to enlistment; and let us consider very seriously the working of the short enlistment Act, the abolition of bounty, the question of the reserve and, most especially, let our rulers condescend occasionally to take practical advice, and to avoid the endless and worrying promulgation of unstable and contradictory warrants.

Such are some of the lessons to be learnt from the discussion of Monday night; and, as the further consideration of Dr. Adams' able paper has been adjourned to February 9th, we hope that this vital question may claim some share of the public attention, which is now so lavishly bestowed upon the general election and the Tichborne trial.

THE EQUATION OF SANITARY WORK.

WE have, as our readers are aware, felt it to be our duty to animadvert very decidedly upon the absence of any definite principles of policy, which has been exhibited by the representatives of the Local Government Board in the crusade upon which they were dispatched for the sanitary organisation of the country. It would seem that at length, however, something like a principle has been discovered by the Board, or, rather, by one of its inspectors; for the ægis of central inspiration is so conveniently available as a protection for the opinions and actions of individual officials in all governmental matters, that we shall be probably doing no injustice in this matter if we assume that it is to the unaided genius of the representative of Gwydyr House that this discovery is due, when we state that it is nothing less than the determination of what we may be permitted to call the equation of sanitary work, and its precise valuation in pecuniary terms. We are sure that our readers will, like ourselves, regard it with the interest with which the astronomer probably contemplates the hazy commencement of consolidation exhibited by a nebula, or with which the physiologist examines the first evidences of the primitive trace in the animal embryo. Let us hasten to explain what this interesting discovery is.

It appears, then, that the Pontypridd Rural Sanitary Authority, having, we presume, either become somewhat exercised in their minds at their neglect of their duties under the Public Health Act, or having been gently stimulated to the consideration of the subject by Mr. Doyle, the energetic inspector of the Local Government Board for Wales, decided upon accepting one-half of the scheme which Mr. Doyle laid before the Sanitary Authorities of the Principality last year, and agreed to appoint their Poor-law medical officers as medical officers of health. It further appears, from a report in the *Cardiff Weekly Mail*, that they offered these gentlemen 25 per cent. on their Poor-law salaries, as a remuneration for the new duties which were thus to be imposed upon them. Whether this offer was the spontaneous proposal of the Pontypridd Board, or whether it was in any way originally "inspired" by Mr. Doyle, is not a matter of much importance, as that gentleman in the end officially endorsed it. Now, 25 per cent., although relatively a respectable proportion, may or may not, in a concrete form, be an important addition to a professional man's income, according to the gross amount of the salary on which it is calculated. As no one of the medical officers in question appears, from the published list of salaries, to receive more than £30, and the majority of them only receive £20 a year, the emolument which would accrue to any one would in no case exceed £7 10s., and in most cases would be appreciably less. Under these circumstances, it is scarcely surprising that these gentlemen should have protested against such a shabby mode of treatment. They said: "We think it but reasonable, taking all things into consideration, that the smallest salary you (the Board) should offer, and we could expect, should be at the rate of 50 per cent. on our present small salaries as officers of the Board of Guardians." This audacious attempt at extortion seems, like that of little Oliver on an equally notable occasion, to have so paralysed the intellectual energies of the Board, that they felt themselves unable, by their own unaided efforts, to deal with it, and so summoned Mr. Doyle, as a sort of *deus ex machinâ*, to help them out of their difficulty. Mr. Doyle, like another prophet who was once called in to curse, though he concludes his intervention by blessing the offenders, does it, we must confess, in such a qualified and grudging manner, that we fear at least half of the double-edged benefit which our great poet says attends such acts, must have evaporated in the performance of it. However, the doctors got their 50 per cent. in the end; and if they should resolve to look upon it as a very modest *honorarium* for the retention of their services whenever any special sanitary emergencies may bring them into requisition, we think that the public will hardly consider them unreasonable in doing so.

There are several features in this little transaction upon which we might, if it were desirable, hang a few instructive remarks; but the one to which we are at present most concerned to draw the attention of our readers, is the reason which Mr. Doyle is reported as having given for backing up the original offer of 25 per cent. by the Pontypridd Board. "He was bound in candour", he said, "to state that the work of an officer of health did not, as a rule, amount to more than one-fourth of that of a (Poor-law) medical officer." There is here, as we remarked above, the germ of a great discovery. After all the confused babble with which we have been afflicted during the last year or two as to the practicable work which a medical officer of health can undertake, the area which he can efficiently supervise, and the relative merits of men who are or are not engaged in practice for such appointments, it is quite refreshing to come upon so charmingly simple a formula for determining all these intricate problems. It is obvious that in order to work out what we may venture to call the potential of a medical officer of health, we have only to take the activity of a number of Poor-law medical officers, divided by four, sufficient to fill up six working days (for we presume that even a medical officer of health may claim his Sundays free, though probably many of them are not so fortunate as to get them), and the difficulty is solved. The same process will, of course, also give his salary wherever it is considered desirable that he should restrict himself from other professional services of income. In fact, the calculus of sanitary organisation may be fairly said to have been thus discovered at last.

There is only one circumstance which in a degree modifies our admiration of Mr. Doyle's ingenious discovery, and that is a doubt of the grounds upon which his calculation is founded. We are somewhat curious to learn how he has come to satisfy himself that 25 per cent. represents the exact relationship of the work of a Poor-law officer and of a medical officer of health. We are not uninclined to think that it is possible that he may have considerably overestimated the ratio—at any rate in some cases; and we have very little doubt that the work which is expected of Rural Sanitary Authorities can, as a rule, be much more accurately gauged by the salaries which they offer than by a comparison with that which they extract from their district medical officers. There is just one more remark which we should like to make, and that is upon the concluding observations of Mr. Doyle: "That, taking all the circumstances into consideration" ("all the circumstances" being, we may add, that the Pontypridd Poor-law medical officers were admitted even by Mr. Doyle himself to be very inadequately paid), the Local Government Board would be prepared to pay their moiety of the 50 per cent., on condition that they could revise the salary, if it were thought proper to do so at the expiration of twelve months." So there is still hope at the bottom of the well yet, and the doctors may possibly get another 25 per cent. next year, unless Mr. Doyle's foreshadowed revision of salaries should, as will probably be the case with Mr. Gladstone's promised "adjustment of taxation", mean taking it out of one pocket to put it in another. We should like to know, too, how the Local Government Board reconciles this arrangement which it thus sanctions for subsidising these trumpery little salaries to the Pontypridd medical officers of health with the refusals which it has made to assist other Rural Sanitary Authorities in similar arrangements in other parts of the country.

After Mr. Doyle's ambitious scheme of last year for confederating the whole of the Poor-law medical officers of Wales under four central officers of health, and the way in which it was quietly ignored by the Authorities of the Principality, it must be somewhat annoying to him to find that all his labours in the cause of sanitary reform have only eventuated in his having to give his *imprimatur* to such a sorry substitute for it as this. However, he, like his official chief, will, we trust, grow wiser as he grows older, and will come in time to see how miserably imperfect any scheme of sanitary organisation must be which is not founded upon clear and consistent principles of action, and supported by a firm and energetic attitude towards Sanitary Authorities on the part of the Local Government Board itself. When these truths have been fully realised by Mr. Stansfeld, we may hope to see the subject of sanitary organisation taken in hand in a very different way from that in which it has hitherto been handled by him.

HOSPITAL SATURDAY FOR LONDON.

THE institution of a Hospital Sunday has been speedily followed by the proposal of a Hospital Saturday; but we cannot say that we look upon the latter with the same favour with which we regard the former. Let us see how they stand related to one another. The Hospital Sunday is avowedly charitable: it is an arrangement for collecting in an organised, a simultaneous manner, the alms which the various churches, chapels, etc., within the metropolitan area have hitherto raised in an irregular and unorganised way. The promoters of this movement hope that it may be the means of bringing the work of our hospitals and their financial necessities prominently before the public, and thus creating a greater interest in them, and obtaining for them increased support. The hospital managers at the same time look forward to receiving with more certainty and punctuality the money which has hitherto flowed in a fitful stream; and the profession anticipate that the Committee of the Hospital Sunday Fund may inaugurate many desirable reforms, and exercise a most wholesome influence over the various medical charities of London.

But what, on the other hand, is the object of the Hospital Saturday movement? It is clearly expressed in the second resolution which was passed at a conference held lately at Albert Gate; namely, 'That this meeting, fully recognising the importance of those for whose benefit hospitals had been established, aiding in the support of such institutions, therefore most earnestly recommends that a special day be set apart upon which the working classes may, to the extent of their means, contribute to a fund which shall be distributed among the various hospitals and dispensaries of the metropolis." The first point in this resolution to which we take exception, is the definition given of the class for whom hospitals are intended. As we have repeatedly pointed out, they are carried on for the benefit of the poor, the needy, the necessitous, the really indigent. These are the phrases by which the managers indicate the class for whom they administer the funds at their disposal. But the resolution we have just quoted assumes that the working classes, as a whole, are those for whose benefit the hospitals exist. Here, then, is a conflict of opinion; for surely the artisan class, at the present time of rising wages and rising independence, cannot be called poor or needy, indigent or necessitous. We may hope that at any time—and specially at a period of national prosperity like the present—only a very small proportion of the industrial classes can, with any propriety, be considered the proper objects of charitable relief. It is clear, then, that the hospitals and dispensaries have not been established for the gratuitous medical treatment of the working classes generally, but only for the relief of such of them as may from time to time fall into needy circumstances. The resolution, however, which we have quoted, goes further than this, and asserts that, because the hospitals and dispensaries have been founded for the working classes, therefore they should be called upon to aid in the support of these institutions. Now this suggests a dilemma. Are the contributions which are so earnestly invited to be of a purely charitable nature? or is it to be considered that they are to go towards the medical treatment of the donors, and to purchase for them the right of applying to a charitable institution whenever they are overtaken by sickness? If the former—and the appeal is well responded to—it will be a sign of the good feeling and prosperity of the working classes at which we could not but rejoice, and to which we would gladly give all encouragement; but at the same time it would be conclusive evidence that they are not indigent or necessitous. If, on the other hand, the contributions are to be considered as going towards their own medical treatment, then without doubt the effect of the movement would be more than ever to foster in the working classes the habit of turning to the hospitals for relief in every ailment however trivial. The comparatively small sum given by the more thrifty would tend more than ever to pauperise the whole class. When, moreover, we notice that the movement is encouraged, if not originated, by employers of labour, we cannot help fearing that an equivalent in letters of recommendation would be expected, and that these would be distributed to *employés*, many of whom are well able to pay for their own medical advice, and that thus the evil of governors' letters and the hardships to general practitioners would both be enhanced.

Upon the whole of this question, the report of the great professional meeting held in 1870 speaks with no uncertain voice. "The practice of receiving small payments for medicine, or the payment of a small sum for the privilege of attending the hospital, appear to your Subcommittee equally unsound. . . . The effect, indeed, is to enrich the hospital to the extent of the payment, but it also tends to lower the standard of medical remuneration in the district; and it will be utterly impossible to introduce provident dispensaries . . . if the workman has the idea proposed to him that he can obtain the better advice of the hospital in this cheaper way. It is impossible to dissociate the ideas of payment and right; and when once the right is admitted to obtain hospital advice and medicine on payment, it is obvious that the workman will avail himself of the privilege when and as he pleases. In this case, regarded from a professional point of view, the business of the general practitioner is practically transferred to the consultee, and every farthing paid to the hospital managers will be regarded by the former as an abstraction from his legitimate source of income."

The movement, however viewed, clearly indicates one thing—*i.e.*, the prosperity of the working classes. We have no doubt in what way it is wisest that this prosperity should be recognised—namely, by inducing them to associate together to provide themselves with medical attendance on the principle of mutual assurance. This is the course recommended by the Committee of the Hospital Sunday Fund, which has pronounced against giving gratuitous medical assistance to the artisan class, and has strongly urged the development of provident dispensaries. We hope, therefore, that the promoters of the Hospital Saturday movement will be warned in time, and will not so work their plans as to make them clash with this authoritative expression of opinion.

WE have received from Mr. Mitchell of Bond Street, a beautifully engraved portrait, by Hill, from a drawing by Richmond, of the late Dr. Bence Jones, F.R.S. It is an excellent likeness of that eminent and esteemed physician.

THE question of the admission of women to the Obstetrical Society of London will, we believe, be submitted to the Fellows at an early meeting, Mrs. Garrett-Anderson having sent in the usual form of application signed by a large number of the leading obstetricians, including the President of the Society, Dr. Tilt.

THE late Mr. William John Hutchinson, coal-owner, of Newcastle-on-Tyne, has bequeathed £25,000 to the Infirmary of that town, £10,000 to the Dispensary, £500 each to the Children's Hospital, Lying-in Hospital, and Eye Infirmary, £2,000 to the Prudhoe Convalescent Home, £1,500 to the Ingham Infirmary at South Shields, besides £10,000 to other local charitable institutions. The total amount of the bequests is £50,000.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting was held on Tuesday, January 13th—Geo. Burrows, M.D., F.R.S., President, in the Chair. The Report showed that the total received by the honorary financial secretary during the year 1873, including subscriptions and donations, and a legacy of £10 from the late Mr. Dendy, was £1,505 6s. 5d. The number of distressed medical men or their widows, to whom grants of immediate relief were made, was 115, the average amount of grant being between £8 and £9. But as in many instances the recipients had families dependent upon them, the actual number of persons relieved was considerably in excess of this. The number of annuitants is thirty-four, of whom nearly all receive £20 *per annum*. An earnest appeal is now being made to the profession for help to increase the annuities to ten shillings a week. Special votes of thanks were accorded to Mr. N. Henry Stevens for his services as honorary secretary for cases during the past year; to Messrs. J. R. Hill and E. Parker Young as auditors; to Mr. Webber, honorary financial secretary; also to Messrs Churchill for the use of a room for the meetings; to the editors of the medical journals for their continued advocacy of the claims of the Fund; to Dr. Hare as treasurer; and to Dr. Burrows for presiding. The following is a list of the officers and committee for 1874. *President:* Geo. Burrows, M.D., F.R.S., D.C.L., Pres. Royal Coll. Phys. *Vice Presidents:* J. Warburton Begbie, M.D.; Sir W. Fergusson, Bart., F.R.S.; Sir W. Gull, Bart., M.D., D.C.L., F.R.S.; Charles J. Hare, M.D.; Sir W. Jenner, Bart., M.D., K.C.B., F.R.S.; Sir James Paget. Bart., D.C.L., F.R.S. *Trustees:* H. W. Acland, M.D., LL.D., D.C.L., F.R.S.; George Burrows, M.D., D.C.L., F.R.S.; G. C. Jonson, L.R.C.P.Ed. (Chairman of the Committee); Sir James Paget, Bart., D.C.L., F.R.S.; Edward H. Sieveking, M.D. *Other Members of Committee:* Edward Ambler, Esq.; Edmund L. Birkett, M.D.; William H. Broadbent, M.D.; H. Bullock, Esq.; J. Churchill, Esq.; Nath. H. Clifton, Esq.; George T. Dale, Esq.; Stamford Felce, M.R.C.P.Ed.; J. F. France, Esq., J.P.; D. De Berdt Hovell, Esq.; Thos. Jervis, M.D., J.P.; John Liddle, Esq.; W. Martin. Esq.; John Morgan, Esq.; J. T. Mould, Esq.; Harvey Owen, M.D.; John C. Steele, M.D.; Richard Stocker, Esq.; N. Henry Stevens, Esq.; E. Parker Young, Esq. *Treasurer:* Charles J. Hare, M.D., F.R.C.P. *Honorary Secretaries:* Charles S. Webber, Esq., F.R.C.S. (Finance), 1, Upper Berkeley Street West, W.; Geoffrey Hett, M.D. (Cases), 1, Ledbury Road, Bayswater, W.

THE SUNDERLAND INFIRMARY.

THE Medical Board of the Sunderland Infirmary have issued a circular asking for information upon several points connected with hospital management. Of these the most important are the following:—1. How are indoor-patients admitted—on subscriber's letter or free? 2. How are the honorary medical officers elected—by the votes of all the governors, or by a committee of election, or by the ordinary committee of management? 3. Is there any rule whereby the honorary medical officers are debarred from holding club, benefit society, or parochial appointments? It is gratifying to see that the subject of medical reform is engaging attention all over the country, and we are glad to give the results of our experience, arising out of the consideration of similar questions elsewhere. 1. Governors' letters are no doubt liable to be greatly abused; but there is little advantage in abolishing them unless some system of inquiry, not only into the medical, but also into the social condition of each applicant, is introduced instead. 2. As to the election of the honorary medical officers, we are strongly of opinion that it should not be by the votes of all the governors. Probably the best mode of election is by a special committee required to decide the matter finally, and appointed for the purpose on each occasion by the committee of management. 3. With regard to the honorary medical officers being allowed to hold club, benefit society, or parochial appointments, we are inclined to think that the utmost latitude should be allowed which is compatible with the efficient working of the hospital. Inasmuch as these officers are unpaid, no obstacle should be put in the way of their holding other appointments; and it should be left to the right feeling of the individuals and to their sense of duty not to undertake more than they can carry out thoroughly.

THE INFECTION OF SMALL-POX.

DR. ZUELZER of Berlin has just published the results of some experiments which he has made on monkeys (cercopithecus) with variolous matter. About a drachm of blood from a severe case of small-pox, and about the same quantity of pus from the mature pustules of another case, were made into small balls with bread-crumb and given to two monkeys. Both remained well. Ten days later, the hair was cut, without injuring the skin, from a part of the back of one of these monkeys. A piece of charpie charged with variolous pus was laid on the spot, covered with a watch-glass, and secured by strips of adhesive plaster, till the end of three hours, when it was removed and the place washed. No infection followed. Twelve days later, some blood from a severe case of variola was inoculated into several parts of the back and the inner surface of one of the thighs of the same animal. The blood used contained a very large number of globular bacteria. On the sixth day after the inoculation, the temperature began to rise, the normal in the rectum being in the morning about 100.4 Fahr., and in the evening 102.5; and on the eleventh day it was 105.5 to 106.4. The animal lost its appetite, but this returned on the ninth day. Red spots appeared in great abundance on the rump, and single ones on the back, on the inner surface of the thigh, and on the mucous membrane of the fauces; they soon developed into papules, some of which became flat pustules which soon burst. To test the possibility of conveying infection through the breath, a quantity of desquamated epidermis from small-pox patients, and small pieces of linen impregnated with their blood and pus, were used. These were placed in several small gauze bags in a wooden cage, which was often shaken. A small wire basket filled with the same materials was also given to an animal to play with. It sickened on the fifteenth day, presenting the same symptoms as in the former case. Dr. Zuelzer arrives at the following conclusions. 1. The blood of variolous patients is infectious. 2. Infection does not take place through the digestive apparatus nor, probably, through the sound skin. 3. Infection takes place through inoculation, and also through the respired air, when this is sufficiently charged with the poison.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

AT the Quarterly Court of Directors, held January 14th, the President, Dr. Burrows, in the Chair, £1266 : 10 : 0 was distributed to 58 widows and 24 children. The expenses of the quarter amounted to £57 : 18 : 3. Fresh applications for assistance were received from two widows, and grants were made to them in accordance with the rules of the Society. Two new members were elected; and proposals of membership were accepted from three candidates.

THE HYGIENIC IMPORTANCE OF THE SABBATH.

THE Swiss Society for the Sanctification of the Sabbath offers 1,200 *francs* (£41), in one prize or in *accessits*, for the best essay or essays on the hygienic importance of rest on Sunday, especially for those engaged in laborious occupations. The following points must be discussed, in as popular a form as possible :—1. The favourable effects of such rest on the individual at different ages, and its influence on families and on nations; 2. The diseases which continuous labour provokes or aggravates in those whose occupations deprive them of weekly rest—for example, those employed in works that require constant attendance, workmen in certain manufactories, railway, telegraph, and post-office employés, etc.; 3. The practical application of the facts ascertained. The essays must be written legibly in French or German, or accompanied by a translation into one of those languages; and must be sent, before September 30th, to the President of the Society, in Geneva.

MEDICAL MICROSCOPICAL SOCIETY.

THE first annual meeting of this Society was held on Friday, January 16th, at 8 P.M., at the Royal Westminster Ophthalmic Hospital; Jabez Hogg, Esq., President, in the chair. The minutes of the previous meeting were read and confirmed, and the Secretary read the report of the Committee. From this, it appeared that, although the Society was only one year old, its affairs were in a flourishing condition. During the year, 129 members had joined it; and sixteen papers had been read, each of which was followed by a lively discussion; and at no meeting had there been any lack of specimens for exhibition. The Treasurer's report was also satisfactory. Ninety-four of the members had paid their subscriptions, amounting to £47. There had been spent for the Society £36 : 10 : 3, thus leaving a balance of £10 : 9 : 9. Besides this, thirty-five members still owed their subscriptions, which would amount to £17 : 10 more to be added to the balance. The following gentlemen were elected officers for the ensuing year :—*President:* Mr. Jabez Hogg. *Vice-Presidents:* Mr. W. B. Kesteven, and Drs. H. Lawson, J. F. Payne, and W. Rutherford. *Treasurer:* Mr. T. C. White. *Honorary Secretaries:* Messrs. C. H. Golding Bird and J. W. Groves. *Committee:* Drs. M. Bruce, E. C. Baber, A. Pritchard, W. S. Greenfield, W. H. Allchin, and J. Matthews; and Messrs. H. Power, F. T. Paul, J. Needham, G. M. Giles, S. Coupland, E. A. Schäfer. The President read his address; after which votes of thanks were accorded to the various officers, and the proceedings terminated. At the next meeting, to be held on February 20th, at 8 P.M., Mr. B. T. Lowne will read a paper.

PRIZES OF THE MEDICAL SOCIETY OF LISBON.

THE following are the subjects for which prizes are offered by the Lisbon Medical Society for the present year. 1. The influence which the present system of supply of drinking-water in Lisbon can exert on the public health. 2. Mortality in Lisbon; its comparison with that of the principal capitals in Europe, and an examinatian of the causes which influence it. 3. Does any other fever prevail in Lisbon along with typhoid and remittent fevers, which may be confounded with them? 4. Determine the nature and the anatomical seat of beriberi. 5. What theory, in the present state of biological chemistry, best explains the formation of sugar in diabetes, and what rational treatment of this disease is deducible therefrom. 6. Determine the influence which Virchow's cellular theory has had on the progress of surgical therapeutics. For each subject, a gold medal weighing 20 *grammes*, and a diploma of honour as a second prize, are offered. Essays must be written in Portuguese, Spanish, French, English, or Latin, and must be sent in before October 1st, 1874. The names and addresses of the authors must not be appended, but must be sent in under seal.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

AT the annual meeting, on January 12th, the following members, recommended by the late Council, were duly elected office-bearers and Council for the year 1874 :—*President:* E. Sercombe, Esq. *Vice-Presidents* [Resident]: C. Vasey, Esq.; A. Coleman, Esq.; *John Tomes, Esq., F.R.S.; [Non-Resident]: Peter Orphoot, Esq. (Edinburgh); S. C. Gibbons, Esq. (Brighton); *T. R. M. English, Esq. (Birmingham). *Treasurer:* J. Parkinson, Esq. *Librarian:* T. A. Rogers, Esq. *Curator:* C. S. Tomes, Esq. *Honorary Secretaries:* T. H. G. Harding, Esq.; *Edwin F. Lane, Esq.; for Foreign Correspondence: *Henry E. Sewill, Esq. *Councillors* [Resident]: E. J. Winterbottom, Esq.; J. B. Fletcher, Esq.; S. J. A. Salter, Esq., F.R.S.; J. S. Turner, Esq.; A. G. Medwin, Esq.; *T. C. White, Esq.; *C. J. Fox, Esq.; *Oakley Coles, Esq.; *E. Saunders, Esq.; [Non-Resident]: J. K. Chisholm, Esq. (Edinburgh); D. Corbett, Esq. (Dublin); F. J. C. Scott, Esq. (Swansea); G. Henry, Esq. (Hastings); *G. W. Smith, Esq. (Manchester); *E. P. Bromley, Esq. (Southampton). The names in the list to which an asterisk is prefixed are those of the new officers and councillors.

THE RECRUITING QUESTION CONSIDERED FROM A MILITARY AND A MEDICAL POINT OF VIEW.

THE following is an abstract of an extremely able address delivered this week at the United Service Institute by Mr. A. Leith Adams, of the London Recruiting District. After indicating the chief causes of the falling off in the quality and numbers of recruits during the last twenty years, the author pointed out the results of emigration, especially in Ireland; also the effects of the high wages and demand for skilled and unskilled labour. The able-bodied man who enlisted in former years was not to be procured on the same terms; the consequence being that, by lowering the physical standard to meet the demand, we had been driven to select soldiers from among a class of the population notorious for containing elements of physical degeneracy. The influence of race on the physical capability of a people, and the effects of emigration and continuous drain on the able-bodied youth of a country through warfare, were dwelt on at considerable length, more particularly with reference to the French, as compared with the Germans. The evil consequences of overwork on the undeveloped youth were forcibly stigmatised; and the fact was demonstrated, that the average age of the majority of infantry battalions on home service was under nineteen years. The effect of emigration and political influences (Fenianism) on recruiting had been shown by the comparison instituted with reference to Ireland. In 1860, of the total number of recruits raised in the United Kingdom, Ireland furnished 321 per 1,000; whilst in 1872 the proportion was as low as 72.4 per 1,000. The author also referred to the influences of race on the physical capabilities of the soldier, and to the deterioration of race consequent on unsanitary influences, with the dangers of admitting persons subjected to these into the army, from the standard being lowered to 5 feet 4½ inches. The author insisted on maintaining a physical height standard of 5 feet 7 inches for the infantry soldier at twenty-five years of age, which would not be accomplished by the present system, and could only be done by increasing the inducements to enlist, and thereby affording greater scope for selection. He also suggested the enlisting of lads of seventeen years of age, and training them (as in the Navy) until twenty, provided that older men could not be obtained. Various schemes for inducing soldiers to enter the service were pointed out. The only way to obtain soldiers of good *physique* was by competing with the labour market, or, in other words, by offering better inducements to serve than at present.

MANCHESTER MEDICAL SOCIETY.

THE following officers and Council for 1874 were appointed at the last annual meeting :—*President:* J. E. Morgan, M.D. *Vice-Presidents:* D. Lloyd Roberts, M.D.; J. Galt, Esq.; E. Lund, Esq.; T. Windsor, Esq. *Honorary Secretary:* W. Whitehead, Esq. *Honorary Librarians:* C. J. Cullingworth, Esq.; C. E. Glascott, M.D. *Honorary Treasurer:* J. Thorburn, M.D. *Council:* G. H. Atwell, Esq.; J. D. Bird, M.D.; L. Borchardt, M.D.; J. Dreschfeld, M.D.; F. A. Heath, Esq.; J. Hardie, M.D.; H. Knowles, Esq.; D. J. Leech, M.B.; D. Little, M.D.; J. Moffat, M.D.; J. Ross, M.D.; A. Wahltuch, M.D. *Auditors:* J. B. Brierley, M.D.; J. C. Peatson, M.D.

CENTENARY COMMEMORATION OF THE MIDDLESEX HOSPITAL MEDICAL SOCIETY.

ON the 29th ult., the Middlesex Hospital Medical Society celebrated their hundredth anniversary by a most excellently managed and well attended *soirée.* According to the idea of Mr. Sam Weller's friends at Bath, a *soirée* meant "boiled leg of mutton with the usual trimmings". If those gentlemen had gone through a season of London *soirées*, they would certainly come to the conclusion that the word meant "microscopes"—"rows of microscopes with the usual diatoms and flies' legs". At the Middlesex, the inevitable microscopes were almost eclipsed by the variety of valuable, curious, and interesting objects with which the rooms were filled. The lecture-theatre made a capital concert-room, and was crowded throughout the evening. Altogether, the Society may be justly proud of the success of their Centenary Commemoration.

RESEARCHES ON PUTRID INFECTION.

AN interesting paper is published in the third number of Stricker's *Medicinische Jahrbücher* for 1873, by Dr. Gesnaldo Clementi and Dr. George Thin, on some investigations on putrid infection, chiefly confirmatory of those of Sanderson and Klein, Davaine, and others. The object has been, first, to compare the results of inoculation with healthy and putrid blood; secondly, to discover whether the blood of animals infected by putrid inoculation would produce a similar state in other animals, if introduced into their organism; thirdly, to find how small a dose would suffice, and whether any special treatment of the blood before inoculation, such as dialysing, boiling, etc., would modify its septic power. The animals used were one hundred and twenty-three rabbits and two dogs. The blood used for inoculating other animals was taken from rabbits which had died of infection, or had shown distinct symptoms. The symptoms manifested were, firstly, an indisposition to move or eat, leaning to one side, difficulty of breathing, and finally convulsions. The *post mortem* examination showed tumefaction and infiltration in the neighbourhood of the punctures. In a number of the cases, there was considerable swelling, and in one ulceration of Peyer's patches; in another case, pleuritic exudation was found. Of the two dogs, one was inoculated with 0.8 gramme of putrid ox-blood, and soon betrayed symptoms of fever, with increase of temperature, dying on the sixth day. The other dog was inoculated with the same quantity of the blood of the preceding animal; it showed slight symptoms, and recovered on the third day. This dog was re-inoculated with the blood of an infected rabbit without result. The authors give tables of their experiments, setting forth the quality of the blood and the results obtained. Out of twenty-seven animals inoculated with healthy blood, only four died; in two of the above twenty-seven, the blood was previously dialysed; both animals lived. Of twenty-three inoculated with putrid blood, eleven died. Of thirty-seven inoculated with transmitted blood (*Durchgangsblut*), fifty-four died, twenty-three of these last, varying from the third to the twelfth generation of transmission, which had received transmuted blood in doses of 0.08 gramme to 0.00008 gramme, all died—the majority of them, indeed, before the fifth day. The authors conclude from their investigations, that the mortality is much greater from transmitted than from putrid blood—a decimilligrame from the twelfth generation of transmitted blood sufficing to kill a rabbit. Attention is called to a fact in respect to this latter group—that boiling had very little effect, and dialysing none at all, in mitigating the septic influence; but no death followed when the blood had been previously distilled or digested in alcohol. Comparing the action of putrid blood with that of healthy blood in the cases where the largest quantity (0.4 gramme) was employed, it was found that five animals out of seven inoculated with the former died, while four treated with healthy blood all lived. Two out of four inoculated with the smallest dose (0.00000008 gramme) of putrid blood died. It has been asserted that the septic matter is not diffusible; but the authors decline to assume from the results obtained by them after dialysis, that this is not true, because bodies capable of putrefaction may, they say, pass through the parchment paper, and afterwards undergo septic change. Another reason is, that parchment paper is very unreliable, being frequently dotted over with spots of unchanged paper, which simply act as so many little filters. The authors conclude by endorsing the views of the authorities cited at the commencement of their paper.

SCOTLAND.

THE PROPOSED EXTENSION OF THE EDINBURGH UNIVERSITY BUILDINGS.

LAST week, a meeting of the Committee formed several years ago for the purpose of devising the means and collecting the necessary funds for extending the accommodation available in connection with the University of Edinburgh, was held in the Council Room of the University. The Lord Justice-General presided, and among those present were the Right Hon. Lyon Playfair, Postmaster-General; the Earl of Rosebery; Sir Alex. Grant, Bart.; Sir Robert Christison, Bart.; Dr. Matthews Duncan, etc. It was reported that the Committee had succeeded in coming to terms with various proprietors in the neighbourhood of Teviot Row, and privately purchased property nearly opposite the new Infirmary, on which it was proposed to erect class-rooms, chiefly for the accommodation of medical students. It is well known that the present accommodation in the University is much too limited for the modern requirements of medical teaching, the class-rooms having been designed half a century ago. To secure ample convenience for the students in their manipulations, and a clear light for the demonstrations of the Professor, is the chief aim of the Committee; and it is proposed to place in the immediate neighbourhood of the new Infirmary, theatres, class-rooms, and laboratories, specially adpted to meet these requirements. The sum required is £100,000, towards which the Committee reported that about £37,000 had now been obtained by private subscription. After some conversation, it was, we read, resolved to hold a public meeting in February, with the view of opening the subscription list to the general public. A Subcommittee was appointed to make the necessary arrangements.

IRELAND.

THE total students dissecting in Trinity College in 1873-74 is 180. The new students matriculated in 1873-74 number 58.

HOSPITAL SUNDAY IN DUBLIN.

THE Council of Fifty, appointed at the public meeting in Molesworth Hall, held a meeting at the Shelbourne Hotel, on Saturday, the 24th ult., to make arrangements for carrying out the movement. In consequence of the refusal of Cardinal Cullen to join the Hospital Sunday movement, the Mater Misericordiæ and St. Vincent Hospitals sent letters declining to have anything to do with the movement; therefore these institutions, we regret to state, have *ipso facto* excluded themselves from any participation in the fund. The following were appointed office-bearers to the Council. *President and Treasurer:* The Right Hon. the Earl of Meath; *Vice-President:* Right. Hon. the Viscount Monck; *Secretaries:* Lord Brabazon, W. J. Napier, Esq., Dr. Grimshaw, and Thomas Pim, Esq. The day fixed for the collections is, if possible, the third Sunday in November.

THE BENNETT AND BARTON FUND.

WE understand that the whole sum required to defray the expenses of Drs. Bennett and Barton, in defending an action at the last Wicklow assizes, where it was attempted to prove that these gentlemen caused, by their negligence, the death of a patient in Sir P. Dun's Hospital, has been subscribed, and will shortly be presented to the defendants. The costs of the case were about £150, rather a costly success for the medical men. We trust that the ease with which this sum has been raised will be a caution to those who think they can obtain damages against careful, though unsuccessful, surgeons.

MEDICAL CANDIDATES AT IRISH ELECTIONS.

BEFORE this reaches our readers, all the Irish elections will be decided; and we hope the returns may include some members of the medical profession. Sir Dominic Corrigan has retired from the representation of Dublin. Dr. Lyons was solicited to stand in his stead, but declined to contest the city. Without entering into the political merits of Sir Dominic's views, we can at all events express our regret at losing a medical member who manfully supported professional interests, and who courageously introduced, in spite of the opposition of many of his constituents, a Sunday closing Bill for public-houses; and, well knowing that he must encounter opposition at the next election, intended again to introduce the measure. We are afraid that the anticipated opposition from the Dublin pothouses may have had some influence in determining Sir Dominic's retirement. Dr. Evory Kennedy, well known in the profession for obstetric works, and his recent papers on puerperal fever and its causes, will contest the County Donegal in the Liberal interest. We would gladly welcome Dr. Kennedy as a medical member of Parliament. Mr. O'Leary, surgeon to St. Vincent's Hospital, Dublin, contests Drogheda in the national Home-Rule interest. We understand that Dr. Brady will be returned for Leitrim without difficulty, if not without opposition.

THE APOTHECARIES' COMPANY OF IRELAND.

ON Friday evening, January 23rd, a meeting of the Association of Irish Licentiate Apothecaries was held in Belfast, the object being to pass resolutions condemnatory of the proposal of the Apothecaries' Company to issue a new pharmaceutical licence. The meeting was largely attended, and the chair taken by Dr. Hodges, the Professor of Medical Jurisprudence in Queen's College, Belfast. About 120 letters favourable to the objects of the meeting were read. Resolutions in favour of the object of the meeting were passed, and copies ordered to be forwarded to the various licensing bodies, including the Apothecaries' Company of Ireland. A deputation was appointed to wait on the Company, with a view of enforcing the opinions of the licentiates. It was stated at the meeting that the Irish apothecaries did not claim to be more than pharmaceutists, as we stated recently.

THE DUBLIN BIRTH AND DEATH RETURNS FOR 1873.

THESE returns have just been published, and show a rather favourable result. The registered birth-rate was 29 per 1000, a low birth-rate as compared with English and Scotch towns, but which, we believe, may chiefly be accounted for by defective registration. The deaths were at the rate of 26 per 1000, rather high, but below the Dublin average. Zymotic diseases have been unusually low, 16.8 per cent. of the total deaths, or 4.4 per 1000 of the population; the annual average being 23.3 per cent. of the deaths from all causes, or 6.1 per 1000. This is indeed, a favourable result for Dublin, where the zymotic death- rat has been unusually high. The year is remarkable for the close of the great small-pox epidemic, which terminated in the early part of the first quarter. Scarlatina must be considered as the disease of the past year, causing 233 deaths; of these, 151 were registered during the fourth quarter. The total deaths from this cause for the previous year were 151. Measles and whooping-cough were also prevalent, showing their usual alternations with one another between the summer and winter months. Fevers have been much below the average as causes of death, numbering 274 against an annual average of 390, or 30 per cent. under the average. The other causes of death presented no remarkable variations during the year.

THE ASHANTEE EXPEDITION.

[FROM OUR OWN CORRESPONDENT.]

Gold Coast, January 5th, 1874.

THE new year was ushered in here by the arrival of the *Victor Emmanuel* hospital ship, and the march of the first half battalion of white troops for the Prah. Previously to disembarkation, the men of the different corps were medically inspected, and the sick, with the exception of a few cases of erysipelas, which had been previously sent on shore for the purpose of isolation, and all those unable to march, mostly from slight ailments, were sent on board the *Victor Emmanuel* for treatment—in all 25: of this number, 16 were from the 23rd and 9 from the 42nd. The Rifle Brigade landed every man belonging to the battalion. Some few of this last gallant corps fell out afterwards, however. Those unable to march after landing were first brought up to Connor's Hill, pending arrangements being made for their transfer to the hospital ship. When brought to the beach, the sick are taken off in surf-boats, and almost immediately transhipped to the steam-pinnace of the *Victor Emmanuel*, distinguished by the Geneva cross painted upon her bows. This miniature steamer very shortly reaches the *Victor Emmanuel*, which is moored two miles off the shore, and to windward. Those who are able to walk come up by the ladder, while the more weakly are lifted up on to the deck in one of the ship's cots. Every thing is done expeditiously and well, and with all that tenderness and care so characteristic a feature in the medical and sanitary arrangements of the present day.

The sending of the *Victor Emmanuel* out here was a most happy thought, for diseases contracted in Africa rarely benefit by treatment on shore. The hospital deck is quite a picture, and the medical officer may well feel proud of its arrangement and construction; it is beautifully clean, quiet, and well ventilated, and the invalid can enjoy the gentle sea-breeze as it blows through the ports, unaccompanied by the noise and various but very agreeable perfumes of Cape Coast. Nothing appears to have been neglected: the diet appears to be especially well cooked and served up, and the attendance all that can be desired, while the discipline of the hospital orderlies could not be in better hands than in that of their active commanding officer. There is, however, one blot upon this otherwise almost perfect system—a dual government. Surely a military commandant and an adjutant are not required in a floating hospital. It must place the able and painstaking senior medical officer in a false position, and a most invidious one; for, instead of being the head of his own hospital—which he certainly ought to be in every respect, as being responsible for all the medical arrangements and a vast quantity of stores—he has to play second fiddle to an officer who is himself subordinate to the captain of the ship, the latter being always supreme on board a man-of-war. As an instance, or rather example, of the absurdity of this dual arrangement, take the following. The senior medical officer wishes to communicate with the commander of the vessel; to do so he has to write through the military commandant, who is himself subordinate to the naval captain. As a practical proof of the uselessness of these appointments, it may be mentioned that both of the officers applied for employment on shore, being more anxious for military rather than the *quasi* medical commands. These remarks are only directed against the system of making such anomalous charges for purely military officers. The hospital deck of the *Victor Emmanuel* is by far the coolest part of the ship. The temperature on the voyage out has not risen beyond 82 deg. Fahr.

During the past month the weather has been on the whole fine; there have been two or three attempts at a northerly or Harmattan wind. To-day, the readings of the hygrometer in the shade in the air, at 3 P.M., were 81 deg. and 76 deg.—a range of five degrees. A gentle sea-breeze is blowing from the westward. We have had scarcely any rain since the earlier part of the last month; but when it does rain, it pours in a tropical shower of the most wetting description.

The *Thames* arrived here on the 3rd instant; she will probably go to Ascension and St. Helena with invalids. The *Simoom* leaves on the 7th for St. Vincent with military invalids and convalescents, who will be sent home by the Cape or Brazilian mail-boats; the prevalence of yellow fever on board the steamers of the African Company precluding their being used for the conveyance of officers to England. Dr. Horne, late principal medical officer, leaves in the *Manatoban* for Glasgow. It is understood here that his promotion to the rank of deputy surgeon-general has been confirmed, in recognition of his services during the earlier period of the war. Dr. Woolfryes, acting principal medical officer, leaves for the front to-morrow. Surgeon-Major Fraser will perform his duties at Cape Coast *ad interim*, Surgeon-Major Bleckley remaining as senior medical officer of the *Victor Emmanuel*—a most important and onerous trust, and one requiring great tact and judgment. Two field-hospitals will accompany the column after it crosses the Prah, with the usual staff of medical officers. Sir Garnet Wolseley has decided that only two regimental surgeons shall accompany each regiment. At Prahsu and Mansu, large receiving-hospitals will be established, in charge of a surgeon-major and two surgeons each; while, at each of the intermediate halting-places, smaller hospitals will receive the sick on their transit to Cape Coast. On arrival here, they will be received into the hospitals established on Connor's Hill, the garrison-hospital, and the church, converted into one capable of receiving twenty-two patients. The hospitals at the front will of course be evacuated as quickly as labour permits, and all European troops as rapidly as possible, when ill, transferred from the shore to the hospital-ship. The *Tamar* and *Himalaya* will be also available for a similar purpose.

This is a general sketch of the hospital arrangements. It is, however, to be hoped that the care bestowed upon the troops will, to a large extent, do away with the prevalence of disease to any great extent. Disease, of course, there will be; an African climate could scarcely be called African if it did not show some of its deadly effects; but the sanitary arrangements, carefully elaborated beforehand, must change much of this disease to a mild form, if not altogether prevent it. The stations from the coast to the Prah have been all carefully selected, and very respectable huts built for the shelter of the men at the termination of their daily marches. Water has been analysed, and every precaution that the teaching of hygiene indicates brought to the notice of the quartermaster-general's department. These recommendations, if strictly carried out, must have their effect. Medical attendance for the sick has been supplied with a liberality hitherto unprecedented in war; and altogether the medical and sanitary arrangements are as complete as they possibly can be. Labour and transport have been a great difficulty; even now, carriers are deserting to their homes in such numbers that the European officers attached to the several native tribes have had to go after them to their respective villages. In consequence of this want of transport, the 23rd have had their orders to disembark countermanded, and the half-battalion already on shore has been directed to re-embark on board the *Tamar*. Such is the amount of support we have received from our native allies.

Messengers arrived from the king at Prahsu on the 2nd, with letters addressed to Colonel Harley, the late administrator. Sir Garnet Wolseley would, however, only treat with the king himself, it is currently reported. One of the ambassadors, who could speak English, said that Amenquatier had told the king, upon his arrival at Coomassie, that he had only fought with the white men once, and beaten them, and that all his losses arose from small-pox and dysentery alone. Sir Garnet has, it is believed, addressed a long letter to the king explaining the cause of the war and the many defeats his troops have had in the field.

It has been a most fortunate circumstance that, since the commencement of the disembarkation of the troops from the transports, no rain has fallen. The men have been equally fortunate in getting away before the warmer part of the morning (after 8 A.M.) As the shade for the first fifteen or twenty miles is very slight, cases of sunstroke would undoubtedly have occurred if the columns had started later.

January 8th, 1874.

The *Adela* transport arrived yesterday from the windward ports with some few cattle on board, much needed at this time. The right half-battalion of the 23rd Regiment have been halted at Acroful, the second camping-ground, two marches or fifteen miles distant from Cape Coast. The officers and men speak very highly of the arrangements made for their comfort on the march; the bamboo-huts affording excellent shelter, and the fresh-beef ration given as frequently as possible *en route*, being a change of diet much appreciated after the monotony of a ship's diet. The first half-battalion of English troops arrived at Prahsu yesterday in good health and spirits, having passed through dense forests alternating with more open country. It is no mean triumph to sanitary and engineering science to march masses of Europeans, in perfect health and with dry feet, eighty miles through a dense forest hitherto untrodden by any of our countrymen except those few gallant officers engaged in preparations, engineering and hygienic, for those who were coming after. We may hope that our white troops will reach Prahsu in full vigour; and, even if we have seen the last fights of this campaign, which is at least not improbable, it will always remain on record that science can conquer even the most deadly germs of disease.

To-day the invalids go on board the *Manatoban*. She sails on the 10th, and will take home, in addition to the late principal medical officer, Dr. Robertson, Captain Gordon, 93rd Highlanders, Captain Brett, 2nd West Indian Regiment, Assistant-Commissioners Macdonnell and Nugent, Control Department, Lieutenant Graves, and a few military invalids not likely to be effective in this country. Fever and dysentery have been the affections from which the majority of the officers and men have suffered who go to England by this steamship. Upon the departure of the *Simoom*, Dr. Irving, R.N., senior naval surgeon, will go on board the *Himalaya*, and act as senior naval medical officer to the fleet. In consequence of the African steamers touching at Accra, a health-officer has been sent to that port. All vessels are now visited by the health-officer, Dr. Reade, R.N., on their arrival. The African steamers from the leeward invariably fly the yellow flag. The *Senegal*, which has just arrived, is now in quarantine. The yellow fever, which has been prevalent of late amongst the officers and crews of these vessels, has been contracted in what is commonly called the Bights, more particularly the embouchure of the Bonny, where they lie for several days while steam-tenders collect the oil from the neighbouring rivers. The disease is really more a severe form of malarial remittent than true yellow fever—not a whit the less deadly, however. If one can judge from recent cases which have occurred, the so-called seasoning has been of little advantage, two at least of those who were attacked having served for many years at intervals upon the coast.

After leaving Cape Coast, the troops pass through, for the first twenty miles, a more or less open country of hill and dale—the heights covered for the most part with a low shrub of dense jungle, diversified here and there by clumps of cotton-trees, whose thorny stems rise to a height of one hundred and fifty to two hundred feet. After passing Dunquah, the Paintry of the older writers, forest-trees become more numerous, shading to a great extent the road from the rays of the sun. As the path approaches Mansu, they become still more dense, and continue so until the banks of the Prah are reached; here the scenery is very beautiful. After crossing, one again enters the primeval forest, dark and sombre. It is only when open spaces are reached during the progress of the journey, that the heat is found excessive; these last are chiefly the clearings round the remains of villages destroyed during the march of the Ashantees when they invaded the Protectorate during the early part of last year. Until arriving at Dunquah, the country is not very marshy. After this village is left behind, the land is flatter, and consequently morass is crossed more frequently, and water-courses are more abundant. The halting-places—Inquabim, Acroful, Yancoomassie, Mansu, Tutah, Assin Yancoomassie, and Barracoa—have been well selected, in a country where so many difficult problems, engineering and sanitary, have been discussed previously to the choice of a site. They are all more or less elevated, and close to running water supply. Mansu is, perhaps, the best situated in this respect, as the Okee, a rapid and permanent stream, flows in a south-easterly direction some three hundred yards north of the station. As it winds round to the south, it forms a very beautiful cascade over a ledge of granite rocks close to the ford on the Denkera road, the only path left open when the Ashantee advanced guard held the main road in November last for a short time.

Perhaps more trouble has been taken in the construction of the buildings at Mansu than at any of the other stations. It contains bamboo huts capable of holding half a battalion of white troops, several huts for officers, hospitals for sixty or seventy patients, native lines, and a fort within which are the central magazines. The surface, owing to an impervious subsoil of red clay, is unfortunately too retentive of water. This accounts in part for the greater dampness of the up-country stations, nearly all labouring under a similar disadvantage. Subsoiling would, of course, have remedied to a great extent this evil. Want of time, and the necessary materials and labour, put a veto upon the attempt. People at home can have no idea of the difficulties which had to be encountered out here in making arrangements for the march of one regiment to the Prah.

THE REGISTRATION OF MIDWIVES.

SUBJOINED is the report of a Committee appointed in November last by the Parliamentary Bills Committee of the Association, to consider a plan for the instruction and registration of midwives. As a preface, we give a brief summary of the proceedings of the Parliamentary Bills Committee in reference to the subject during the past year.

On April 4th, 1873, a deputation of the Parliamentary Bills Committee of the Association had an interview with Mr. Stansfeld, President of the Local Government Board, to urge on him the necessity for steps being taken to obtain the registration of midwives. The matter was fully explained by Mr. Ernest Hart, Chairman of the Committee. Mr. Stansfeld stated that he felt it his duty to take an interest in the subject, and that he should be prepared to take any action that might seem advisable. He further promised to have a letter to the Privy Council drawn up, as being the body to move in the matter. [For a full account of the proceedings of the deputation, see BRITISH MEDICAL JOURNAL, April 12, 1873, page 415.]

In presenting their report to the Annual Meeting of the British Medical Association (see JOURNAL, August 16, 1873, p. 191), the Parliamentary Bills Committee referred to their communication with the President of the Local Government Board, and stated that he had expressed warm approval of the general views laid before him. They reported also that the Obstetrical Society was prepared to give its assistance, and that Mr. Stansfeld had requested Mr. Ernest Hart to prepare and submit to him a scheme for the education and registration of midwives, with a view to its consideration by his Department. The report was unanimously adopted by the Association.

At a meeting of the Parliamentary Bills Committee on November 29th, Mr. Ernest Hart, the Chairman, stated that he had delayed bringing the subject before the Committee until the Obstetrical Society had published a scheme which they were known to be preparing. He now laid before the Committee an account of a deputation from the Obstetrical Society to Mr. Stansfeld, embodying suggestions for the instruction, examination, licensing, registration, and supervision of midwives (see JOURNAL, November 22, p. 608, and December 6, p. 676). It was decided:

"That Dr. Holman, Dr. Desmond, and Dr. Aveling, be requested to consider the scheme of the Obstetrical Society for the education and regulation of midwives, and to make such remarks or alterations as they may consider necessary, and to circulate the same to the delegates of the Branches to this Committee, with the request that they will take an early opportunity of submitting the same to the Councils of their respective Branches, and communicate the result to the Chairman of this Committee."

The subcommittee named have accordingly examined the scheme proposed by the Obstetrical Society, and the subjoined report is the result of their deliberations.

Report of a Subcommittee of the Parliamentary Bills Committee on the Education and Regulation of Midwives.

In compliance with the resolution passed at a meeting of the Parliamentary Bills Committee of the British Medical Association held November 29th, 1873, we have considered the scheme of the Obstetrical Society for the education and regulation of midwives, and have amended it, as we believe, as follows.

Definition of a Midwife.—A respectable woman, able to read, write, and calculate, understanding the management of natural labour, and the ordinary care of the mother and child after labour, and capable of recognising any conditions requiring medical aid during the parturient and puerperal states.

Instruction of Midwives.—This might be done by utilising the present lying-in charities and unions. Theoretical instruction might also be given by qualified medical men, and practical instruction at the bedside, and preferably at the patients' homes, since experience has shown that it is neither necessary nor desirable to congregate a large number of lying-in women under the same roof.

Examination and Licensing of Midwives.—This would be best accomplished by a licensing body especially formed for the purpose; and the General Medical Council should be required and empowered by Act of Parliament to appoint this body.

Registration of Midwives.—It is believed that nothing short of compulsory registration of midwives will afford safe attendance during labour to those who are unable to distinguish between a good and a bad midwife. In future, every woman undertaking the duties of a midwife in England and Wales should be required to pass an examination prior to registration as such; and no public appointment should hereafter be given to any midwife who is not so registered. It is also thought desirable that all midwives at present in practice should, on the production of satisfactory evidence of fitness for the calling, be eligible to be placed on the Register of Midwives.

Removal of Midwife's Name from Register.—Seeing that great injury might accrue to the public from midwives thus registered neglecting or exceeding their duties, it is considered necessary that provision should be made for the erasure from the register of the name of any midwife who has gravely misconducted herself.

These suggestions appear to us to contain the main points for consideration. Thousands of women are at present acting as midwives who have received no obstetrical instruction whatever. The questions are, whether the system of compulsory education should be applied to them, and to what extent and by what machinery it ought to be accomplished. The subject is difficult and complicated; and we earnestly hope the respective Branches will give it their best attention, and by their counsel aid the Parliamentary Bills Committee in the work which it has undertaken. For this purpose, we would beg that the above questions may be submitted to the Branches or their Councils in the course of the next fortnight.

C. HOLMAN, M.D. (Reigate).
L. E. DESMOND, M.D. (Liverpool).
J. H. AVELING, M.D. (London).

AT a meeting of the East Surrey District Branch, held at Croydon on Thursday, December 18th, Dr. Carpenter in the chair, Dr. Holman took the opportunity of bringing before the notice of the members the action which was being taken by the Parliamentary Bills Committee relating to the instruction, licensing, and registration of midwives. He said that, as two of the three members of the Subcommittee (Dr. Aveling and himself) who had been appointed to report upon the "suggestions" of the Obstetrical Society of London were there, it would be a great assistance to them if they could obtain from those present an expression of opinion upon some difficult points which they would, with the permission of the chairman, beg to submit.

Dr. Carpenter said he should be happy to put to the meeting any propositions that Dr. Holman or Dr. Aveling would like to have the opinion of the meeting upon.

The first of the Obstetrical Society's suggestions was then read and discussed, and adopted with the omission of two words, as follows.

Definition of a Midwife.—A respectable woman, able to read, write, and calculate, understanding the management of natural labour, and the ordinary care of the mother and child after labour, and capable of recognising any conditions requiring medical aid during the parturient and puerperal states.

The second suggestion was adopted without alteration, and runs as follows.

Instruction of Midwives.—This might be done by utilising the present lying-in charities and unions. Theoretical instruction might also be given by qualified medical men, and practical instruction at the bedside, and preferably at the patients' homes, since experience has shown that it is neither necessary nor desirable to congregate a large number of lying-in women under the same roof.

Considerable discussion took place as to the best mode of examining and licensing midwives. It was not thought advisable that the Obstetrical Society of London should be required to undertake these offices. At length the following resolution was passed.

Examination and Licensing of Midwives.—This would best be performed by a licensing body especially formed for the purpose. The General Medical Council should be required and empowered by Act of Parliament to appoint this body.

The suggestion of the Obstetrical Society relating to the Registration of Midwives was adopted with a very slight alteration.

Registration of Midwives.—It is believed that nothing short of compulsory registration of midwives will afford safe attendance during labour to those who are unable to distinguish between a good and a bad midwife. In future, every woman undertaking the duties of a midwife in England and Wales should be required to pass the examination of the licensing body prior to registration, and no public appointment should hereafter be given to any midwife who is not registered. It is also thought desirable that all midwives at present in practice should, on the production of satisfactory evidence of fitness for the calling, be eligible to be placed on the register.

The last suggestion was considerably curtailed, the part relating to the annual license being considered unnecessary.

Supervision of Midwives.—Seeing that great injury might accrue to the public from the midwives thus registered neglecting or exceeding their duties, it is considered necessary that power should be given to the examining and licensing board, after due investigation, to erase from the register the name of any midwife who has seriously misconducted herself."

The members present were unanimously of opinion that measures for the purpose of meliorating the present position of midwives were urgently demanded; and many stated their convictions that properly trained midwives would relieve them from a part of their practices which was unremunerative and fatiguing, and at the same time of very little medical interest.

CARDIFF MEDICAL SOCIETY.

The Annual Meeting was held in the Board Room of the Infirmary on Wednesday, January 7th. There were present—Dr. Wallace, President, in the chair; Dr. Edwards; R. F. Nell, Esq.; A. P. Fiddian, Esq., M.B.; C. T. Vachell, Esq., M.B., Librarian; and Dr. Sheen, Secretary and Treasurer. The Society has seventeen members. One new member was elected; the loss of four were reported. The finances are sound. A list of excellent new books added to the library was read. It was lamented that the attendances was very small. It was decided that the subject for discussion at the next ordinary meeting (February 4th) should be "The Treatment of Worms", introduced by Dr. Sheen. The Secretary's accounts, having been audited, were passed. The following office-bearers were elected for the present year:—President, W. Taylor, M.D.; Vice-President, J. J. Buist, M.D.; Treasurer and Secretary, Alfred Sheen, M.D. Additional members of Committee: W. T. Edwards, M.D.; J. Milward, Esq.; A. P. Fiddian, M.B.; and R. F. Nell, Esq.

The above report suggests to us—as other similar reports have done before—that in many branches of the Association the formation of local book-clubs, and the increase of local district meetings, as in the South-Eastern Branch, would be beneficial. It is a source of regret to see in how many large Branches the members of a great district have only once a year an opportunity of meeting, and then often at a great distance from their homes; so that their connection with the corporate body of the Association is maintained from year to year only through the JOURNAL, or by a rare visit to a distant Branch meeting or annual meeting of the Association. A great object of the Association is to promote personal intercourse among the members, and to excite them to scientific local meetings. This object, we feel persuaded, can only be effectually carried out by extending throughout the Association the district organisation of Branches.

THE WEBB FUND.

The following additional contributions have been received by Mr. Augustus Churchill, the Treasurer, to the 4th instant.

	£	s.	d.		£	s.	d.
Dr. Morell Mackenzie	10	10	0	Dr. T. Smith Rowe	10	10	0
Dr. Woodman	2	2	0	Dr. Charles Taylor	3	3	0
Dr. Begley	2	0	0	Mr. John Noble	25	0	0
Medical Benevolent Fund	20	0	0	Mr. J. C. Gore	3	0	0
Dr. Thorowgood	1	1	0	Dr. J. Hutchinson	1	1	0
Mr. George Cooper	5	5	0	Mr. G. Lawson	10	10	0
Mrs. G. S. Rhodes	2	2	0	Dr. J. D. Chepmell	2	2	0
Dr. Langdon Down	2	2	0	Dr. Crucknell	2	2	0
Dr. Randall	2	2	0	Mr. John Bonus	5	0	0
Dr. Stevenson	2	2	0	Mr. E. C. Hulme	3	3	0
Dr. Ballard	2	2	0	Mr. W. A. N. Cattlin	5	5	0
Mr. W. Cadge	5	5	0	Miss E. G. Mann	3	3	0
Mrs. Ferrey	5	0	0	Mr. R. H. Prance	10	10	0
Mr. W. S. Savory	5	5	0	Mr. John Gay	5	5	0
Dr. Waring	5	0	0	Mr. D. L. Collins	2	2	0
Dr. Markham	1	1	0	Dr. Beale	5	5	0
The Examiners in Arts of the Society of Apothecaries	21	0	0		210	19	0
Dr. Priestley	10	10	0	Amount previously acknowledged	800	19	6
Dr. Potter	5	5	0				
Dr. Sansom	1	1	0	Total	£1,011	18	6
Dr. Hawksley	3	3	0				

SPECIAL CORRESPONDENCE.

GLASGOW.

[FROM OUR OWN CORRESPONDENT.]

Deaths among Children from Overlying.—Deaths from Drowning.—Question of Coroners' Inquests.—Food Adulteration Act.—Western Infirmary, General Meeting.—Medico-Chirurgical Society: Legislation for Lock Hospitals.

Our energetic medical officer of health, in his latest report, calls attention to the rather startling number of deaths among young children from overlying by their parents. The portion of the report concerned with this subject was published in the daily prints, and showed that, during the first three weeks of this year, there have been seven deaths from this cause, while, according to the Registrar-General's accounts, the average yearly number of such deaths had been seventeen for the last five years. Dr. Russell points out the close connection of the greater mortality from this cause, at the beginning of the year, with the convivial customs so prevalent in Scotland at this period; and he remarks that, in every one of these seven cases, intemperance of the parents had apparently been the cause of the death of the children. The subject was brought up at a meeting of the Police Board on the 26th instant, and was the occasion of a short discussion as to whether it would not be advantageous to introduce the coroner's inquest into Scotland. It seems that all these cases are reported to the Procurator-Fiscal, and that it is entirely in his option to order an inquiry to be instituted or a *post mortem* examination to be made. The inquiry is entirely private, and nothing more is usually heard of the cases. In relation to this question of the coroner's inquest, there is another class of cases which might offer the subject of serious consideration.

Any one who reads the daily newspapers in Glasgow can hardly fail to be struck by the number of deaths from drowning which occur in the city. We have more than once heard this remarked on by strangers, though we who live in the midst of it are, perhaps, not so much impressed by it. We do not think we are at all above the mark when we say that an average of two or three bodies are found weekly in the river or in one or other of the canals which intersect the city. We believe also that comparatively few of these bodies are ever identified, and any inquiry which is made concerning them is conducted with the utmost privacy. All that is heard of the event is the appearance of a couple of lines in the newspaper, stating that a body of such and such an appearance was found in the river or canal.

Now it may be matter of question whether the institution of a coroner's inquest would perceptibly increase the chance of such bodies being identified. Yet it cannot be denied that it looks an exceedingly serious matter that about a hundred persons yearly disappear from Glasgow, and no one apparently knows anything about their mode of death. A public examination might at least open people's eyes to this surprising fact, and lead to precautions being taken, as well as being a means of possibly leading to the discovery of the friends of the deceased.

In Glasgow and the West of Scotland, the Food Adulteration Act is being carried out with an exemplary activity by the various local authorities. The dealers in milk are being most severely prosecuted, but the grocers and victuallers are not escaping. There have been convictions for selling adulterated tea, mustard, and various other articles. Considerable outcry has been made here, as well as elsewhere, against the convictions for selling adulterated tea, and this chiefly on the ground that the tea is not adulterated in this country, but in China. At a recent meeting of retail grocers, a resolution was passed to request Government to alter the law, so that those only would be liable to conviction who sold articles with a guilty knowledge that they were adulterated. The obvious answer to all these objections, however, is, that, if a pure article be required, a pure article will be obtained. The only way of reaching the Chinaman is by insisting that the tea, as sold here, shall be pure, and the only way to reach the guilty mixer is to lay the onus on the seller, of finding out whether the article he obtains for sale is unadulterated. There is no doubt at all that the general public are highly satisfied with these prosecutions, and desirous that they should be strenuously carried out. If a fraction be added to the price of some articles, there will be no difficulty in obtaining this advance.

The second annual general meeting of the Western Infirmary was held on January 23rd, when various reports were submitted. As this institution has been recently under notice in your columns, it is unnecessary to give any detailed account of this meeting.

In the Medico-Chirurgical Society, at its last meeting, a subject was introduced by Dr. H. C. Cameron, which bears some important relations to the discussion on the Contagious Diseases Acts. The subject of the paper read was, "A Plea for Legislation in regard to Lock Hospitals." The essayist first described the general routine and treatment of the patients in the Glasgow Lock Hospital. The residence necessarily partakes in great measure of the character of an imprisonment, and this is especially felt by the class of persons concerned who have been accustomed to unusual freedom. Hence it happens that escape from the hospital is often urgently longed for; and, though patients are submissive enough on admission, when the disease is in a painful and acute stage, yet, whenever the pain is relieved and the acuteness of the symptoms overcome, they are apt to demand their dismissal. Many thus go out before cure is complete, and when they are just in the condition to spread the disease. The essayist then gave it as his opinion that power ought to be given by legislation to detain such patients in hospital till they are certified as fit for removal by the medical attendant. This might effect many of the purposes of the Contagious Diseases Acts, and yet the women would only come under the action of the law by voluntarily seeking admission to the hospital. A rather lively discussion followed, in which the question was mooted whether power may not be already possessed, under the Police Act, to do all that the essayist requires. It seemed the opinion of most that no such power exists, but it seems worth inquiring into.

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

THE next meeting will be held on Tuesday, February 10th, at 7.30 P.M., in the Council Room, Queen's College, Birmingham, when papers will be read, and specimens exhibited.

WILLIAM HINDS,
LAWSON TAIT, } *Honorary Secretaries.*

Birmingham, February 1874.

NORTH WALES BRANCH.

THE next intermediate general meeting of this Branch will be held on Tuesday, the 24th instant, at 11.30 A.M., at Cambrian Hotel, Pensarn, Abergele, under the Presidency of R. Davies, Esq., Llanfairtalhairn.

The dinner will take place at 2.30 P.M. Tickets, 6s. 6d. each, exclusive of wine.

Gentlemen having papers or cases to communicate, and who purpose dining, will be good enough to send early intimation to the Honorary Secretary.

D. KENT JONES, *Hon. Sec.*

Beaumaris, February 3rd, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE second meeting of the Session was held on Friday, November 28th, 1873; F. TURTON, Esq., in the chair.

New Members.—Five members of the Branch were elected members of the Section.

Communications.—1. Mr. VOSE SOLOMON exhibited some microscopic specimens of a Tumour of the Orbit.

2. Mr. LLOYD OWEN exhibited an Infant, seven months old, suffering from Epicanthus. Particular attention was drawn to this deformity, and the various operations devised for its relief were described, the one advocated, and illustrated by a diagram, being Van Ammon's. Von Graefe's views, as to the postponement of operation until the child had attained its fifth or sixth year, so that the natural improvement in appearance due to the raising of the bridge of the nose might be fully appreciated, were mentioned.

3. Dr. RUSSELL presented two cases of Atrophy of the Deltoid, and called attention to the difference in the behaviour of the muscular tissue under faradism in each case. In one patient, electric contractility was extinguished both to faradism and to voltaism; here there had been injury to some of the branches of the brachial plexus of six months' standing. In the other patient, although atrophy had effected destruction of a great part of the muscle, yet the muscular fibres which remained contracted actively. This latter was probably a case of progressive muscular atrophy, the commencement of the disease showing itself in the deltoid in consequence of overuse of that muscle in blowing forge-bellows. Dr. Russell also called attention to the coexistence of atrophy of the infraspinatus, and to the added incapacity inflicted by loss of power in this muscle, as pointed out by Duchenne de Boulogne, in consequence of the loss of the capability of rotating the arm outwards, necessary in carrying the hand across a sheet of paper whilst writing or in drawing out the needle in sewing.

4. Dr. WELCH exhibited a child, thirteen months old, with a primary Labial Chancre and commencing Secondary Symptoms. The father contracted syphilis, and infected his wife, who suffered severely from the constitutional effects of the poison. Dr. Welch considered it probable that the child, which slept with its parents, had applied syphilitic matter to its mouth and lips.

5. Dr. MALINS showed a drawing of the interior of the Cervix Uteri taken from a woman who died at the sixth month of pregnancy. The length of the cavity was one inch and quarter, the rugæ were well-marked, and the interior was filled up by a gelatinous plug. The uterus, with the contained fœtus, was given to him by Mr. Newnham, of Wolverhampton. It was taken from a woman who died suddenly of œdema of the lungs and heart, a *post mortem* examination being ordered by the Coroner. Dr. Malins explained the physiological and practical bearing of the observation, and referred to the papers of Dr. Matthews Duncan in the *Edinburgh Medical Journal* for March, 1859, and to a pamphlet reprinted from that Journal in 1863, also to the opinion of Stoltz and Cazeaux upon the behaviour and condition of the cervix during pregnancy, which views the preparation tended to support.

6. Mr. BARTLEET showed a stump after Roux's Amputation at the Ankle-Joint. He described the operation, and pointed out the advantages that were claimed for it, and the disadvantages that were attributed to it. Mr. Bartleet stated that an experience of five cases, some of them of several years' standing, convinced him that the advantages were real, the disadvantages merely theoretical.

7. Dr. BALTHAZAR FOSTER showed a specimen of Rupture of the Aortic Valves from accident.

8. Mr. FURNEAUX JORDAN gave clinical notes of five cases of Calculus of the Female Bladder, the specimens being also exhibited.

FORMATION OF THE SOUTH HANTS BRANCH.

A GENERAL meeting of the medical profession of Portsmouth and the surrounding towns was held at the School of Science and Art, Portsmouth, on Tuesday, January 27th, to consider the desirability of forming a Medical Association.

W. H. GARRINGTON, Esq., J.P. (Coroner of the Borough), was unanimously called to the Chair. Dr. WARD COUSINS was then called upon to address the meeting. He said that the time had come when it was absolutely necessary to form an Association in Portsmouth. The number of medical men in the immediate neighbourhood amounted to one hundred and fifty, and all had been invited to attend the meeting. He proposed that an Association be formed, including the medical officers of the army and navy who were resident at the port; and that their brethren from the surrounding towns be also invited to co-operate. Dr. Cousins then spoke of the advisability of constituting the Society at once a Branch of the British Medical Association. Having referred to the advantages the members of local societies obtain by union with the central Association, and the signal service the central Association has rendered the profession generally by promoting union and helping on the advancing science of the times, he proposed "That a Branch of the British Medical Association be formed in Portsmouth, including also the surrounding towns."

The resolution was seconded by Inspector-General Dr. SMART, R.N., and unanimously carried. After some discussion, the Branch received the name of "The South Hants Branch of the British Medical Association".

CORRESPONDENCE.

HOSPITAL STATISTICS.

SIR,—I read, with some surprise, in Mr. Erichsen's second lecture, reported in your number for January 24th, p. 99, a passage referring to Sir James Simpson's statistics, which seems to me so completely to ignore the question at issue in the controversy which those statistics excited, that I must venture again to recall the attention of Mr. Erichsen himself, as well as your other readers, to the point—though I have written so much on the subject, that I am extremely reluctant to repeat what I had hoped was quite clear already. Sir J. Simpson produced his statistics in order to prove, and he asserted that he had thereby proved, that hospitals in which the sick are aggregated are made more unhealthy, in consequence of that aggregation, than the isolated houses in which private patients are treated; and, further, that this unhealthiness increases as the time increases during which the hospital remains in use. He asserted, accordingly, that grave cases (such as the major surgical operations) could only be treated with success either by disusing permanent hospitals altogether, and substituting huts, which should be changed from time to time, or by cutting up the present buildings into chambers isolated from each other, and which were also to be disused from time to time, so as to lose their acquired taint.

The objections which were made to Sir J. Simpson's figures were essentially twofold. The first was, that they involved every species of statistical untrustworthiness, and this Mr. Erichsen freely admits. He says, with regard to them, "that it is quite possible that successful cases have been recorded and unsuccessful ones kept back, and that the conditions of the patients compared, though belonging practically to the same class of society, were different before the operation." If this be conceded, I do not see why we should trouble ourselves further about so-called statistics, which would be shown to be deficient in that essential quality of numerical accuracy, which alone gives statistics any value as a basis for reasoning. Mr. Erichsen, nevertheless, contends that, though they are not accurate, they cannot be so very fallacious as to preclude him from assuming that there is a higher rate of mortality in hospital than in private practice. This does not seem to be the opinion of others who have seen a good deal of operative surgery in private and public, under somewhat similar conditions. But let that pass. Mr. Erichsen has entirely ignored the second objection to Sir J. Simpson's statistical reasoning, viz., that, if we allow the mortality to be greater in one class of cases than the other, there is no proof that it depends on any such contamination of air by aggregation of patients, as was assumed by Simpson, and still less was it proved that the older hospitals are less healthy than the more recent—apart, of course, from any superiority of construction. Mr. Erichsen, therefore, appears to regard the controversy as being one of figures only, viz., as to whether the rate per cent. of this and that list was 40, 20, or some other figure. I regarded it (and I think I may venture to say that Mr. Callender and Dr. Matthews Duncan, who were the opponents of Sir J. Simpson on this head, also regarded it) as a question of fact, whether any such radical and inherent unhealthiness in our city hospitals had been proved or rendered probable; and, in concluding to the contrary, I am glad to be able to cite Mr. Erichsen as a witness. He claims for his own hospital a mortality much below that which Simpson's tables showed to have prevailed in city hospitals generally, and shows that this mortality diminishes, instead of increasing, the longer the hospital remains in use. He believes that the more careful method of treating cases of amputation adopted by Mr. Callender (which is, after all, merely the careful carrying out of known rules of surgery) may reduce the mortality in hospitals even below the rate which Simpson's tables claim for private practice; and, what is still more important, he believes that much of the difference in death-rates (which, as I have above shown, is admitted by him to be rather assumed than proved) is due to the fact that formidable cases, which are left to die in private, are amputated in hospital practice.

Could anybody adduce stronger arguments than Mr. Erichsen has here supplied us with for saying that the reasoning which sought to show that large hospitals are necessarily unhealthy, was, in all respects, fallacious, and that the practical conclusion cannot be accepted?

That hospitals may be rendered unhealthy by injudicious overcrowding, is, of course, quite true, and a truth long recognised; but that is not what Sir J. Simpson meant by "hospitalism," nor what the public understood him to mean. The term was invented and brought into general use by him as a popular (I had almost said a clap-trap) phrase, indicating that a new discovery had been made, showing the radical unsoundness of our present hospital system. If Mr. Erichsen does not believe this, as we are bound from his lectures to conclude that he does not, I would venture to submit to him that he ought not to countenance the use of a term which, in that case, can only mislead, and which was designed to convey an impression which he has himself shown to be misleading, I am, etc., T. Holmes.

18, Great Cumberland Place, Feb. 2, 1874.

MERCURY IN SYPHILIS.

Sir,—As Mr. Jonathan Hutchinson firmly believes that mercury is a *real antidote* to the poison of syphilis (and I think it will be almost universally admitted that there is no one living more competent to give a correct opinion on such a very important matter), he would confer a lasting benefit upon the profession if he would state more particularly (1) if all the preparations of mercury are equally antidotes to the poison; or (2) if some preparations are more adapted to certain stages of the disease—say, primary or secondary. The tertiary form is generally admitted to be best treated with potassium iodide. Is this medicine as real an antidote for the tertiary form as mercury is for the primary and secondary forms? That it does an immense deal of good is very generally known. Is the tendency to relapse due to the remedy being discontinued too soon, as the tendency to secondaries is to the premature stoppage of mercury? Tertiary symptoms are still syphilitic, and in certain cases the potassium iodide does very little good. Is mercury in such cases the remedy *par excellence?* If the disease (chancre) be at all advanced, the mercury should be continued for at least two months. Does the continuance of the patient in his ordinary occupation, and taking his usual food, interfere with the antidotal action of mercury? Mr. Hutchinson only mentions one preparation of mercury—the grey powder—one to three grains three times a day. Is this the best preparation, as a rule, for the cure of the disease in all its stages—primary, secondary, and, when necessary, the tertiary form also?

If Mr. Hutchinson would kindly answer these questions, he would confer a lasting benefit, not only upon the profession and the English nation, but upon the whole world; for, if mercury be a real antidote to the poison of syphilis, which Mr. Hutchinson firmly believes it to be (I quite agree with him), it necessarily follows that, if this antidote were more systematically and perseveringly employed in this very common disease, we should see much less of those troublesome secondary and tertiary forms, which are so common at present, as well as much less of inherited syphilis. I am, etc.,

A Liverpool Associate.

Liverpool, Jan. 27th, 1874.

DR. SNOW BECK'S CASE OF DEATH FROM THE INJECTION OF PERCHLORIDE OF IRON.

Sir,—The time has come when the position occupied by Dr. Snow Beck in his philippics against the use of perchloride of iron injections in *post partum* hæmorrhage admits of being clearly defined.

Let me recall the attention of your readers to the following simple statement. At the meeting of the Obstetrical Society, in March, 1873, Dr. Snow Beck said, in answer to a direct challenge from Dr. Playfair, that he had seen personally nine or ten cases of death from septicæmia following the injection of perchloride of iron into the uterus to arrest *post partum* hæmorrhage. Nearly a year has now elapsed; and, notwithstanding repeated challenges in the *Obstetrical Journal*, and in the British Medical Journal, to publish his "nine or ten cases" observed by himself, he persistently evades this plain duty.

There is nothing in the antecedents of Dr. Snow Beck, or in the character and tone of his many recent controversial diatribes, to invest him with such authority, that he may claim exemption from the obligation incumbent upon us all to set forth the facts from which alone scientific conclusions can be securely drawn.

But Dr. Snow Beck seeks to impose upon the profession conclusions drawn from facts which, as yet, have no existence for anyone but himself.

In this position, I leave him.

The moral of this strange discussion may be appropriately pointed by reference to the well known anecdote associated with the foundation of the Royal Society. King Charles, it is said, sent to the Society the following problem: "Why is it that, when a living fish is thrown into a bucket of water, the whole weighs no more than it did before the fish was added?" A Fellow, more shrewd than the rest, said: "I doubt the fact." I am, etc., Robert Barnes.

31, Grosvenor Street, February 2nd, 1874.

⁂ Dr. Snow Beck will now, no doubt, feel bound to forward us the short particulars of the cases.

EFFICIENT WORKING OF THE SANITARY ACT.

Sir,—One of the greatest drawbacks to the efficient working of the Sanitary Act is the want of early information of the outbreak of any contagious, infectious, or epidemic disease of a dangerous character in a medical officer of health's district; and, until some proper means are universally adopted, the carrying out of the Act is more or less a farce, or rather a delusion and a snare.

In Section iv, Duties of Medical Officer No. 6, it says: "On receiving information of an outbreak of any contagious disease, he shall visit the spot without delay, etc." But, in many cases, he never hears of an outbreak at all; or, if he do, it is often after the death of the first victim, and when the disease has established a firm foothold. A case in my district of typhoid fever was reported to me on the 22nd instant, and on that day the patient died, after an illness of fifteen days. The inspector only knew late on the day of the 21st, and reported it to me at once by post. Now, what I wish to maintain is, that there ought to be means adopted whereby the earliest information should be given to the officers; and I suggested to the sanitary authority of the Bakewell Union, at their meeting yesterday, a way out of the difficulty; and, for the purpose of inviting discussion on such an important subject, I venture to repeat the suggestion to you. "That, on the outbreak of any contagious, infectious, or epidemic disease of a dangerous character, it shall be the duty of the head of the family, or other deputed by him, in which the disease occurs, to give notice in writing, or personally, to the medical officer of health for the district in which he lives, within twenty-four hours after the disease has manifested itself; and, providing he fail, he renders himself liable to a penalty."

This was one of the best laws at the time the cattle-plague was prevalent in England, and was a principal means of its eradication; and the same law is still in force regarding pleuropneumonia in cattle; why, then, should not human beings be guarded by even more stringent measures? or is it that their lives are of less value than the lives of cattle?

The medical officer for the southern division of this union, in refuting a charge of neglect to-day, suggested that the registrars should be asked to furnish weekly returns of deaths to the medical officers; but the information, in my opinion, would be of much less value after death than at the time of illness. We want immediate information, not after death, or even after many days' illness.

The case of typhoid fever before alluded to broke out in the village of Hathersaye, a place most inefficiently supplied with pure water, and in a house about the centre of the village. There is a brook running the whole length of the village, the water from which has to be used for culinary and washing purposes, and into which the refuse and sewerage from the whole of the inhabitants is emptied. The house in which the patient died is on the edge of this brook, and it is almost too horrible to imagine the evil that may have been done.

Now, had I but known, I should have advised the authority to issue handbills of warning, and have used precautionary means with reference to the disposal of the matters that found their way into that brook. The population of the village is upwards of 1,000.

Surely, if the cattle of our land are guarded from infection as much as possible by the early information their owners are compelled to give to superintendents of police, our own species, should, at any rate, receive equal care and attention.

I am, etc., PHILIP S. FENTEM, M.D.,
Medical Officer of Health for Bakewell Union.
Bakewell, Jan. 26th, 1874.

OBITUARY.

JOHN PEET, M.D., F.R.C.P.Lond.,

SURGEON-MAJOR OF THE BOMBAY ARMY, AND LATE PRINCIPAL OF GRANT MEDICAL COLLEGE.

DR. PEET died on January 18th, at Shanklin, in the Isle of Wight, where he had chiefly resided since his retirement from India in 1865, and had endeared himself to all classes of the community by his unceasing activity and interest in all works of public usefulness and social charity.

Dr. Peet arrived in Bombay in 1842, at a time when the plans devised by Sir Robert Grant, for the medical education of the natives of Western India, were about to be carried into effect. He was appointed the first Professor of Anatomy and of Surgery of Grant Medical College, and commenced his course of instruction in anatomy in October, 1845. Though the Medical College of Bengal had been for some years in existence, and the difficulties attending the introduction of the study of practical anatomy had there been successfully overcome, still the same dangers from prejudice and ignorance had to be encountered in Bombay, for the influence of success in Calcutta was unfelt, and different classes and castes had to be dealt with. The judgment and tact with which this duty was performed by Dr. Peet were such, that very speedily the pursuit of practical anatomy became silently and surely established. At a later period, the same success attended Dr. Peet's judicious arrangements in clinical and operative surgery. As a lecturer he was clear, simple, and very earnest; and by these qualities, and the force of his moral worth, he early acquired the confidence, respect, and regard of the students, and maintained these feelings unshaken during the nearly twenty years of his teaching. After witnessing the complete success of the first curriculum, to which he had largely contributed, Dr. Peet was obliged, in 1852, to absent himself from India for the restoration of his health, which had suffered from sustained attention to his official duties. He returned in 1854, and held charge of the college, the chair of medicine, and the affiliated hospital, for two years during the absence of the Principal in Europe. In August, 1856, the Principal of the College resumed his duties. During the two following years, Dr. Peet was partly engaged in the general duties and the department of education, which gave him the opportunity of acquiring a good practical knowledge of two of the vernacular languages of the Presidency; and partly in Europe, when he became a member, by examination, of the Royal College of Physicians of London. He was elected a Fellow in 1860. In August, 1858, Dr. Peet returned to the position of Principal of Grant College, Professor of Medicine and Clinical Medicine, and Surgeon of the Jamsetjee Jejeebhoy Hospital, and continued in active discharge of these duties till his retirement from India in 1865. These seven years were—more especially in their early period—disturbed times for education generally in India, and for medical education particularly in Bombay. There was the damping influence of the great mutiny; there was the introduction of an university system with Procrustean principles; there were the crotchets of governing authorities, and the inconsiderate imitation of defects, because they already existed elsewhere, all to be contended against. Dr. Peet stood up manfully for the interests and reputation of his college, when these were assailed; but imperial decrees often take little heed of the honest convictions of learning and experience. It is not, however, to be understood that Dr. Peet was proof at all points against the influences around him. He gave his mind to some things—rightly or wrongly time will show—which to other minds, trained in the same school of experience, seemed of very doubtful policy; but he did not do so without earnest thought, and an evident regret that he felt constrained to differ.

But it was not only as a medical administrator, teacher, and practitioner that Dr. Peet earned a great reputation in Bombay. He was also a zealous cultivator of the science of medicine, and contributor to its literature. At an early period of his service he became an active member of the Medical and Physical Society of Bombay. He was Secretary from 1849 to 1853, Vice-President from 1859 to 1862, and President in 1863 and 1864. In the subjoined note* is a list of his chief contributions to the *Transactions* of this society. As Professor of Medicine, Dr. Peet experienced the want of a suitable text-book for his class. The standard English works did not seem to him to meet the wants of Indian students, who were to practise their profession in a tropical country. To supply this deficiency he published, in 1864, his *Principles and Practice of Medicine.* The object was not to produce a complete treatise on the practice of medicine, or to attempt to rival existing standard works, but to set before the Indian medical students the various subjects that are usually comprised in a system of medicine, in those points of view in which his experience, as a teacher of nearly twenty years, assured him they would be most readily apprehended; and to allot space to special diseases, in proportion to their importance and prevalence in tropical countries. This text-book has already been translated into three vernacular languages, and will doubtless, for many years to come, guide and assist the native practitioner in his work of quiet usefulness in the various wide-spread districts in which these languages are spoken. The first edition was soon expended, and Dr. Peet had hoped to realise more nearly, in a second edition, his own high standard of what such a work ought to be, but the opportunity did not present itself.

Such are the leading facts of Dr. Peet's public career, and from these a general idea may be formed of his character and powers. He was full of life and energy, self-reliant, and conciliatory. His mind was eminently practical, and showed a marked preference for subjects of ready attainment. In congenial work of this kind, he evinced great industry and tenacity of purpose. On questions of importance, his judgment was, for the most part, trustworthy and decided, for it was the result of careful study and reflection. This caution, however, was due rather to his high sense of the duty and responsibility than to natural endowment; for, to those who knew him well, he sometimes, in matters of minor import, seemed to allow the strict balance of his powers to be disturbed by the friction of opposing opinion, or the dominance of a favourite idea. Of his relations in private life, of his thoughtful tenderness in the domestic circle, and of the blank that is left there, we may not speak. His rare qualities of head and of heart will ever remain in the affectionate remembrance of the attached friends who, for many years, have known and valued his worth. His early death will be mourned; but his good name will long live in the memory and affection of the people of that distant land on which he long and usefully laboured.

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* 1. Tapping in Hydrocephalus. 2. Cases of Hydrophobia. 3. On Lunar Influence. 4. On the Practice of Transfusion. 5. Statistical Report of Jamsetjee Jejeebhoy Hospital. 6. On Tetanus. 7. Selections from Practice in Jamsetjee Jejeebhoy Hospital. 8. Notes on the quantity, density, and reaction of the Urine of persons resident in Bombay. 9. On the Prevalence of Typhoid Fever in the Bombay Presidency. 10. Notes on Three Fatal Cases in which Fibrinous Coagula were found in the Heart.

WILLIAM MORRIS, M.R.C.S., PETWORTH.

MR. MORRIS, who recently died suddenly, was born in 1820, at Oswestry, and was one of a family of fourteen children. After receiving his education at the Oswestry Grammar School, he was apprenticed to his father and eldest brother, who were at that time practising medicine there. Later on, his professional education was completed at University College. He came to Petworth in 1843, as an assistant to a firm, to whose practice he subsequently succeeded.

He was an excellent example of how much a good man may do, above and beyond his professional work, to endear himself to his fellow-men, and to help them in their varied struggles of life. A kind and sympathetic nature, a gentle manner, and good common sense in the exercise of his professional skill, gradually secured for him a very wide and increasingly-extensive practice in the town and country.

In his professional capacity, he was as implicitly trusted and looked up to as he was widely known; and it was acknowledged by patients, and also by members of his own profession, that, though a country doctor of advancing years, he was fully conversant with modern and improved remedies and appliances. As a surgeon, he was no indifferent operator, and during his career it fell to his lot to perform, once or oftener, many of the most important operations.

His energy and enthusiasm in his calling abundantly evinced his love for it, and made him an assiduous worker. It was mainly through his efforts that the Petworth Cottage Hospital, which was built at the expense of the late Lord Leconfield, was started; while the general plan of its construction, and almost every detail of its fittings and arrangements, were planned and executed at his direction.

He died in the midst of his work. He fell in a fit of apoplexy, in the very act (as it is supposed), of reaching down his hat to go forth on visits to patients. This sad event was no doubt conduced to by overwork, which he had endured night and day for many years. His friends often tried to impress upon him the necessity of some relaxation, both of mind and body, but his temperament was such that he could not restrain himself from his labours, and his only thoughts were how he could best promote the comfort and alleviate the sufferings of others. He has left a widow and two sons and two daughters.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted members on January 29th, 1874.

Brookhouse, Joseph Orpe, M.D.St. And., Parliament Street, Nottingham
Mackenzie, Stephen, M.B.Aberdeen, Weymouth Street, W.
Galabin, Alfred Lewis, M.D.Camb., Camberwell Grove, S.E.
Irvine, James Pearson, M.D.Lond., Mansfield Street, W.
Davidson, Alexander, M.D.Edin., Rodney Street, Liverpool
Semple, Charles Edward Armand, M.B.Camb., Torrington Square, W.C.
Rickards, Edwin, M.B.Oxon., General Hospital, Birmingham

The following gentleman was at the same time admitted as a Licentiate.

Parakh, Dhanjisha Novroji, Euston Road, N.W.

UNIVERSITY OF DUBLIN.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, January 13th, 14th, and 15th, 1874, the following candidates obtained the License to practise Medicine.

Elliott Sanderson Browne, Martin Edward Bourke, Rowland John Denny, and Richard Nugent Stoker.

The following candidates obtained the Midwifery Diploma.

Richard Nugent Stoker and Wallace Williams Lovejoy, M.D. Harv. Univ. Camb. (Mass.), 1872.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, January 22nd, 1874.

Squire, William. Hanwell, Middlesex

Thursday, January 29th, 1874.

Barnard, Thomas, Lewes, Sussex
Davis, Edwin Harry, Dorchester
Hartley, Charles, Stocking Pelham, Herts

The following gentlemen also on the same day passed their primary professional examination.

Adcock, Harold, Guy's Hospital
Musgrave, Reginald Vernon, St. Mary's Hospital

At the Preliminary Examination in Arts, held at the Hall, on January 30th and 31st, 1874, 50 candidates presented themselves; of whom 16 were rejected, and the following 34 passed, and received certificates of proficiency in general education. In the First Class, in order of merit:

1. Joseph William Oglesby and Thomas F. B. Palmer. 3. Joseph L. Burchall and John Wallis Gill. 5. Alfred C. Preston. 6. William Reed Hill, Norman Porritt, and Arthur Roberts. 9. Richard J. Dearden, George Richard Green, and Henry Newsome Oglesby.

In the Second Class, in alphabetical order:

W. B. Benison, R. O. Bunting, H. D. Chapman, R. A. S. Chard, H. F. Collier, S. A. Crick, W. E. Dawson, Wm. Eames, R. A. Fergusson, R. H. E. Knaggs, A. D. Leahy, C. S. Lewin, W. G. McLennan, L. L. de Montille, A. J. Newman, T. F. Pearse, J Protheroe, E. J. Reilly, Herbert Smith, W. B. Thomson, G. F. Wallis, Alfred C. Wey, and H. Wigglesworth.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Surgeon: £65 per annum. Applications, 13th instant, to F. Barlow, Sec.

ARMY MEDICAL DEPARTMENT—Surgeons. Applications to T. G. Logan, Director-General.

BRIDGNORTH INFIRMARY and DISPENSARY—House-Surgeon: £100 per annum, furnished rooms, etc. Applications, 12th inst., to Alfred Mathias, Hon. Sec.

CUMBERLAND INFIRMARY, Carlisle—Surgeon. Applications, 26th instant, to John Laver, Sec.

DEVONSHIRE- Public Analyst. Applications, 26th instant, to H. Ford, Clerk of the Peace, Exeter.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY—House-Surgeon, Clerk, and Apothecary: £50 per annum and board.

HOSPITAL FOR SICK CHILDREN—Assistant Physician. Applications, 18th instant, to S. Whitford, Sec.

INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications, 16th inst., to Major-General Pears.

KILKENNY UNION—Medical Officer to the Workhouse: £75 per annum.

LITTLEMORE PAUPER LUNATIC ASYLUM, near Oxford—Resident Assistant Medical Officer: £80 per annum, increasing to £120, furnished apartments, and board. Applications, 23rd instant, to the Superintendent.

LIVERPOOL ROYAL INFIRMARY—Surgeon.

LOWESTOFT Urban, Lowestoft Port, and Mutford and Lothingland Rural, Sanitary Districts: £50, £20, and £50 per annum, and private practice. Applications, 21st instant, to Wm. Rix Seago, Lowestoft.

METROPOLITAN HOSPITAL, Devonshire Square—Assistant Physician. Applications, 21st instant, to George Croxton, Secretary.

MIDHURST RURAL SANITARY DISTRICT—Medical Officer of Health for the Tillington Subdistrict.

MIDHURST UNION—Medical Officer for the Tillington District: £60 per ann.

NARBERTH UNION—Medical Officer for District No. 1, and the Workhouse: £55 and £20 per annum, and fees. Applications, 21st March, to John Thomas, Clerk.

NAVAL MEDICAL SERVICE—Surgeons. Applications, 12th February, to A. Armstrong, Director-General.

NEWTOWNLIMAVADY UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Newtownlimavady Dispensary District and Bridewell: £105 per annum, and fees. Applications, 9th instant, to W. S. Fleming, Hon. Sec.

NORTH RIDING INFIRMARY, Middlesboro-on-Tees—House-Surgeon: £100 per annum, lodging, board, etc. Applications, 9th instant.

NORTHUMBERLAND PAUPER LUNATIC ASYLUM, Cottingham, Morpeth—Resident Medical Superintendent: £400 per annum, furnished house, etc. Applications, 9th inst., to Wm. Dickson, Clerk to Committee, Alnwick.

NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th March, to E. M. Kidd, Sec.

RHAYADER UNION—Medical Officer for the whole Union: £80 per annum.

ST. MARY'S HOSPITAL, Paddington—Lecturer on Materia Medica. Applications, 9th instant.—Aural Surgeon. Applications, 14th instant, to J. G. Wilkinson, Secretary.

ST. MARY ABBOTTS, Kensington—Public Analyst: £50 per annum, and 5s. per analysis. Applications, 16th instant, to G. C. Harding, Vestry Clerk.

SALOP AND MONTGOMERY COUNTIES LUNATIC ASYLUM—Assistant Medical Officer: £80 per annum, board and lodging. Applications, 13th inst., to C. de Courcy Peele, Shrewsbury.

SHEFFIELD GENERAL INFIRMARY—Assistant House-Surgeon: £65 per annum, board, lodging, etc. Applications, 10th inst., to Joseph Kirk, Sec.

STOCKBRIDGE Rural Sanitary District—Medical Officer of Health. Applications. 17th instant, to G. M. Footner, Clerk to the Authority, Romsey.

TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY—House-Surgeon: £50 per annum, board, lodging, and washing.

TORBAY INFIRMARY AND DISPENSARY, Torquay—House-Surgeon and Secretary: £100 per annum, with board.

THE FRIENDS' RETREAT, near York—Medical Superintendent. Applications, 10th instant, to Jonathan Burtt, Treasurer, Belle Vue, Heslington Row, York.

WESTMINSTER HOSPITAL—Assistant-Surgeon. Applications, 10th instant, to F. J. Wilson, Sec.

MEDICAL APPOINTMENT.

Names marked with an asterisk are those of Members of the Association.

*BUCK, J. RANDLE, L.R.C.P., appointed Medical Officer of the Worcester Dispensary and Provident Medical Institution.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

JONES, Ebenezer, Esq.. M.R.C.S.Eng., at Rhayader, suddenly, aged 59, on on January 11th.

KELLETT, Edward. M.D., at Kells, aged 56, on January 24th.

PORTER, John Taylor, F.R.C.S., aged 55, at his residence, Ash Mount, Sheffield, on February 2nd.

OPERATION DAYS AT THE HOSPITALS.

MONDAY	Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.
WEDNESDAY	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY	Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY	St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. J. Morgan, F.R.C.S., of Dublin, "On a fertile source of Venereal Contagion, demonstrated by experimental research and direct proofs, illustrated by models and drawings"; previous to which, Mr. Maunder will exhibit a patient the subject of Excision of the Ankle-joint; also, the patient's child, whose corresponding lower extremity is short. Mr. Jabez Hogg will bring forward a case of Hemiopia; and Mr. A. E. Durham a Case of Dislocation of the Femur on to the Margin of the Sciatic Notch, of Five Months' standing, reduced by Manipulation under Chloroform.

TUESDAY.—Royal Medical and Chirurgical Society. 8 P.M.: Ballot. 8.30 P.M.: Drs. Hennessey and MacLaren, "Note on Cholera in the North-West Provinces of India"; Mr. Howard Marsh, "On the Treatment of Rickety Deformities of the Legs by Operation."

WEDNESDAY.—Epidemiological Society, 8 P.M. Dr. Gavin Milroy, "Proposition on Quarantine in relation to Epidemic Cholera."

FRIDAY.—Clinical Society of London, 8.30 P.M. Adjourned debate on Mr. Prescott Hewett's paper on "Pyæmia"; Dr. Cayley, "Case of Hæmoptysis"; Mr. T. Warrington Haward, "Case of Blood-cyst of Hand."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

J. W. P.—We do not think that the Licentiates of the Royal Colleges of Physicians of London and Edinburgh have, as such, a right to use the title of Doctor implying the possession of a degree in medicine. The London College, at least, expressly disapproves of such use.

MR. BRIDGER (Cottenham) sends us a long letter explaining his reasons for issuing the advertisement referred to at page 160 of last week's JOURNAL. He states that he had it inserted three times in the local papers, by the advice of his friends, simply to disprove certain insinuations which had been made, and to let the public know his position with reference to the practice of the late Dr. Pinchard. While advertisements of the kind are as a general rule deserving of strong disapprobation, such circumstances as are described by Mr. Bridger may be held to excuse the insertion of one to the limited extent and for the special object stated in his letter.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

INSURANCE OFFICES AND MEDICAL FEES.

SIR,—I thought that the time had gone by when insurance offices refused to pay medical men their fees. The London Life Association has just succeeded in getting information from me about a patient of mine, and, in reply to my request for the usual fee, sends me a lithographed circular to say that it can do no such thing. By their reports they seem to be prosperous.

I am, etc., AUGUSTIN PRICHARD.

NOTICE TO ADVERTISERS.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

WE have already expressed the opinion that the *Popular Treatise upon the Influence of Gout at the Heart*, etc., which is being sent about free by post, is a catchpenny pamphlet which is professionally disgraceful. It illustrates one of the worst abuses of special hospitals, that this professionally discreditable pamphlet should be circulated in part as an advertisement of a "National Hospital for Diseases of the Heart", of which the author is medical superintendent. It is surprising that the gentlemen connected with the hospital should permit so gross an abuse. Dr. Eldridge Spratt is, we fear, content, from whatever motives, to bear the discredit which attaches to a mode of proceeding which our correspondent justly censures.

DR. A. B. (Dublin).—Immediately.

OBSCURE FORMULÆ.—The *Pharmaceutical Journal* has the following:—In answer to Notes and Queries No. 377, I think I can solve two out of the four difficulties mentioned.

1. "Tinct. Teste."—A West End Physician used to order the shell of a species of Tortoise, the *Emys guttata*, macerated for three months in rectified spirit. The formula was, I am almost positive, ʒij of the shell to Oj of S.V.R., and ʒiv of this tincture (?) with ℥iijss of aq. dest. was prescribed. The dose of this potent mixture was one teaspoonful, given in cases of consumption; and, it is almost needless to add, with no very marked effect. About three years ago I frequently made up the above prescription.

2. "Pil. Aloes Glacial."—These pills are prepared by Corbyn and Co. I have had occasion to procure them once or twice for a prescription.—JOHN N. PLACE.

Who is the West End Physician?

WHAT NEXT?

THE *Kilburn Indicator* has a pathetic leader on the woes of ill-paid and hard-working medical men; and concludes its article by an original and neat suggestion. "In the meanwhile, we shall be happy to publish any authenticated statements sent us, showing the number of rich and poor cases attended by the different medical gentlemen of the locality during the past year, with the number of accouchements in both classes, and the deaths they may have certified to in the time, together with any other facts that may bear upon the question, or be interesting to our readers." Why not ask for a return of the number of cases in the hands of the neighbouring solicitor, or of the number of accounts kept at the local bank? As a mild draw for advertisements, the suggestion is ingeniously impudent.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle: The North British Daily Mail; The Blackburn Times; The Glasgow News; The Glasgow Herald; The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

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BOOKS, ETC., RECEIVED.

The Place of the Physician: with other Essays. By James Hinton. London: H. S. King and Co. 1874.

LECTURES
ON
HOSPITALISM: AND THE CAUSES OF DEATH AFTER OPERATIONS.

Delivered at University College Hospital, London.

By JOHN ERIC ERICHSEN, F.R.C.S.,
Holme Professor of Clinical Surgery in University College, and Senior Surgeon to University College Hospital.

LECTURE IV.—ON THE PREVENTION OF HOSPITALISM.

CONTENTS.—*Overcrowding.—Influence of,* 1. *Condition of Patient before Operation;* 2. *Skill of Operator;* 3. *Of Treatment after Operation.—Septic Disease bears no relation to mere size of Hospital.—Hospitals vary greatly in number of Operations and in amount of Mortality.—Evils in the present mode of Construction of Hospitals.—In Arrangements of Wards, Offices, Dead-House, Erysipelas-Ward.—Lincoln County Hospital.—Ventilation from Corridors.—Injurious Influence of Out-Patient Department.—Influence of Age of Hospitals.—Principal Hygienic Rules.—Conclusion.*

IN the last Lecture, I pointed out to you that, and in what way, overcrowding gave rise to septic disease; and I particularly endeavoured to impress upon you the very important fact, which I cannot too strongly urge upon your attention, that it is the nature, and not the number, of the cases in a ward that occasions that pestilential state of its atmosphere which developes pyæmia and other septic diseases. A ward may be "overcrowded" with those surgical injuries and diseases in which there is no breach of surface—such as simple fractures, chronically inflamed joints, strictures, etc.—without any more serious detriment to the health of its inmates than would result from inhabiting a room that is habitually too full of people; but the case is widely different when the inmates are the subjects of injuries or operations that occasion suppurating wounds. Then, and under such circumstances, even if the ward be not full, septic disease may be developed; and this will certainly happen, so far as our experience here will lead us determine any sanitary point with certainty, if the number of suppurating wounds, the majority being severe ones, exceed one-half of the number of patients the ward is constructed to hold: and further, when once septic disease is so generated, it will spread by contact or infection of air.

Let me, then, advise you not to be sceptics about the influence of septics. How this "overcrowding" generates septic disease in the first instance—by local infection or by blood-poisoning—is a point on which men of science are divided. The discussion of this question would be altogether beyond the object of these lectures, and it need, consequently, not detain us. Its solution one way or the other in no way influences the fact with regard to the evil influence of overcrowding. We may, then, take it as proved, by the experience derived from this hospital, that under circumstances of injury or disease, and of a building such as we have to deal with here, an invasion of septic surgical disease may be foretold. We are able to determine with accuracy when it is imminent, and with certainty that it will occur according to the number and nature of the open wounds in a state of suppuration that are in a ward at a given time. To be forewarned in such cases is truly to be forearmed, as septic disease, and pyæmia more particularly, is the main cause of the present high rate of mortality after operations, more especially amputations. As the conditions under which it is developed can be determined with accuracy, we have only to guard against the development of these conditions in order to prevent the evolution of the septic cause of mortality, and thus, and in the same ratio, diminish that mortality.

Let us, however, examine this important question a little more in detail; for truly it is one on which I do not wish to dogmatise, but which I should like to present as clearly as possible to you. Now there can be no doubt of this, that, if the present rate of mortality after amputations in hospitals be not dependent on those influences to which patients are subjected after the operation has been performed, and which are included under the general term "hospitalism", they must arise from one of the three following conditions—viz., 1. The state of the patient's health before the operation; 2. The skill with which that operation is performed; or 3. The treatment—constitutional or local—to which he is subjected after its performance. Let us briefly examine these.

1. Can the condition of the patient's health, his social status, his occupation, exercise any influence in determining the present high rate of mortality? Upon this point I need say but little, as I have no intention to compare town with country, hospital with private patients, but to compare the results of one hospital with another in the same town. Now I may take it for granted that the conditions of health are the same in the patients in all metropolitan hospitals; that there is no difference in health or in social status between the patients of a hospital in which the mortality amounts to 18 or 25 per cent. after all amputations, and those of one in which it reaches nearly 50; and yet these are the differences that are met with in different metropolitan hospitals. We find the same differences existing in the hospitals of Paris; and, on reference to Simpson's admitted statistics, it will be found that the hospitals of county towns differ also largely one from the other in the rate of operation-mortality. Without, therefore, comparing town and country patients, we find the utmost possible discrepancy in the results obtained from different institutions in the same town in which the conditions of the patients must necessarily be as nearly as possible similar in all that respects habits of life, occupation, and resulting constitution.

2. As to the second condition that may be supposed to lead to this different rate of mortality in different hospitals—namely, any difference of skill that may exist, it is not to be entertained for a moment. There are, doubtless, many capital operations in surgery—such as lithotomy, the ligature of arteries, herniotomy, etc.—in which it may be supposed that different operators possess varying degrees of skill which might influence the result; but in amputation, that simplest of all the great operations, there can be no difference in this respect: and, indeed, the results that are furnished by different hospitals bear no proportion whatever to the known skill and professional ability of the surgeons connected with them; and it is one of the greatest evils of the prevalence of septic disease in a hospital—call it hospitalism or not, as you please—that it neutralises the highest surgical skill, and renders abortive every care that can be bestowed upon the patient.

3. The third possible condition that may influence results of operations, independently of hospitalism, is treatment. Its influence on the results may possibly be somewhat greater, though on this important point we possess, as yet, no reliable evidence. It is a curious fact that the surgeons of the past generation seem to have been almost entirely ignorant of the existence of septic disease, and of its influence in modifying injuriously the results of surgical operations. There are, no doubt, scattered hints in the works, even of such philosophical surgeons as Brodie and the Bells, bearing upon this point, but septic disease was but little regarded, and its more prominent features scarcely recognised. In Cooper's last edition of his great *Surgical Dictionary* there is no mention whatever of pyæmia; nor is that disease described in the works of the best authorities of the day. Surgeons thirty-five years ago were chiefly concerned with methods of operating and modes of treatment, and they referred the varying conditions of success or failure to the practice that was adopted in these respects. We find long discussions and controversies upon the comparative advantages of the flap and circular methods of amputation, of immediate and delayed union; but no reference to those more general causes that are now known to override all these comparatively minor considerations of fashioning of flaps or mode of procuring union of wound. At this period, indeed, the secondary effects of pyæmia and septicæmia in the visceral abscesses and congestions produced were recognised; but the intermediate link of the blood-poisoning was but little, if at all, suspected. I can speak with some degree of experience upon this subject, for more than thirty years ago a paper of mine on so-called "Congestive Pneumonia" following surgical operations, injuries, and diseases, was published in the *Medico-Chirurgical Transactions*, and in that paper, as well as in another one on the "Cause of Death after Burns", I failed to recognise, and in the discussion that took place upon it no reference was made to, the blood-poisoning, which undoubtedly led to what we now know to be pyæmic and septicæmic conditions, but which were then looked upon as distinct constitutional diseases arising from some local irritation in an obscure and inexplicable manner. But, if we go from this past pathological era and come to more recent times, we shall still find that a great, and I cannot but think an undue, importance has been attached to peculiar methods of operation and to particular plans of treatment. Let me speak on this point solely from my own personal experience. The 307 amputation cases that have occurred in my wards have all, I believe without a single exception, been done by the flap operation. The patients have been subjected to various methods of treatment. In the early periods, up to twenty-five years ago, Liston—and I, acting afterwards on his precepts—generally treated amputation-wounds by leaving the flaps open with a piece of wet lint interposed, but otherwise

fully exposed to the air for from four to six hours until all oozing had ceased and the cut surfaces had become glazed. The flaps were then brought together, a strip of water-dressing laid along the edge of the wound, and an attempt made to procure union by adhesion. I afterwards employed different methods of treatment, generally bringing the flaps together immediately after the operation was completed, and dressing the stump in the operating theatre, sometimes washing the surface with a solution of chloride of zinc, with alcoholised water, or carbolised solutions. But, whatever method of treatment was adopted, the mortality was, as nearly as possible, the same, ranging, as I have stated in the first lecture, from 23 to 25 per cent.; in fact, it is quite certain that no influence whatever has been exercised in the result in my practice by any method of local treatment that has been adopted.

Of the antiseptic treatment, I can as yet say nothing positive; it has been tried in some cases in my wards, and with success, but not, as yet, in a sufficient number for me to come to any conclusion as to its utility in operation wounds; of its great advantage in chronic abscesses, I have seen enough to leave no doubt on my mind. Theoretically, "the antiseptic method" is perfect. It fulfils all the requirements that can be desired in the management of a wound. It may be equally good in practice, but, as I have already said, this is a point yet to be determined. The essential points in the local treatment of any wound being scrupulous attention to cleanliness, the absolute purity, so far as freedom from all decomposable organic matter is concerned, in everything that is brought into contact with it, be it air, or instruments, or dressings, or surgeon's fingers, and close personal supervision. In all these respects, the "antiseptic treatment" of Lister, and Callender's method of managing stumps, leave nothing to be desired; and, if I were to venture an opinion upon a subject which is still *sub judice*, I should say that it is in this that their great merit in practice consists. But we have, as yet, to learn the real value of antiseptic methods of treatment; and this can only be done by the observation of a very extended series of cases in which these plans of treatment have been employed, and comparing the results thus obtained with an equally extensive set of cases treated by other methods under as nearly as possible the same conditions in the same hospital. It would clearly lead to an incorrect conclusion, if we were to compare the mortality resulting from treatment by antiseptics and by other modes, at different seasons of the year, or in different years when epidemic influences might be present or absent, or in two hospitals, the mortality of which for years past has been so dissimilar, as is presented by those contained in Table B, as compared with University College with a mortality of 25 per cent., or St. Bartholomew's with one of 18 per cent. The only fair method of comparison is between the practice of one surgeon who uses the antiseptic method with that of another who does not, in the same institution and at the same time. This has never as yet been done, or, at least if done, the results have never been made public; and, until we are in possession of such comparative returns, we can attach no importance to the publication of isolated cases, or even of short and partial runs of success which have, as stated in Lecture I, occurred after almost every new method, and to many surgeons.

But if the high rate of mortality at present existing after amputations and many other operations, and dependent upon septic disease, and which differs so widely in different hospitals in London, is not due either to the condition of the patient before the operation, to the skill with which it is practised, or to the treatment that is adopted, to what are we to refer it? Why, necessarily to the last of the four conditions; namely, to the hygienic influences to which the patient is subjected after the operation. It is these influences that give rise to the septic diseases that are so fatal, pyæmia alone being the cause of death in more than one-third of the fatal cases; and, if this could be removed, we should be able to lessen our mortality proportionately. In other words, instead of having an average death-rate of about 37 per cent. after amputation, we should bring it down to 24 at most, if only the pyæmic cases could be saved; and considerably lower if the mortality from other septic disease, such as erysipelas, could be done away with.

The differences that exist in the rate of mortality from pyæmia after operations in different hospitals admit possibly of explanation in different ways. Simpson, as is well-known, endeavoured to prove that the mortality from septic disease in a hospital increases in the direct proportion of the size of the building. In this, I believe he was in error. It is quite possible that, if the conditions were equal in all hospitals, size might determine result, but the conditions are so unequal that no legitimate deduction as to mortality can be drawn merely from the consideration of the size of a hospital. If all hospitals were constructed in exactly the same way, if the number of severe injuries and operation-cases they contained was in exact proportion to the general number of their inmates, mere size of building, or, in other words, accumulation of numbers under one roof, would, in all probability, exercise a determinable influence upon the result. But, the construction of hospitals is so varied, and the proportion of severe operations and injuries varies so greatly in different institutions, being at least twice as great in proportion to the number of patients in some hospitals in London to what it is in others, that no safe deduction can be drawn from mere size of building or number of inmates. Thus, if we only take the four hospitals, the statistics of which appear in Table B, and University College Hospital, I find that the number of cases of amputation in the hospitals in proportion to the number of beds they contain is as nearly as possible as follows during the years mentioned in that table, viz.:—

Hospital A,	there was 1	amputation to every	13	beds.
Hospital B,	,, 1	,,	17	,,
Hospital C,	,, 1	,,	10	,,
Hospital D,	,, 1	,,	35	,,
University Coll. Hos.,	1	,,	6½	,,

In point of fact, the largest hospital in London (St. Bartholomew's) is at the present time surgically the most healthy—its reports showing a smaller percentage of deaths from septic disease than that of any other institution. At University College Hospital, the number of operation-cases has always been very large in proportion to the size of the institution. We have 150 beds, of which about 75 are surgical. Now, I find by the Registrar's returns, that we have a yearly average of capital operations—*i.e.*, of operations by which life is directly imperilled, as the major amputations, resections, operations for stone, hernia, the removal of large tumours, of organs, such as breast, testis, penis, and tongue—a total amounting to about 80, or more than one for each surgical bed; and this exclusive of all injuries that do not require operation. This is fully double what occurs in some other hospitals in London of the same size, and fully as many as occur in some that contain more than double the number of beds. Hence with us the proportionate number of severe cases in regard to the actual number of beds is very large, and yet the mortality from septic disease is, upon the whole, small.

In speaking so much of University College Hospital, I may possibly have laid myself open to something like a charge of egotism, for we naturally connect the hospital with the surgeon; but I must either refer to the results of the practice of that hospital, to which I have for nearly a quarter of a century been surgeon, and from which I necessarily derive all my experience of public surgical practice, or I must be silent.

It is not my intention on the present occasion to go into the general question of the construction and hygiene of hospitals; but there are a few points to which, as they bear on our present subject, I may direct your attention; for, indeed, I cannot but come to the conclusion that in the solution of this question is involved much that relates to the development of septic disease, and that increases immensely the evil results which are consequent upon over-crowding, or the simple aggregation of patients under one roof, by rendering the air impure before it enters the wards, and keeping, in fact, the whole hospital atmosphere in a state of pollution.

I cannot but think that there is something radically wrong in the conventional method of constructing ordinary hospitals. I am not at present speaking of those so-called "palatial" hospitals, founded by the munificence of the charitable and pious of a long past age, the revenues of which have augmented by the increased and ever growing value of property; by the bequests and donations of successive generations of benefactors, until they have rivalled the incomes of dukedoms: but I solely speak of that large class of hospitals (metropolitan and county) varying in size from 100 to 300 or 400 beds, which have no such princely revenues to fall back upon, but are supported from year to year by the "voluntary contributions" of the many charitable, pious, and often munificient, donors who live amongst us. These hospitals, having often but slender means at their disposal, or having been constructed with economy in outlay, have been built on a conventional plan, from which no architect has yet departed. They are simply big houses, with basements containing kitchens, lavatories, cellars, and the ordinary offices of a large establishment; with an operating theatre and dead-house more or less closely connected with the main building; with every floor filled with sick and injured people. On the ground-floor, accidents and operation-cases; on the first-floor, probably medical patients; above, chronic surgical cases—who can wonder at the development of pyæmia below and of erysipelas above? Who would live in an ordinary house thus filled? Who would expect to preserve his health if he ventured to inhabit it? How can the air be pure, and how can recovery be expected, or freedom from septic disease secured, under such circumstances? Civil hospitals, that were built during what may be termed the "pre-sanitary age"—*i.e.*, until about a third of a century ago, were uniformly constructed on this big-house plan, being three or four storeys high. The evil of this mode of construction is very great. It leads to the upper storey, which ought to be the healthiest, being usually the most infected with septic disease, and this notwithstanding its being more easily ventilated than those lower down.

This has happened here repeatedly with regard to erysipelas. The upper floor in the main building of our hospital is occupied by the female surgical beds. The cases are much less severe than those in the male accident wards on the ground-floor; the wounds are slighter; operations less frequent and far less severe. But yet erysipelas occurs to a greater extent amongst the patients on this floor than amongst those on the ground-floor. From July 1870 to July 1873, there were thirty cases of erysipelas in these wards, against twenty-four in the lower wards. But during the whole of this time, I had not one single case of pyæmia amongst my female patients in the upper ward. The fact appears to be, that the air, as it ascends in the hospital, becomes impregnated more and more with septic matters; and that, erysipelas being infectious, the contagion of that disease is at once carried by the upward current of air to the higher storeys, however well ventilated these wards may be; and no doubt the good ventilation in these higher wards tends to lessen the septic disease that would otherwise be more frequent in them.

But not only is the general mode of construction of most hospitals, whether town or provincial, faulty, but the internal arrangements are usually such as not only tend to predispose to those septic diseases that are due directly to contamination of air beyond a certain point of impurity, and also to render it extremely difficult in all cases, and in some impossible, to expel or eradicate such disease when once it has got a foothold in the building. A hospital may thus become contaminated by septic disease—be pyæmia-stricken, in fact, beyond the possibility of purification. This is what has happened at the Lincoln County Hospital, which the governors have most nobly decided on demolishing and reconstructing at a vast cost. In the case of this hospital, to which I have no hesitation in alluding, as its condition has been made public in the local papers, in the medical journals, and, at the meeting at which its reconstruction was decided upon, my name was mentioned in reference to a modified scheme, there have been repeated outbreaks of pyæmia for many years past; and at last the surgeons had been compelled to desist from operating in it, and even to advise patients to be treated at their own homes, rather than encounter the perils of the hospital. Mr. Brook, one of the surgeons, said at the meeting alluded to: "Of late years, the interior of the hospital has, at one time or another, been entirely renewed; but still the disease (pyæmia) kept breaking out; and it was the opinion of all great authorities that it lurked in the very fabric, and that nothing but demolition would remove it." (*Lincoln Gazette*, January 10th, 1874.) Mr. Lowe, another of the surgeons, spoke in the same strain, and has told me that, although the hospital had become thus pyæmia-stricken, he had never met with a case of that disease out of the hospital in the town itself.

I am acquainted with other instances of hospital infection nearly, if not quite, as serious as this; but, as they have not yet been brought before the public, I refrain from mentioning them. But surely no stronger or more conclusive evidence is needed of the tenacious and ineradicable nature of this pyæmic infection, when once it has taken firm hold of a hospital, than that which is furnished by the example just given. What name so appropriate as "hospitalism" for a condition of things such as here described? The town free from infection; the hospital saturated by it, so as to induce its own surgeons to recommend their patients not to enter it, to compel them to refrain from operating, and after every attempt that science and humanity could suggest; every hygienic means employed in vain in the fruitless attempt to eradicate the pestilence from "the very fabric" itself; to compel the governors, as a last resource, to decide on the demolition of the building and its complete reconstruction at a great expense as the only remedy. The truth is that, when once a hospital has become incurably pyæmia-stricken, it is as impossible to disinfect it by any known hygienic means, as it would be to "disinfect" a crumbling wall of the ants that have taken possession of it, or an old cheese of the maggots which have been generated in it. There is, in these extreme cases, only one remedy left—that remedy which the governors and staff of the Lincoln County Hospital have so generously, so disinterestedly, so nobly, resolved on—viz., the demolition of the infected fabric, and the destruction of its materials, for that last clause must not be forgotten. In fact, just as the cattle-plague has to be "stamped out" by the pole-axe, so has the infection of a pyæmic hospital to be destroyed by the pick.

From the manner in which most hospitals are built—on the model, in fact, of a large dwelling-house—all the wards open upon corridors or lobbies which communicate with the general staircase of the building, and, through the medium of these, with its basement-floor, with the entrance-hall, the out-patient department, and frequently by continuous passages with the dead-house. The only air-supply that the wards receive at night, or when the windows are shut, is, in the majority of cases, that which is thus drawn from these corridors, and which, from various causes, is already in a state of impurity, and will thus more readily become contaminated up to the septic point by overcrowding of the wards.

Now let us consider briefly how these causes of pollution of the air may be remedied.

The three main causes of the impurity of the air of hospital corridors and staircases appear to be: 1. Effluvia from the kitchens, cellars, and washing-places, on the basement-floor. The odours arising from these various sources of impurity, the smell of cooking, of washing, etc., are often perceptible in a very marked degree in hospitals. This evil might easily be remedied by removing all these offices into an outbuilding, as is now generally done in all well constructed modern houses. The basement-floor might then be converted to useful purposes for the inmates. Reading and recreation rooms might be established in it for the use of residents or patients.

2. The second great cause of impurity in the internal air of many hospitals, is the out-patient department being under the general roof of the hospital. This I cannot but consider to be a great evil, and a most fertile source of disease amongst the inmates. The fact is, that there is too much done in hospitals at the present day. They have not been constructed originally for the amount of work that is thrown upon them. Thirty years ago, the out-patient department was insignificant in comparison to what it now is. Dispensaries then did the work that hospitals now undertake in this respect. Not only are there the usual general medical and surgical out-patients, but very commonly new out-patient arrangements are made for those affected by a variety of special diseases. Not only has the augmentation in the number of out-patients become so great as to be a source of demoralisation to the public at large, of loss and injustice to the great mass of general practitioners, of wasteful expenditure and of great embarrassment to hospitals—but the accumulation of these crowds of diseased, often of infectious, people in the entrance-halls and "out-patient and casualty" rooms of hospitals, has become a source of serious unhealthiness to the inmates of these institutions. The out-patient room is commonly situated near one of the entrances into a hospital; and who that has gone into that apartment, when crowded with patients, many afflicted alike with dirt and disease, has not been conscious of a heavy and noisome odour tainting the air at its very entry into the hospital, and rendering it, at the very doors of the building, unfitted for contact with the wounded within its walls?

I give no opinion here on this question of indiscriminate out-patient relief. Whether an evil or a necessity, it exists. But it should not be suffered to exist under the same roof that covers those who have recently sustained serious injuries or been subjected to grave operations. For this, at all events, there can be no necessity; and we shall in vain attempt to purify the air of our hospitals, and to render it free from septic influences within, when we allow it to be polluted, if not infected, at its very entry into the building. Let the out-patient department be removed from the hospital to a detached and altogether separate building, and we shall at all events remove one source, and a great one, of atmospheric impurity.

3. A third grave cause of the impurity of the *general* as distinguished from the *ward* air of hospitals, is often the proximity of the dead-house and *post mortem* room to the main building, with which it, in most instances, is connected by means of a corridor. To this I need do little more than allude; for it must be obvious that it is hopeless to endeavour to prevent the continuance, the occasional severe outbreak, or the spread, of septic disease in the wards, when the air that supplies them from within the building is from time to time contaminated by the diffusion through it of emanations arising from the *post mortem* examination of those who have already perished from their influence. The dead-house, like the out-patient department should be entirely separated from the hospital, and should have no covered communication with the main building. So also the porters whose duties are connected with it, and the officers whose business it is to make the necropsies, should on no account be permitted to handle the patients or to examine or dress the wounds of any surgical patient.

There is one other source of infection, or rather of maintenance of infection, in a hospital that is closely allied in its influence to the dead-house; I mean the "erysipelas ward." That, also, should never be allowed within the walls and under the roof of the main building, but should be detached and non-communicating. The contagion of erysipelas is undoubted. I gave you, in the last lecture, a striking illustration of it. What but infection, then, can be expected from placing patients so diseased on the same floor, in the same stream of air-communication with others, rendered, by open wounds, peculiarly susceptible to its infection? If the "erysipelas ward" were removed out of the hospital, and had no communication with the main building, its use would be greatly restricted ; as now situated, it too often feeds itself.

We know as yet but little that is positive as to the influence of the duration of use, or, in other words, the age, of a hospital in producing a tendency to the generation of septic diseases within it. It is a question extremely difficult to answer, how far the mere age of a building tends to its unhealthiness—whether that building be a modern hospital or a medieval Italian palazzo. There are so many circumstances in every building, independently of its mere age, that must modify its sanitary condition—such as the material of which it is constructed—stone, brick, or modern lath and plaster—its site, and the attention that has been bestowed upon its drainage and other hygienic conditions—that we cannot, I think, go much further than this in the answer, viz., that age and neglect will certainly render any building unhealthy.

There is one remarkable circumstance connected with age of hospital, and it is this, that new buildings added on to old hospitals often become more unhealthy than the original building. This happened at one of the Paris hospitals (I believe it was the Neckar), and has been observed in this country also.

But to return again to that on which I base all my remarks in these lectures, viz., the experience I have derived during the twenty-five years that I have been surgeon to University College Hospital, I can say this, that—notwithstanding the immensely improved sanitary arrangements that have, during that time, been introduced and adopted by the increasing vigilance and devoted attention of the hospital committee—the sanitary state of the hospital has just been maintained at the same state that it was a quarter of a century ago. Our amputation-mortality is exactly the same now as it was then, viz., about 25 per cent. The effect of greatly improved hygienic arrangements has been to prevent the hospital from becoming more unhealthy; they have not succeeded in increasing its salubrity. They appear just to have been able to counteract the ill effects that would otherwise have arisen from the impregnation of the building with the accumulated septic emanations of a continuous influx of sick and wounded.

There are various other points in connection with hospital hygiene to which I need do little more than direct your attention, as they are matters of general rather than of special sanitary arrangements ; they are matters, in fact, of common sense with common experience. Though generally known, they are often neglected ; but attention to which will undoubtedly greatly influence the development, the prevalence, and the persistence of septic disease in a hospital. They consist mainly in the following points. 1. The rendering of all surfaces as little absorbent as possible, by parianising the walls and painting the floors : by these means also they become smooth, and less likely to harbour organic dust. 2. The employment of dry rubbing of, instead of washing, the floors. 3. The frequent purification of the bedding. 4. The removal of all unnecessary furniture, such as bed-curtains, carpets, etc., that can impede ventilation or harbour infection. 5. The removal of the patients' clothes, especially those of cloth and woollen materials, from the wards, and storing them away in an outbuilding. 6. To compel the nurses to wear dresses that can easily be, and that frequently are, washed. 7. It would doubtless be advantageous to furnish the patients with suits that admit of being cleaned and washed—flannel in winter, cotton in summer. 8. There should always be an abundant supply of carbolised water in the wards for washing purposes. 9. No personal communication through porters, dressers, or house-surgeons ; between the dissecting room or dead-house, and the wards. 10. The isolation of patients suffering from fœtid ulcerations, especially of a cancerous character. 11. The separation of patients with suppurating wounds from one another by the interposition of unwounded patients. 12. Care not to allow more than one-half of the patients in any given ward to have suppurating wounds, even if these wounds be trivial ; nor more, if possible, than one-third if severe. 13. Instantly to isolate all cases of septic disease. 14. To see that there is a current of air admitted into and passing through the ward from the outside of the building by night as well as by day. 15. To close every surgical ward once a year for a month, during which time it should be disinfected and whitewashed. 16. And above all, and under all circumstances, to avoid over-crowding.

By attention to simple hygienic rules such as these, much may be done to lessen the mortality from septic surgical diseases in hospitals ; to mitigate the violence of their outbreaks ; to limit the range of their destructiveness when they do occur ; and, above all, to prevent the risk of ineradicable and persistent contamination of the building by septic poison, a condition which experience has shown to be incurable, and only to be met by the destruction of the infected building.

And now, gentlemen, I have done for the present with this subject, the most important, probably, that is at the present moment before the profession. It is alike important to the surgeon and to the public. To the public who use the hospitals, there can be no subject of deeper or more vital moment than that those hospitals should be in the highest state of sanitary efficiency. To the surgeon, the importance of the prevention of septic disease in hospitals cannot be overestimated. As matters now stand, the most consummate skill and the most devoted attention are often alike rendered unavailing by the influence of septic diseases generated within the hospitals themselves by the operation of causes entirely beyond the surgeon's control—diseases which neutralise the best directed efforts of his art, and which, in no small degree, increase the pressure of that heavy responsibility and deep anxiety which, even under the most favourable circumstances, attend its exercise.

LETTSOMIAN LECTURES

ON

SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

Lecture III.

Gentlemen,—I have still to bring before you the affections which result from the effects of syphilitic disease upon the brain, its membranes, and blood-vessels. So numerous are these, and so important, that I could well occupy, in even a brief account of them, more than the number of hours allotted to the entire series of lectures ; and they are so varied and protean, that I might be excused if I took refuge in a merely symptomatic classification of them. But, even were I to bring them before you under the heads of paralytic and convulsive affections, and affections of sensation or of the intelligence, I should find myself in a difficulty of another kind. In many of the cases, there are both convulsions, paralysis, and mental derangement, and these could only be assigned to one or other ground in an arbitrary manner. Moreover, any of these symptoms may arise in one case from one cause ; in another, from some lesion entirely different both in seat and character ; and one classification would fail altogether to aid either in prognosis or treatment. A real diagnosis implies the identification of the part which has suffered injury, and a recognition of the morbid process which has inflicted it. We can form a rational estimate of the chances of recovery, and direct intelligent efforts for its attainment, only when a distinct and definite idea has been formed respecting the disease we have to treat, and it is only when this has been done that we can profit by our mistakes. Let us have error rather than confusion.

I must here again briefly enumerate the morbid changes which syphilis induces in the brain. You will remember that the characteristic is a tendency to the exudation of a particular kind of plastic material, which may be diffused in the membrane at the base of the brain, or over the hemispheres, or may take the form of a distinct tumour, which will frequently have a great resemblance externally to malignant growths. The "habit of locality" of the tumours, as well as of the diffused exudation, is to affect the surface, although gummata or syphilomata may be found in the substance of the brain, usually, however, in the more vascular parts, the grey matter of the corpora striata or thalami.

In the diffuse form, we may have the membranes adherent to each other, and to the convolutions, by means of the firm plastic material described in my first lecture ; and, as a result, the vessels of the pia mater are occluded, the supply of blood to the peripheral grey matter is diminished, and this undergoes atrophic change of some kind, or small indurations may invade the nervous structures from the membranes. Disease of the surface grey matter of the hemispheres may give rise to convulsions or paralysis, or the most varied intellectual or moral disturbances, according to the particular set of convolutions affected, and the nature and rate of progress and stage of the morbid process. This it is—the tendency to affect the membranes, and the varying intensity of the inflammation—which makes syphilitic affections of the brain so multiform.

The order in which I propose to consider these affections is as follows :—First, the slighter changes, presumably in the membranes or blood-vessels, which give rise merely to periodical convulsive attacks, or in which these constitute the prominent symptoms; next, the graver affections of the membranes; after these, will come syphilitic tumours or syphilomata, illustrations of cerebral affections occurring in infantile syphilis, and, finally, syphilitic thrombosis.

Syphilitic Epilepsy.—As disease of the surface of the hemispheres commonly gives rise to convulsions, it is not surprising that convulsive seizures are among the most common symptoms in syphilitic disease of the brain. Attacks of convulsions may usher in a train of grave disorders of nervous functions, or may be one among many concurrent phenomena, or may form the only important symptoms. They may be produced by tumours growing either from the bones or dura mater, or in the pia mater, or in the substance of the hemispheres, when these reach the surface; or by diffused exudation in the pia mater; or by thrombosis at the time of its occurrence and during the consecutive changes; or by slighter changes affecting the nutritive vigour of the hemispherical grey matter.

They are generally late manifestations belonging to the tertiary period of syphilis, though I have seen syphilitic epilepsy within a few months of the first evidence of constitutional affection.

It is probably a slighter meningeal affection than this which is present in those cases of so-called syphilitic epilepsy in which the convulsive or epileptiform seizures are the prominent symptoms throughout, and not simply the precursors of graver forms of disease. It is probable, again, that syphilitic disease of the arteries, not giving rise to extensive thrombosis, may produce sufficient interference with the cerebral circulation to impair the nutritive vigour to a degree which will permit of irregular discharges of nerve-force, just as we see sometimes in the epilepsy of advanced life.

In epilepsy proper, or idiopathic epilepsy, there is frequently absence of any lesion to which it can be attributed, and it might be that, in syphilitic epilepsy, no appreciable lesion would in some instances be found. Authorities, again, are still at variance as to the nervous centre in which the paroxysms start. I have not had the opportunity of examining *post mortem* a case in which the epileptiform convulsions had been the only nervous symptoms due to syphilis, or met with a description of such a case; but, from the time when I first came to have a definite opinion on the subject, I have looked upon the hemispherical grey matter as the usual seat of the disturbance which gives rise to epilepsy; and, although experiments seem to show that disorder of the cortex cannot be the only cause of convulsions of the kind seen in epilepsy, it is certain that it is a frequent and important cause, and the associated symptoms make it certain that, in syphilitic epilepsy, the cerebral hemispheres are affected. These associated symptoms, together with the age at which the periodical convulsions came on, and syphilitic history, constitute the peculiarities which serve to distinguish syphilitic epilepsy. Before entering upon this point, I will relate a few cases.

The first to be given was under observation for several years. Epileptiform convulsions; frequent attacks of *petit mal*; mental enfeeblement (at one time mania); together with syphilitic keloid and tumours in the tongue.

CASE I.—W. B., aged about 36, came under my observation on October 12th, 1864, at the Western General Dispensary. He complained of an affection of the skin of the chest, which, on examination, proved to be keloid tumours, which had been developed in the scars of former rupial ulcerations. He had also a syphilitic gumma beginning to ulcerate in the left side of the tongue, and great enlargement either of the vallate papillæ or of follicular glands immediately behind them, forming two symmetrical masses at the base of the tongue of the size of a cherry. He made no other complaint at this time, but seemed extremely stupid and confused, and no history at all could be obtained from him at this time beyond an acknowledgment of having contracted syphilis twenty years before. A week later, he mentioned that he was subject to fits, had three or four every day, falling down insensible; he frequently also "lost himself," would become suddenly unconscious without falling, and, when he came to himself, would find himself staring into a window or at nothing, and would not know where he was for a time. His memory was defective and his mind altogether very weak; he could not tell me how long he had had the fits, could give no history of the cutaneous affection, and he did not mention that he had, for more than ten months, been in the workhouse infirmary.

His history, as I gathered it in fragments at his numerous subsequent visits and from his wife, was as follows.

He had contracted syphilis twenty years before. Of its earlier manifestations, I could learn nothing. Before he went into the workhouse, twelve months previously, he had numerous ulcerations, probably rupial, in the scars of which the keloid growths had appeared. His wife had had numerous miscarriages, and had suffered from sore throat for eighteen months. Of four children born alive, two were dead, and the survivors were weakly, though they did not give evidence of hereditary syphilis.

The first fit had occurred seven years before, and he had had four or five within a month. He had no further attack for twelve months, and then again had three or four, after which there was another interval of nine months. Subsequently, the fits became more severe and frequent, and, twelve months before he came to me, he had six or seven a day, and was quite out of his mind, "raving mad," so that he had to be taken to the workhouse infirmary, where he remained more than ten months. When he first came under my care, he was still, according to his wife's statement, excited and unmanageable, and, especially, would get out of bed at night and wander about.

There was no pain in the head; no affection of sight or hearing; no paralysis. Articulation was distinct, but his talk and ways were childish, and his mind evidently enfeebled. Of course, he was unable to work. Iodide of potassium was given in doses of six grains. The improvement was remarkably rapid. The attacks of *petit mal* quickly ceased, the fits became less frequent, and in less than two months he was able to go to work as cow-keeper for the first time for eighteen months. The gumma in the tongue was quickly resolved, the tumours at the base yielded more slowly, the prominences in the skin gradually diminished and disappeared one by one, leaving shallow depressed scars.

This man was under treatment, at intervals, up to the time of my leaving the out-patient department of St. Mary's Hospital in 1871. The dose of iodide of potassium was gradually raised to twelve grains in 1866, sixteen to twenty grains in 1867 and 1868, these amounts being required to keep down the disease. He would cease to attend, from time to time, when no longer troubled by attacks of any kind, but was soon compelled to return for the medicine. In April, 1869, he reappeared, complaining of giddiness, having had no fit for five months; the iodide was not given at this time, and he had no attack during an attendance of two months. He did not apply again till May, 1870, when he had just had three fits. This interval of about eighteen months was by far the longest he enjoyed; but he was again free from attacks up to October 8th, when the iodide, which he had taken for three months in doses of fifteen grains three times a day, had been suspended for about six weeks. About the end of November, and early in December, the fits were very numerous and severe, and the dose had to be raised to thirty grains, under which he recovered, and he ceased to attend early in 1871. Cod-liver oil and iron were given, in addition to the iodide, during a great part of the time he was under treatment.

There was nothing in the fits to distinguish them from ordinary epileptic seizure; the attacks of *petit mal* varied greatly in intensity; sometimes he was merely confused in his mind or stupid; at others, he would be absolutely unconscious without falling or struggling; if walking at the time, he would go on, and, on several occasions, he was brought to his senses by knocking his head against a wall. To complete the account of his symptoms, mention must be made of frequent attacks of giddiness and of trembling and shaking; occasionally, he felt cold and perspired freely. The minor phenomena did not replace the more severe attacks; but, when quite free from fits, he was usually free from all other symptoms. He was able to work during almost the whole time he was under observation.

CASE II. *Frontal Node; Epilepsy; Attacks of Giddiness and Trembling, with Mental Depression.*—G. B., aged 34, married, with four children, all living, his wife having had no miscarriages, became out-patient of St. Mary's Hospital on April 17th, 1871.

He had been treated by my colleague, Mr. Gascoyen, for tertiary syphilis six months before, and bore on his forehead the cicatrix of a node which had suppurated. He had remained well till within six weeks, when all at once he was seized with a peculiar feeling as if he would lose his breath. This had occurred three times, and twice he had fallen down insensible without the least warning, frothing at the mouth and struggling. Besides these attacks, he had frequent rounds of giddiness when he worked at all hard, and, at times, fits of trembling, especially if he had not his meals regularly. At times, he was very low spirited. He felt quite well, except when suffering from one or other of the symptoms described, and his appetite was excellent—he could eat anything. The pulse was irregular, being obviously affected by the respiratory movements, frequent towards the end of respiration, slower, but fuller, in expiration—a sure indication of cardiac weakness.

He took iodide of potassium in doses gradually increased from eight to sixteen grains three times a day, and never had another epileptiform seizure. The only attack at all approaching these in character was on June 5th, after working hard on a hot day, when he found himself feeling strange, sat down, lost all power, but remained quite conscious; the fingers were cramped and tingled very much. The giddiness also became less and less troublesome. He was under observation till the end of the year.

The combination here was of epileptiform seizures, with attacks of giddiness, of trembling, and of low spirits. The appetite was remarkably good.

CASE III. *Syphilitic Sore Throat; Violent Epileptiform Seizures; Pain in the Head, Giddiness, Hesitating Speech, Weakness in Legs.*—Henry L., aged 30, painter, acknowledged syphilis, and suffered from syphilitic sore throat while under observation. He had been married eight years; had no children, but his wife had had several miscarriages. On December 3rd, 1870, while in apparent health, and without warning, he suddenly fell down insensible and in convulsions, in which the tongue was bitten, and he fell down stairs and struck his head in the attack; the unconsciousness lasted for an hour. On December 15th, when he came under observation, he complained that, since the fit, he had been unfit for work, suffering from pain in the head, chiefly in the right frontal region, giddiness, especially on stooping; his speech was a little thick, and rather slow and hesitating. The tongue deviated a little to the right when protruded. There was no evidence of paralysis in the face. His walk was very deliberate and devoid of energy. The pupils were equal; the sight good. He had had no lead-accidents, and there was no evidence of lead-poisoning beyond a faint and doubtful blue line in the gums.

Iodide of potassium was ordered in doses of five grains. Next day, December 16th, he had another fit at noon, while sitting before the fire. He had no warning, and would have fallen had he not been caught; the convulsions were violent, affecting chiefly the left limbs; the tongue was bitten. He had no more fits while under observation, but, for a time, he complained of pain in the head, starting during sleep, shaking of hands, and trembling all over. Cod-liver oil, with iron and strichnine, were given in addition to the iodide, the dose of which was raised to ten and then to fifteen grains on the appearance of ulceration in the throat.

CASE IV. *Nodes and Other Tertiary Manifestations; Epilepsy; Headache; Giddiness; Strange Feelings.*—W. M. C., aged 27, painter, was transferred to my care by my colleague, Mr. Gascoyen, on January 11th, 1869. While under treatment for stricture of the urethra, he was seized with a fit on the 8th, and again on the 9th; he felt giddy; his fellow workmen noticed that his mouth was drawn to one side; he then fell down unconscious, and was convulsed, the tongue being bitten.

He had a node on the inner side of the right tibia, and a subcutaneous tumour on the outer aspect of the same leg, for which Mr. Gascoyen had been giving small doses of iodide and bromide of potassium. He was married; his wife had not miscarried, but had had two healthy children. One child, aged 7, had the two upper central incisors short and thin towards the edge, thick near the neck, but without notch. On the 11th, he appeared still to be suffering from the effects of the fit, had headache, and appeared dull and stupid. He was giddy, faint, and felt queer at times, and was occasionally threatened with an attack, which did not come on; but the complaints of other symptoms than the fits were fewer than usual.

Iodide of potassium was given in doses of eight grains three times a day. He had three fits during the night of January 27th, less severe than before; a slight one on the 30th; no others till April 11th, after being drunk on the previous day. Two or three glasses of beer now made him tipsy, a much smaller quantity than was required before. The dose of iodide was now increased to ten grains, but, on the 15th, it had to be suspended on account of symptoms such as I have sometimes seen produced by bromide of potassium. He felt ill; had no appetite; his bowels were confined; the tongue was covered with a thick, moist, white fur, and the breath was foul. His joints were stiff; he felt inclined to shiver; was hot in bed, and cold out; he was depressed in spirits and very emotional. An aperient was given, and an acid and bitter mixture ordered in the place of the iodide. The symptoms just enumerated were soon relieved; but, on the 28th, he had another fit, and the iodide of potassium was again given in doses of six grains. He had no further attack after this while under my care.

CASE V. *Syphilitic Cachexia and Ulceration of Lips; Epilepsy; Petit Mal; Loss of Energy and Spirits.*—Mrs. R., aged 34, had enjoyed good health till her sixth pregnancy, five years before I saw her, at which time, after being ill, and confined to the sofa, for three or four months, in consequence of pain in the head and weaknesss, he had had three violent epileptiform seizures on successive days. Bromide of potassium was given, and there was no return of the fits till December 30th and 31st, 1872, when she had two. She had not been well in the interval, and, since the last attacks, had suffered greatly from pain at the back and on the top of the head; her spirits were always depressed; she frequently cried, was soon exhausted, and entirely destitute of energy, so that, from being active in the superintendence of her house and a farm establishment, she had become useless and miserable. Although she had no severe fits, she had frequent attacks of *petit mal.* She consulted me on February 28th, 1873. Her face was expressionless, except in so far as it was indicative of low spirits, and her speech was somewhat indistinct and toneless. The optic discs were normal. She had a syphilitic look, and on the inner aspect of the lips were ulcerations of a syphilitic character. Of her six children, three had died soon after birth, three living were healthy. I obtained no other history of syphilis, the husband being present and acting as spokesman.

The patient was taking bromide of potassium. I gave ten grains each of iodide and bromide, with ammonia and a phosphorus capsule, twice a day.

I saw the patient again on May 17th, when she was, in all respects, better. In spirits, energy, conversation, and appearance, she was quite another woman, and she had resumed her duties in connection with the farm. She had had one fit before commencing the medicine, two or three attacks of *petit mal* at the first catamenial period, but since then had been free from all symptoms of the kind. She had had, for a time, two bad ulcers on the inside of the lip, but they had healed, leaving cicatrices, which looked like mucous tubercles, so-called.

I recommended an increased quantity of iodide for a time, and exacted a promise that, on any return of symptoms, I should be informed. So far as I know, she has remained well.

CASE VI. *Nodes, etc.; Epilepsy; Extreme Nervousness.*—An officer, aged about 30, came under my care in September 1870. He had contracted syphilis four years before, had had very slight secondary manifestations, but, later, had had ulcerations on the forehead and nodes on the skin. He had at one time also suffered greatly from rheumatoid pains, the nature of which had not been recognised; but he drank largely of brandy, for the sake of the relief it afforded him. He was serving abroad in a hot climate four months before I saw him, when he began to have epileptiform attacks of great severity, attended with sensations described as horrible, and had three in one week; afterwards, they came at longer intervals, always occurring in the morning before breakfast.

He suffered, in addition, from pain in the head, almost continuous, but variable in intensity, and worse at night. He had pains also in the left shin, where there was a node. He had also a stricture. He was in a state of extreme nervous depression, could not see his friends, or go out into the street; was incapable of any exertion, and unable to bear the least excitement; would go out for a drive in a cab, and turn back, and always arrived at my house in an excited condition, scarcely able to speak.

He had been taking iodide of potassium, in doses of ten grains, twice a day, together with bichloride of mercury. The treatment I pursued was to give the iodide in gradually increasing quantities, beginning with sixteen grains three times a day. The pain in the head was at once relieved, and the nodes gradually diminished. He had no new fit, though there were repeated threatenings. The nervous symptoms were numerous and varied, and his apprehension extreme. He was under treatment a month before he felt equal to walk in the street, and four or five months before he trusted himself alone out of doors or went into society. The largest dose of iodide reached was thirty-six grains; but, under this amount, the tongue became large, pale, flabby, and was indented by the teeth, and the dose found to suit best was thirty grains. He took also cod-liver oil.

The appetite was enormous, and it was thought better not to restrict him in the amount of food. The only alcoholic drink allowed was claret in small quantity. At the end of six months, he was able to rejoin his regiment abroad. After some months, however, during which his duties were very trying, he had another fit. A second, within a month, caused him to be sent home again, and he came under my care in December 1872. The treatment was resumed; he had no new attack, and improved greatly in health. He rejoined his regiment abroad in the spring of 1873, since which time I have heard of him, but have no definite knowledge of his condition. He is still, however, discharging his military duties.

CASE VII. *Nodes, etc.; Epileptiform Seizures, beginning with Loss of Speech and Dimness of Sight, Giddiness, Faintness, etc.*—Joseph D., aged 30, labourer, came under my care on January 16th, 1871. He had had syphilis ten years previously, which had been followed by secondary eruptions, and he had, on admission, nodes on the skin. He had been married seven years; his wife had miscarried once, and had borne four living children, one of which died of water on the brain at the age of five months, another from inflammation of the bowels at two months,

During the previous month, he had had four fits, and had previously suffered from pain in the head and across the eyes. In each fit, he first lost his speech and his sight became dim ; he retained consciousness sufficiently to enable him to make signs to his fellow workmen to catch him ; the unconsciousness became complete, and he was convulsed, the entire attack lasting about ten minutes. Other symptoms were frequent giddiness, causing him occasionally to fall, starting in his sleep ; at times, perspirations, or a feeling of stiffness in the tongue.

Iodide of potassium was given, at first, in doses of six grains, gradually raised to twenty grains. He only had one complete seizure, and the giddiness became less and less frequent and severe.

CASE VIII. *Syphilitic Eruption ; Epileptiform Attack.*—Rose R., aged 24, had been in the Lock Hospital three years before for syphilis. For four months, she had been subject to an eruption on the scalp, and, when this was absent, she suffered from pain in the head and fits of epileptiform character, with loss of consciousness and struggles. These last came on very irregularly, sometimes three or four in a day ; at others, two or three in the course of a week ; and, at another time, they might be absent for a week. She had a papular eruption along the roots of the hair, and crusts on the back of the head. The eruption soon disappeared, and the fits ceased, under the administration of five-grain doses of the iodide of potassium.

Looking over my notes of old cases of epilepsy, I find several which, in the light of subsequent experience, I am now inclined to set down as of syphilitic origin, notwithstanding the absence of ascertainable syphilitic antecedents.

I may now sum up the features of epilepsy, symptomatic of syphilitic disease of the brain, by which it may be distinguished from ordinary epilepsy. As to the convulsive attacks themselves, there is nothing distinctive either in their character or frequency, or in the time of their access, *i.e.*, whether nocturnal or diurnal. It is difficult to obtain a reliable description of a convulsive seizure, and the opportunities of watching an attack are very rare ; but, after careful questioning of witnesses in cases of idiopathic and syphilitic epilepsy, I have come to the conclusion given, which is, moreover, that generally accepted. If this statement can be qualified in any way, it would be by the greater irregularity of the intervals between the fits.

An important distinction, however, exists in the fact, that the intervals between the convulsive paroxysms, due to syphilitic disease of the brain, are not intervals of perfect health and freedom from nervous disorders. On the contrary, if there are not nocturnal headaches, or osteocopic pains, or sleeplessness, such as are caused by syphilis, independently of disease of the brain and diagnostic of syphilis, there may be frequent attacks of *petit mal*, often many times a day, or of convulsive twitchings of the eyes or of a limb, or merely of vertigo or of faintness ; or there may be a state of extreme and unaccountable nervousness and apprehension.

Again, we are often put on the track of syphilis by the age at which the epileptiform attacks first come on. It is matter of universal experience that true epilepsy is a disease of early life. If the predisposition, hereditary or otherwise, exists, the disease developes itself before the changes attending the full evolution of the organs are completed. Dr. Russell Reynolds gives the following table of the age at which epilepsy began in 172 cases.

Under 10 years of age	19
Between 10 and 20	106
,, 20 and 45	45
Over 45	2

But, of the 45 in which the disease began between 20 and 45 years of age, by far the larger number began at or about the age of 40 ; so that, in early adult life, there is almost complete immunity from epilepsy. Now, it is just at this period that the epileptiform seizures due to syphilis most frequently come on. When, therefore, a young adult begins to have convulsions of epileptiform character, we may at once suspect syphilis, and the suspicion will be strengthened if there are other nervous phenomena, and may be converted into certainty by evidences of past syphilis, nodes, perforations or cicatrices in the throat, white marks on the tongue, and pigmented scars at different parts.

Once let it be ascertained that epileptiform attacks, not accompanied by other evidences of cerebral disease than such as have been enumerated in the cases I have given, are due to syphilis, and the prognosis is most favourable. There is always a liability to relapse, but I have known almost complete immunity from all symptoms to be enjoyed for more than ten years.

[*To be continued.*]

ON THE MEDICAL SERVICES OF THE NAVY AND ARMY FROM THE ACCESSION OF HENRY VIII TO THE RESTORATION.

By WILLIAM R. E. SMART, M.D., C.B.,
Inspector-General, Royal Navy.

[*Continued from p.* 169 *of last number.*]

IN these quotations, we have most trustworthy evidence of the characters of many of those who obtained employment in the armies and navies of England and France, at the end of the sixteenth and beginning of the seventeenth centuries. As far as relates to the English navy, we learn that many of the surgeons were professors, rather than possessors, of the science and art of surgery ; that the captains of ships had the power to enter and employ as such in their ships whomsoever they chose ; that the system of bounty to surgeons on joining, to enable them to furnish their surgical chests, admitting of prepayments of from £20 to £50, equal to eight times as much in our day, was most grossly abused ; that desertion, after receiving this bounty, was not an uncommon practice ; and that ships often proceeded to sea without any one entitled surgeon to assist their crews. The only counterpoise to the force of these assertions made by Gale and Clowes, is that they wrote in the spirit of men who had closely at heart the position and interests of the London Company of Barber-Surgeons, of which they were eminent members, of whom Gale is candid enough to admit that the Company was unable to furnish a sufficiency of surgeons to meet the requirements of the great national services ; and it must be inferred that the captains who engaged their surgeons were compelled to take the most plausible who offered themselves for employment ; the state itself doing no more to assist them in their search, than by allotting to surgeons no better position and pay than to the common seamen. These, it must be admitted, were deplorable realities that militated against the best interests of the sick and wounded ; but we ought not to pass from this era of military and naval surgery without taking a cursory glance at the state of the profession at that time. Henry VIII may be regarded as the far-seeing patron of the medical profession, as well as father of the English navy. On his ascending the throne, he found the profession practised by physicians, by master-surgeons, and barber-surgeons. Of these, the first had been closely allied with the ancient Church. With regard to that alliance, Dr. John Freind, who had served as physician in our army, 1717, in his *History of Physick* (fourth edition, volume ii, page 259) states that, "notwithstanding the edicts of the Church, either they grew into neglect, or the monks found a way to evade them ; and it was chiefly owing to the multitudes of them employed in our faculty, that at length the Colleges of Salernum and Montpelier began to decay. There might be some reasons in these ages, why this sett of men shou'd be made choice of, where their power over the consciences of others was very great, especially in cases which required secrecy ; but the Reformation, I think, has put an end to this enormity ; and perhaps it is no great prejudice to the publick, that in our times there are no more *Practicing Divines*, who either cannot be well qualified in their own profession, or must be very unskilful in ours." And (at page 111, vol. ii) he remarks that pharmacy and surgery were in so little esteem with the physicians (the *Medici Honorati et Nobiles*) "that they thought it below their character to understand them ; and, therefore, they left all manual operations, such as bleeding, couching of cataracts, laying on caustics, etc., as well as the making up any medicines, to their servants, the *servitores* and *ministri*."

Notwithstanding this generally depressed state of surgery, there were to be seen in Padua and Paris, at the end of the fifteenth century, master-surgeons who boldly undertook to remove calculi from the kidney. The city of London had also master-surgeons of repute, even in the fourteenth century, although there, as elsewhere, the barbers were the ordinary attendants on surgical cases, receiving and boarding patients in their homes.

That great reformer, King Henry VIII, found our profession in a chaotic state : there were physicians and apothecaries, master-surgeons and barbers, and quacks of both sexes, all dealing irresponsibly with those ills that flesh is heir to. The physicians of the day included a mass of empirics and charlatans, together with travelled scholars and men of refined science. To these last the king granted collegiate rights, with power to grant licences to practise medicine and surgery, and to inspect all shops where drugs were stored and sold, which brought the apothecaries legally under their collegiate control, and gave them the power, if so inclined, to consolidate the science and art of surgery with the practice of medicine. The surgeons were "master-surgeons", whose social status rested on their individual ability and repute, and "barbers" who united the practice of minor surgery with a meaner calling, and they alone possessed corporate rights. Henry VIII amalgamated these into one corporate body, styled "barber-surgeons". Apothecaries were members of the City Company of Spicers (now the Grocers), who then imported the drugs of the Levant. Henry placed them under control of the "physicians". These reforms were begun in 1512, by placing the practice of physic and surgery under ecclesiastical surveillance; and they existed in 1540, when the barber-surgeons were incorporated, and were authorised to pursue the study of anatomy in opposition to the sentiments of churchmen. Almost step by step these changes were resolved on during the pressure of foreign wars, which demanded the services of surgeons for the king's armies and fleets.

The barbers followed armies in the exercise of their calling as shavers, hair-cutters, and practitioners of surgery; and from among the barbers of London, King Henry the Fifth's surgical staff at Agincourt was selected by Thomas Morestede, who was sergeant-surgeon to Henries IV, V, and VI. The utility of his staff on that occasion, would naturally assist in obtaining their charter from Edward IV. King Henry VIII commenced the reform of our profession before that of the Church. In the third year of his reign, A.D. 1512, he gave to the Church the control of our profession, both medical and surgical, by ordaining that all practitioners, except those having degrees of medicine from Oxford or Cambridge, should be examined by the clergy, assisted by medical graduates or surgical experts in each branch respectively; the Bishop of London and Dean of St. Paul's being the assessors for London and within seven miles thereof; and in the provinces, the bishops or their vicars-general. In the fifth year of his reign, A.D. 1513, it was enacted that all barber-surgeons should be exempted, *as in time out of mind, from bearing arms,* "with privileges like heralds', as well in battles and feldes of warre, because they be persones that never used feates of warre, nor ought to use, but only their besynes and exercise of their science to the helpe and comforth of the King's liege people in the tyme of their nede;" also exempting them from serving on inquests, juries, and watch in cities.

It is pertinent to our subject to remark, that these important privileges were confirmed to surgeons of all degrees, under the pressure of war—England being then at war with France and Scotland—Tournay being captured, and Flodden fought in that year, but their first privileges related to those who served in the field; while physicians, who were less in demand there, did not secure the same municipal exemptions until 1540, when, it must be noted, that by the same Act the College of Physicians was recognised to be competent to give licenses in surgery as well as in medicine, thus extending the field from which surgeons might be drawn for the king's service. These facts illustrate how much the profession at large gained, during its early organisation, from the warlike services of a portion of it.

In the tenth year of his reign, A.D. 1518, he gave to the Royal College of Physicians its first charter, being incited thereto by the example of the Italian states, and other nations, and by several physicians, among whom were Drs. Chambre and Linacre, and by Cardinal Wolsey. By this charter, the higher grade of our profession was entrusted with self-government in the power of electing its own president and examining officers, with powers to punish offenders by fine and imprisonment, etc., in and within seven miles of the City of London. This charter was renewed, and was confirmed by Act of Parliament in 1523, with the extension of its licensing powers throughout England. Verily, this must be regarded as the Act of Emancipation of the profession of medicine from that Church which had leagued it with astrology and the occult sciences, and had degraded surgery to the status of a handicraft exercised by barbers as such; and in furtherance of that elevation of the profession, by another Act of Parliament, 1530, 22 Henry VIII, surgeons are defined as "not being handicraftsmen." It seems significant of the inherent power of the profession that, as soon as its autonomy was recognised, these changes occurred; but it lay still within the pale of the Church of Rome, for it was not till 1534 that Henry's quarrel with the Pope became irreparable.

In 1538, the cultivation of anatomical knowledge, as the true and sure foundation of surgery and medicine, was recognised by an Act of Parliament, legalising dissection at the Hall of the Barbers.

In 1540, the thirty-second year of his reign, the king placed the capital on the stately edifice he had raised for the development of our profession, by uniting the two bodies which legally practised the science and art of surgery, under the single incorporation, by royal charter, of the Barber-Surgeons' Company of London, to the end that, by their association in the same hall, the science and art of surgery might be improved generally. In order that the study of anatomy might be encouraged, it was enacted that the Company "may take annually the corpses of four condemned fellons put to death, to make incision, etc., for their further and better knowledge, etc., of surgery." It ensured, at the same time, the separation of pure surgery from the art of the barber, by enacting that no barber shall practise surgery, except the letting of blood and drawing of teeth, and that no surgeon shall exercise shaving or other feats of barbery.

It confirmed also to this united company the authority which Henry V had originally conferred on Thomas Morestede, to impress surgeons for the king's service, both within and without the privileges of the City of London. Of the warders or examiners, two were to be experts in surgery and two experts in barbery: which continued until the fifth year of James I, who, in granting a new charter, ordained there should be ten examiners for the license, *all being surgeons.*

From that period, surgeons became virtually distinct from barbers, although incorporated in one company, and using one hall in common; but, by the bye-laws of the company, the masters, elected annually, were alternately a surgeon and a barber, who signed the licenses of the current year; which practice became an offence to the surgeons. The connection of these facts relating to the renaissance of our profession, shows that, from the days of Henry V, our monarchs kept steadily in view one point as essential to the interests of the state, viz., the encouragement of that branch from which surgeons were to be drawn for the service of the state. The surgical staff of the armies of Henry V and Edward IV was drawn from the barbers of London, and their services led to corporate rights and privileges. Henry VIII enlarged those immunities, when he was at war, on finding only *twelve men* constituting the "felisseship of the crafte and mysteries, surgeons enfranchised". At a later period of his reign, he amalgamated those who practised surgery, in one body; and, from a desire to multiply surgeons, he assigned to licentiates of the Royal College of Physicians the right to practise surgery, and pronounced surgery to be no longer a mere handicraft. State necessities may be assumed to have been the urgent reason for this patronage of a hitherto inferior calling; and it may be safely asserted that these necessities contributed, in no mean degree, to arouse and direct the energies of statesmen to organise the profession, so that the state might benefit by its services in war; and thus the profession at large, and the surgical branch of it in particular, owe many of their immunities to that cause. That branch has risen in importance paramount with that of the physician, but not without a struggle, prolonged throughout the seventeenth and eighteenth centuries, to free itself from the position of inferiority into which long usage and church influence had thrown it. Throughout that struggle the surgeons obtained support from the independence of position of those of their number who served in the navy and merchant service, where they were compelled to undertake cures of internal diseases as frequently as of wounds, and were, in the former service, provided with the means of doing this, by the king's authority, at the expense of the exchequer.

[*To be continued.*]

REMARKS ON THE PRODUCTION OF SLEEP DURING SURGICAL OPERATIONS.

By JOSEPH T. CLOVER, F.R.C.S.

SINCE the introduction of anæsthetics, there has never been a period when the opinion of surgeons as to the best way of saving pain was more unsettled than it is at present; yet it is a matter in which every practitioner in the country has had some share of experience, and questions as to the relative safety of various anæsthetics are often put by patients with the greatest anxiety. Our time will not be misspent, if we can make a decided step towards the settlement of these questions.

It may be truly said, that there is danger in every kind of inhalation, if in time, or quantity, or some other circumstance, it have been administered in excess. And there are *conditions of safety,* if we only knew them, that would make all the anæsthetics perfectly free from danger. No one, who has had much experience with anæsthetics, can look back without remembering some case in which threatening symptoms have occurred. Of these symptoms, some have been found to be of slight importance, although very alarming to an uninformed bystander; and some, on the contrary, where, although the lookers-on can see nothing amiss, the administrator knows that the patient is in imminent danger if the anæsthetic be not removed. I shall endeavour to illustrate my meaning further on.

I have been unable to account for the strong opinions to be found in the correspondence of the weekly medical journals, in any other way than by supposing that the results of small doses or brief inhalations of *one* agent have been compared with the larger doses or more prolonged inhalation of another. When we consider that with every known anæsthetic it is an easy matter to destroy the life of animals by concentrating or prolonging the dose, it will appear that it must be a matter of some importance, for the purpose of forming a judgment upon the merits of them, to settle some plan of giving the agents by which the *degree of concentration* as well as the *time* of inhaling is known.

Before speaking of special anæsthetics, I may bring forward some physiological considerations which apply to them generally.

I suppose it will not be disputed that, in administering chloroform, for example, the effect we want to produce is the entrance of a certain quantity into the blood. We know that, in experimenting upon animals, we cannot produce such quietude as is needful for operations without putting a certain proportion of chloroform into the air they breathe; and further that, if the proportion be increased beyond five per cent., the animals will die in a few minutes. The mode of dying varies. If the chloroform enter the blood slowly, the heart will go on beating after the breathing has ceased. On the contrary, if the blood be quickly and strongly charged with it, then the heart stops suddenly, and the breathing continues for a considerable period afterwards.

Some animals are less liable to cardiac syncope than others. In dogs, for example, unless some pains be taken to give a very strong dose, the respiration stops first. The same results happen to man; but many circumstances tend to obscure the facts. Thus, although we can limit the maximum proportion of chloroform which can possibly enter the blood by limiting the proportion of vapour in the air inhaled, we cannot so accurately determine the *minimum* amount which will actually be taken up out of the same atmosphere. *The blood never takes up the maximum amount of chloroform from a given atmosphere, except when the most effective respiration and the slowest circulation of blood concur with muscular exertion and closed glottis.* In very tranquil breathing, the fresh air may go no further into the lungs than the primary bronchi; and then the oxygen enters, and the carbonic acid escapes imperfectly by diffusion. During such breathing, the chloroform enters slowly by diffusion into the nearest pulmonary cells, whilst the more distant scarcely receive any of the vapour. The blood circulating through these distant cells is unaffected by the chloroform, and dilutes the blood, which has absorbed chloroform from the nearer cells. Contrast with this what happens in forced breathing. The contents of the lungs (except a small amount of residual air) are expelled, and fresh air containing chloroform is brought by each inspiration into the pulmonary cells. Under the excitement of delirium, in the early stage of narcotism, patients often breathe deeply and rapidly, and the stertor that follows is unusually pronounced; and it is in such cases that cardiac syncope may come on, even although the percentage of chloroform is not in excess of what is usually required. The syncope is the result of the large proportion of chloroform entering the blood and acting upon the ganglia of the heart.

If now, whilst there is this rapid supply of fresh chloroformed air, the circulation through the lung be retarded, and especially if, by the shock of an operation, the heart intermit and the blood for a second or two remain stagnant in the capillaries of the air-cells whilst muscular efforts are made, the absorption of chloroform is carried to the highest point; and, when the failing heart revives, the first blood it sends into its own substance will be stronger of chloroform than any it had yet received, and life will be in the greatest peril.

The effect of great muscular exertion in causing temporary faintness, when no anæsthetic has been breathed, is familiar to all of us. The heart, like all other muscles, loses some of its irritability from severe exercise. These considerations have induced me to take off the chloroform for at least one inspiration, whenever a patient has made a violent effort with closed glottis.

When ether or chloroform is inhaled, the throat is stimulated; coughing and movements of deglutition commonly occur; vomiting even is sometimes directly excited, if the vapour be very strong. The act of swallowing is usually performed well enough; but, if the anæsthetic have produced sufficient effect upon the patient to interfere with reflex movements, then the deglutition may be delayed at the moment when the epiglottis covers the larynx. Raising the chin, and pulling it as far as possible away from the sternum, is usually sufficient to obviate this source of obstruction. If any one will try the experiment of attempting to swallow with his chin considerably elevated, he will find that he cannot do so without lowering it. When chloroform or ether vapour of greater pungency is given, there may be a direct spasm of the glottis produced. A similar spasmodic closure often occurs when nerves are pinched or divided in the course of an operation. It commonly occurs when a ligature is applied to a hæmorrhoid.

I have never found it necessary to take hold of the tongue with forceps; but I advise that they should be kept ready, for it may be that the greater pungency of the vapour, when applied freely, causes an obstruction which raising the chin will not remove; and in such a case we must not be afraid of hurting the tongue.

Ether.—I was a junior student at University College, and saw Liston perform the first capital operation under ether that was done in this country. Although it continued to be used in certain cases in the operating theatre, there were objections to it which even now are but partially removed. The struggling against it, and the strange things patients said and did under its influence and whilst recovering, made us receive chloroform gladly, as a more convenient and less disagreeable agent. It was given with much freedom, until a death occurred at Newcastle in the practice of Sir John Fife. Of late, chloroform accidents appear to have increased, and thus medical men have very properly been stimulated to seek for a safer anæsthetic. Ether is undoubtedly safer; that is to say, life is not so quickly destroyed by it. But, nevertheless, I have seen a strong dog killed in sixteen seconds by being made to breathe pure ether through a tracheal opening. In the case of death at the West London Hospital after inhaling first chloroform and then ether, the patient had recovered from the chloroform so far as to have a fair pulse; but it ceased to beat very soon after the application of ether by means of a sponge made warm with water. The chloroform had, I suppose, sufficiently narcotised the patient to prevent the usual obstruction to strong vapours by closure of the glottis. If we are prepared to resist the remonstrances and struggling of the patient, ether may be poured upon a hollow sponge or towel folded into a cone, or upon a cone of felt covered with oiled silk, and held over his face. The patient will resist breathing, at first voluntarily, and afterwards more or less spasm of the glottis will be produced. The blood will be imperfectly oxygenated; and insensibility will be produced in a short time, partly from deprivation of oxygen, and partly from the action of ether. Less ether enters the tissues of the body in this way of giving it; and, if the operation last only two or three minutes, the recovery of consciousness will be speedy. Headache is not rarely complained of. Sickness is about as frequent as after a moderate use of chloroform. The patient sometimes remembers the choking sensation, and will not inhale it again if required. The flow of saliva is considerable; and the larger air-tubes are often obstructed by fluid, which makes a loud moist rhonchus; but it does not appear to be of much consequence, as it goes off afterwards.

I think most English surgeons are in favour of giving the ether slowly for about a minute or so at first; and then, when some degree of anæsthesia has come on, to give the vapour strongly. I am decidedly in favour of this plan, and have sometimes succeeded in getting a patient to sleep without any struggling. The most pleasant way is to give nitrous oxide till consciousness is lost, and then administer the ether of moderate strength. I should be afraid of giving *pure* ether by means of a large warmed sponge to a patient already well narcotised, for reasons already mentioned.

I have given ether a good many times by means of a bag, smaller than the one in my chloroform apparatus. The bag was regularly supplied with air, which passed over a large surface of ether, kept at the temperature of about 68 degrees, at the rate of about five hundred inches per minute. I have for the present put this aside, and make use of what I term a double-current inhaler for ether. The object of this instrument is to effect a mixture of ether and air of the strength required. The internal arrangement is on the plan of an ordinary still, supposing the worm to be covered with calico for holding the ether. The ether is kept at a comparatively uniform temperature, the coldness produced by the evaporation of the ether during inspiration being balanced by the condensation of ether and watery vapour during expiration. The valves are so placed that the inspired air passes over the ether, and the expired air passes through the condenser. The ether in the upper part of the vessel being kept several degrees lower than the patient's breath, it is impossible for the proportion of ether-vapour to exceed a certain point. This proportion is more pungent than is usually required, and is diluted at pleasure by a sliding valve which admits air without passing over the ether. The advantages obtained are—1. The power of graduating the dose so as to avoid very much of the unpleasant pungency of ether as commonly administered; 2. Diminution of the smell of ether in the room; 3. It may be used in hot or cold weather without any water-bath, and the use of glass is avoided; 4. Economy of ether; 5. Saving of time. It can be kept ready for use, and will serve for four or five cases without adding more ether.

Directions for Use.—1. Put ether into the apparatus, after removing the inspiring valve, until the vessel is filled to the level of the bottom of the tube. About ten ounces will be required. 2. Refix valve and cap, and rotate the box slowly on its long axis, to distribute the ether over the calico on the outside of the condenser. 3. Open the regulator, remove the three caps, and apply the tube with face-piece. 4. After using, pour out condensed vapour. It will generally be found convenient to suspend the inhaler by means of the strap passed round the neck; but as soon as the patient is asleep, if not before, it can be placed upon the couch. The condensed ether-vapour might be saved and redistilled, if the apparatus were extensively used in hospital practice. In order to prevent the escape of ether-vapour from the apparatus when not in use, I keep it in a tin box, the front and sides of which are double, so as to form a trough for water, into which the lid of the box is immersed. Of course, if the box be heated, the air inside may expand and escape in bubbles; but very little vapour is lost in this way.

Morgan's inhaler consists of a metallic vessel with a diaphragm of India-rubber membrane, which rises and falls with the breathing. This arrangement effects the same result with ether which I produce by the supplemental bag of my nitrous oxide apparatus. The patient inhales almost the same atmosphere over and over again, the ether and carbonic acid increasing, and the oxygen diminishing. I have used it, and found it both effective and economical. It also wastes very little ether about the room. I think more headache was complained of, and that there was rather more sickness, than when I have used my own apparatus, which allows the escape of most of the expired air without being breathed twice.

In Norton's inhaler, the ether is kept at the required temperature by a water-bath. The air passes over it during inspiration; but the expired air is carried off by a tube to the floor, to diminish the smell of ether in the room—an effective arrangement, but scarcely equal to Morgan's in this respect.

For operations about the mouth, which prevent the use of the ordinary face-piece, a small nose-cap connected with the inhaler will sustain the anæsthesia, especially when the patient has been kept fully five minutes under the influence of ether after insensibility of the skin has been induced. In such cases, it is well to be provided with a tin tube an inch in diameter and a foot long, lined with blotting-paper; and, if required, to pour ether into it, and hold it near the mouth, so that the weight of the vapour will cause it to flow into the mouth during inspiration. Ether is well suited for these operations, because, if the administration have been continued long enough to get the tissues well soaked with ether, the anæsthesia is kept up longer than is usual after the withdrawal of other anæsthetics. Ether is also well suited for short operations for which nitrous oxide is inapplicable. The complete muscular relaxation produced by ether renders it by far the best thing to use in reducing old dislocations. It is called for in cases where the system has been injured by intemperance with alcohol, or when there is reason from any cause to believe the heart exceptionally weak. In cases of phthisis or emphysema, I should prefer to give chloroform.

Chloroform.—Next to nitrous oxide, I think chloroform is the least unpleasant anæsthetic to breathe. Patients who have previously taken chloroform are often unwilling to try nitrous oxide, because they have no objection at all to the former; but I have rarely found a patient who had once been put fully under the influence of ether, who was willing to inhale it again, unless it had been preceded by nitrous oxide.

Much has been said against chloroform, on account of the sickness which follows its use. I do not find it occur on an average more than once in seven or eight cases. The morphia or other preparations of opium, which are often prescribed after operations, will account for some of the cases of obstinate sickness. I admit that chloroform has more deaths to account for than ether has; but we must not forget that chloroform is much more frequently administered than ether, and that coroners' inquests are not held in countries where the practice of giving ether instead of chloroform is prevalent. Still there are greater dangers from chloroform than from ether, although I do not think them so insidious that every one who inhales it runs even an infinitesimal chance of losing his life.

The proportion of chloroform to the blood which will destroy life varies according to the species of animal, and in some slight degree according to the individual, but there is no animal that may not easily be killed by a full dose; and therefore, whatever way we give the chloroform, it must be only a reasonable precaution to endeavour to avoid reaching that dose.

I have already explained how it happens that one person whose breathing is *excessive*, whilst his pulmonary circulation is *slow*, may get as much chloroform into the blood of the pulmonary veins, from air which contains a moderate quantity of chloroform, as another person, whose breathing is *feeble* and whose pulmonary circulation is *rapid*, may get from air which contains a much larger proportion of chloroform. Therefore, in whatever way the chloroform is given, the condition of the patient's pulse, as well as his breathing, should be carefully watched all the time he is inhaling; and, when the breathing is deep or the pulse weak, the chloroform should be diminished or removed. In the administration of anæsthetics generally, but especially in giving chloroform, it is advantageous to have the stomach empty or nearly so. I like to give a teaspoonful of brandy, without water, a few minutes beforehand, but not so much as a tablespoonful. If wine be given, or if the patient must have some water with the brandy, then they should be given half-an-hour before inhaling, to allow time for their absorption. Emphysematous subjects, especially, ought to avoid inhaling after a meal, but I do not consider them bad subjects for chloroform. The majority of fatal cases have had good lungs; and, seeing that it is by free respiration that the greatest amount of chloroform enters the blood, we should expect cardiac syncope to happen less frequently in cases where the respiratory function could not be much increased by excitement. It will appear a strange opinion, but I say advisedly, that I think there would be less danger from giving chloroform to the out-patients of a consumption-hospital, than to the same number of distinguished athletes. The subjects of advanced fatty degeneration are bad subjects for any excitement or any anæsthetic, but we have no reliable means of diagnosing such a state. I believe I have given it several times when the heart was fatty. Where the disease is believed to exist, greater caution should of course be used, and it would be well to add one-sixth or one-eighth part of ether.

Modes of Administration.—According to my experience, the safest and least disagreeable way of giving chloroform is by means of an apparatus I introduced twelve years ago, which measures both the air and the chloroform which is mixed with it. It will be objected to on the ground that deaths have happened from chloroform where it has been used, and that it is liable, if seldom used, to get out of order; so that, for example, we may measure out only 700 or 800 inches of air instead of 1000. I admit this, and do not advise any one to use it at all who is not likely to use it often, or who is not disposed to give a little time to keep it in order.

I will defer making any remarks upon the fatal cases, merely mentioning, as the result of my inquiry, that I know of no case where death resulted when not more than thirty-five minims of chloroform was mixed with 1000 inches of air, and when the pulse was felt all the time the chloroform was given. I find that 32 minims per 1000 inches is quite strong enough, except where it is impossible to make the face-piece fit closely on account of the beard and moustache; but, even for such cases, I would not advise more than 34 minims. The best kind of face-piece for this and similar inhalers is one made of tin or thickish lead. The edge should be covered with leather or velvet, and further protected by a movable covering of chamois leather. This covering may be tied on with string; but the best plan is to have the edge perforated, and elastic thread passed through all round and fastened. By this means, the cap is kept in its place without the trouble of tying it, and it can be reversed and used again. It is a slight modification of Dr. Sibson's face-piece. Five or six years ago, I had the edge of the face-piece protected by an inflated air-cushion of India-rubber. Finding that these cushions collapsed, I had them filled with water, or with a little treacle, which answers the purpose of keeping the cushion airtight. Dr. Sibson made use of India-rubber for valves, which I found liable to curl up from the effect of chloroform. I have had valves made of a disc of vulcanite, which fits over the edge of a cylinder, and is kept closed by a fine spiral spring. They act well in whatever way the face-piece is held, and seldom get out of order. A sort of tin cap, to fit over the edge of the face-piece, is an useful protection for the soft metal, when an extra face-piece is carried in the pocket.

Dr. Snow's and Sansom's inhalers are conveniently portable. Although they do not supply the vapour with so much precision as my own, they are much better than a towel or handkerchief.

Skinner's plan is a good and effective one for general practice. It requires less care in adjusting it to the face. The chloroform is supplied from time to time with a drop-bottle upon a flannel mask supported by a wire frame. An ingenious addition to this apparatus has been made by a French surgeon, by which the same hand that holds the mask can supply chloroform drop by drop to the flannel, and thus the other hand is left free to feel the pulse. The weak point of it is that, if the patient should struggle, the bottle might be displaced or broken.

I think some material might be found which would show more distinctly than flannel does the amount of chloroform which remains in it. If supplied too freely, chloroform might drop through the flannel upon the patient's face.

A towel folded and made into a cone, with an opening at the top, is a very effective plan; but if (in order to avoid removing it frequently, for the addition of chloroform) more than a drachm be supplied at first, the vapour may be given off more freely than is safe. A handkerchief or lint, folded to about six inches square, and supplied with ten or fifteen drops at a time, is, I think, a better plan.

If I did not use any special apparatus, I would fold a piece of lint into a compress, of the size of a walnut, and tie it up; then pour upon each end of it a drachm of chloroform, so as to let it penetrate the lint without wetting all the surface; then let the patient smell at it at the distance of two inches, and gradually cover my hand and the patient's face with a towel; by warming the lint with the palm of the hand, nearly the whole of the chloroform can be evaporated slowly. It is known, by its no longer feeling cold, when the compress has become nearly dry and needs to be supplied with fresh chloroform. Not more than thirty minims at a time should be added after the first charge.

Of course, the proportion of chloroform in the atmosphere breathed is, in most of these ways, modified by circumstances: *e.g.*, by the temperature of the room, and of the chloroform at the commencement; then by the amount of cold produced by evaporation of the chloroform; by the distance the chloroform is held from the mouth; by the temperature of the hand, and the manner of holding the chloroform.

The slowness with which a timid patient inhales causes so much delay, that the administrator is sometimes induced to augment the dose; and then, when consciousness is lost, the patient is very liable to get more of it than is safe. Not a few alarming cases have had no bad symptoms until fresh chloroform was supplied; and then, in from a quarter to half a minute, as soon as there has been time enough for the new atmosphere to tell its effect on the heart, syncope has taken place.

Chloroform is said to prevent the shock of an operation; and it certainly does so to a great extent. We do not find fainting so common as it was before chloroform was used; but I have often felt a weakness and irregularity, and sometimes a decided arrest, of the pulse at a time when extensive incisions or injury to nerves has occurred. I think that a patient should have his pupils insensible to light, or breathe stertorously, before the commencement of a severe operation; but that one or two inspirations of pure air should be taken before the anticipated shock is given.

Methylene.—The so-called methylene bichloride is a compound body, similar in many respects to a mixture of chloroform and ether and alcohol. When put into a test-tube, with the bulb of a thermometer fixed just above the level of the liquid, and boiled, the temperature rises steadily; the more volatile substance escapes until the boiling temperature of chloroform is passed. The same rise of temperature occurs when we boil a mixture of ether and chloroform and alcohol.

It may be noticed also that, as the methylene is boiled, the smell of the residue becomes more and more like that of chloroform; but this odour diminishes again as the fluid is nearly dissipated. I do not suppose it to be simply a mixture of the substances named, but I think there is sufficient chloroform in it to make it unsafe to use it with the same freedom that ether may be used.

I have notes of about one hundred cases in which I gave it. Many of my patients were very efficiently and pleasantly put to sleep by it, and awoke with signs of cheerfulness, not usual after the use of pure chloroform; but in other cases there was very undesirable excitement. In one case, the respiration and pulse ceased, and I had to resort to artificial respiration to restore the patient. After this case, I felt less confidence in giving it than chloroform, and I now very rarely give it from choice.

In administering it, I sometimes used a cone of leather lined with flannel. The pungency of the vapour, when given in this way, makes patients often resist and struggle against it, so I more frequently gave it with my chloroform apparatus, using about sixty minims to each one thousand inches of air. I did not find sickness less frequent than after chloroform. I think it is an useful mixture, but it should certainly be used with caution, not only because it contains chloroform, but because the quantity of chloroform given off is not always in the same proportion to the more volatile ingredient. Methylene ether made by adding ether to the methylene bichloride would be liable to the same objections in a less degree.

Mixtures of Chloroform with Other Things.—I find that four to eight minims of ether and thirty minims of chloroform with one thousand inches of air mixed in my bag, answer very well. It sometimes produces more excitement than chloroform alone, but it certainly tends to make the immediate recovery from chloroform more pleasant, and keeps up a better pulse.

The addition of a fourth part of chloroform with one of ether will make the administration of ether on a towel much easier; but, inasmuch as it must be forced upon the patient more than chloroform alone, and the patients are almost sure to struggle, I have not used it very frequently, and cannot advise it.

I have used a mixture of alcohol, one part; chloroform, two parts; ether, three parts; and like it much, for cases where moderate narcotism has to be kept up a long time—*e.g.*, when caustic chloride of zinc has been applied to a cancerous growth. I have tried, in a few cases, tetrachloride of carbon, ethyliden chlorid, and most of the other anæsthetics that have been recommended; and the conclusion at which I have arrived is, that they are neither safer nor more pleasant than ether and chloroform; and, if not decidedly superior in these respects, it is better to continue the agents we are most familiar with.

Nitrous Oxide is an anæsthetic of a very different character to the preceding. I had the pleasure of showing the use of it at the Oxford meeting. Since that time, I have given it in 6,960 cases. When successfully given, the patient appears to fall asleep without any delirium or excitement; but, if the operation be one leaving much pain behind it, the patient sometimes will have a dream more or less connected with it, and then wake up rapidly and completely. It is by far the best anæsthetic for many short operations, such as the extraction of teeth, opening abscesses or boils. It answers very well in operating for strabismus. Removal of the eyeball was performed lately by Mr. Bowman for a lady, who said she had no consciousness of the operation. It is well suited for examining hysterical cases, wrenching stiff joints, and reducing luxations of recent date. I do not think it suitable for cases where it is necessary to keep the patient quiet more than three or four minutes; but, if the patient be allowed to recover consciousness after one inhalation before another is commenced, the anæsthesia may be kept up tolerably well for half an hour. I have never kept a patient unconscious for more than between six and seven minutes; but, if quietude is not important, I have no doubt that a patient could be prevented from feeling pain for an hour. But, although this is possible, I am sure the recovery afterwards would not be satisfactory. When chloroform or ether has been given for ten or fifteen minutes, a state of anæsthesia continues for some time afterwards; but the sensibility to pain returns within two minutes of ceasing to breathe the nitrous oxide, and therefore, in such operations as tying hæmorrhoids and minor amputations, which might, from the short time they take, be thought fit cases for nitrous oxide, it would be unsatisfactory to the patient on account of the after-pain.

In administering nitrous oxide, a plentiful supply of gas is essential to success. There is no fear of patients inhaling too much at first; indeed, they should be told to breathe deeply and slowly. They often disobey the latter part of the advice, and pant as if they could not breathe too rapidly. A supplemental bag was my first contrivance for preventing air from being drawn under the face-piece, and for obviating waste of the gas in cases of this kind. I have now accomplished the same object by keeping the inspiring valve open, so that a part of the expired gas is driven back through it into the bag. I find that I can prolong the sleep of nitrous oxide during operations in the mouth by having the nose-cap and mouth-piece separate, and retaining the nose-cap in its place whilst the operation goes on. The supply of gas must be kept up freely, for, if a little air be drawn in by the mouth, the patient will soon become unsteady, if not actually sensible to pain. Gas is sometimes required where, from the inflamed state of the cheek or lips, the pressure of the face-piece could not be borne. A cap, of the size of the face, formed in front of a piece of glass, and of tin and India-rubber at the sides, answers exceedingly well, but a great deal of gas must be wasted to ensure success. It is a good plan to cover the eyes during recovery, as a bright light or any moving object may cause an unpleasant dream.

If nitrous oxide should prove fatal, I think it will happen from the occurrence of syncope, from some other cause, during the inhalation. Arrested breathing would soon be remedied by artificial respiration, if the heart were beating. I have, on three occasions, been obliged to resort to this means, and the recovery in all cases was satisfactory in less than three minutes.

Nitrous oxide may be used with advantage to prepare the way for giving ether; but I would not advise it before giving chloroform, because, firstly, chloroform is not very unpleasant if given gradually, and, secondly, it would be more dangerous to give chloroform in the state of excitement from gas than without it. I have used gas preparatory for ether in two ways 1. By means of a bag of gas, I make the patient unconscious, and then give the ether as usual; but the patients sometimes wake up enough to struggle against the ether. We should be prepared for this, otherwise the patient may remove the inhaler and remain several minutes longer in a state of excitement. 2. By using a small bag which is supplied with gas during the inhalation, and by diverting the current of gas and making the supply of gas pass over ether, as soon as the patient loses consciousness, enough ether can be got into the system this way to keep up anæsthesia for three minutes with the mouth open. It is, therefore, well suited for small operations in the mouth, such as the extraction of difficult teeth. The best time for inhaling gas is when the stomach is nearly empty. If the state of the stomach would cause nightmare in ordinary sleep, it would also in that of nitrous oxide. About once in five hundred cases, I have known the patient to pass urine whilst under gas, the explanation being, that the bladder was so full as to require a voluntary effort to retain the urine.

OBSTETRIC MEMORANDA.

THE TREATMENT OF *POST PARTUM* HÆMORRHAGE.

I.

THE following case may be interesting at the present time, when an ounce of fact should be worth a ton of theory. On Friday, December 26th, 1873, Mrs. J., who had more than once nearly died from the effects of flooding, was taken in labour with her tenth child. When I arrived, I found that the pains were lingering, and there was great inertia of the womb. I administered brandy, ergot, and extract of beef, at intervals, the os being soft and dilatable; after five hours matters improved, and a fine female child was born alive, and after a couple more pains the placenta was expelled intact. I supported the uterus with my hand for at least half an hour, and after this a pad was placed on the fundus, and the bandage, already *in situ*, tightly fastened. Internal hæmorrhage commenced shortly afterwards, with frequent fainting. I at once unfastened the binder, and, by grasping and kneeding the uterus, squeezed out a large clot and obtained something like a contraction. Ergot and brandy were again given; but, as the wound kept melting away under my hand, I applied ice, which I had in readiness, over the pubes and inside the vagina. As my patient was faint and pulseless and considerable oozing continued, and every drop of blood seemed of vital importance, and the ergot and ice did not satisfactorily stop the bleeding by good firm contraction, I determined to inject solution of perchloride of iron, which at once had the desired effect, and I was able to leave my patient in about an hour with perfect safety. She has recovered without a bad symptom, and says she never felt as strong so soon after confinement. Ergot and brandy had been given from 7.30 A.M., and were renewed in increased doses at 2 P.M., when hæmorrhage commenced; and yet, with ice, pressure, etc., dangerous flooding continued till iron was injected. There was no clot or rent to cause the bleeding, but simply inertia; and I doubt not that, but for the continuous support afforded by the hand, which prevented the womb from dilating, and the prompt injection of iron after failure of the other remedies, this lady would have lost her life.

PERCY BOULTON, M.D.

II.

Believing, as I do, in the immense boon conferred on the profession and the public by Dr. Barnes, by his introduction of the use of perchloride of iron in *post partum* hæmorrhage, I trust that no one will be deterred from its use by the angry tirades of Dr. Snow Beck. This drug appears to act on Dr. Snow Beck much as the colour scarlet is supposed to act on the bovine tribe; it lashes him into fury. Without stopping to inquire how a thing can be "risky," and its result "inevitable" at one and the same time, I would remark that, if Dr. Snow Beck means to say that "inevitable" death is the consequence of the use of perchloride of iron, he is stating that which is contrary to the fact. I have injected perchloride of iron many times as a *dernier ressort* in cases of *post partum* hæmorrhage, and always with the happiest results: none of the patients for whom I have used it have complained of any pain or even discomfort, either during or after its use; and they have invariably made a good recovery. I may, perhaps, relate the last case of the kind which occurred to me. I attended Mrs. J. about a fortnight since with her second child. I applied, as is my custom, a binder before the birth of the child, to be tightened afterwards without disturbing the patient. The uterus was well supported by my hand during the expulsion of the child, and for some time afterwards. A dose of ergot was given during the last stage of labour. Finding that the uterus remained firmly contracted, I tightened the binder and went into the adjoining room. On returning to my patient in about a quarter of an hour, I found her blanched and flooding, and with the pulse at the wrist almost imperceptible. I at once compressed the uterus, which was relaxed, removed all clots with my hand, and washed out the uterus with cold water. This produced some effect, but still some bleeding continued; and, as my patient could not afford this, I substituted for the basin of cold water one containing one part of liquor ferri perchloridi and three parts of water. Not one drop of blood was lost after this, and my patient made a speedy and good recovery. I consider the fear of absorption of the perchloride into the system to be groundless. It has long been in use as a valuable styptic in hæmorrhages of all kinds and in all situations. I have myself frequently used it under conditions peculiarly favourable to absorption; but I have never experienced, nor have I heard of, any but the most beneficial effects from its use.

EDWARD CRIPPS, Cirencester.

III.

There is one method not mentioned by Dr. Braxton Hicks in his admirable paper on *post partum* hæmorrhage, which, although it may be implied and included in his frequent instructions in reference to cleaning out the uterus with the hand, deserves, I venture to think, rather more prominence than has been yet accorded to it. I allude to the persistent retention of the hand *in utero* until it becomes recognised by the recovering womb as a foreign body, and is expelled by the contractions which are the salvation of the case. I have one case in my mind, to which I was called in passing, and in which I had no ergot, syringe, ice, or styptic, to aid me, and where, by the prolonged internal application of what really was a manual plug, I was able to induce complete contraction, although the patient was much exhausted by the loss of blood, and the womb was unusually flaccid. I derived the greatest assistance in this case, I may add, from the child, who sucked away at the breasts most manfully. Were I to meet with an urgent case of the kind again, and if the child would not suck the breasts, I would certainly try to persuade the nurse to do so. Why should it not be a maxim, in cases of "old flooders", that the child should attack the breasts at once, instead of lying uselessly in blankets —a sovereign remedy, untried and unthought upon?

G. H. R. DABBS, M.D., Newport, I.W.

IV.

Perhaps a few points, gained by the experience of a country practice of forty years, and not noticed in the admirable papers lately published in the JOURNAL, may be acceptable. 1. During labour, "bag" the distended uterus with a shawl, tightening it as the uterus is slowly emptied. 2. Immediately, in all cases, upon delivery, turn the patient carefully—do not let her turn herself—on her back. 3. Retain the hand on the uterus for one hour. 4. Immediately upon the expulsion of the placenta, give from forty to sixty drops of laudanum, with the like quantity of sal volatile. The shawl properly adjusted helps the uterus to contract uniformly. The placing the patient on the back, as is seen at a glance, gives a power and control over the uterus, in contact with the spine, that cannot be obtained whilst she remains on her side. The retaining the hand for one hour may be tedious, but it should be done unless there be any means of judging if there be freedom from danger of hæmorrhage. A Dublin physician, many years ago, suggested the state of the pulse as a true criterion. I believe he was correct. If the pulse be equal, without ups and downs, all is right; if the contrary, there is no safety. The administration of laudanum was frequent in olden times. I am sure there is no better contractor of the emptied uterus. The cases that have troubled me most have been those where opium could not be borne. I remember once a lady very exhausted. In my haste, I emptied my bottle containing nearly two drachms of laudanum; in ten minutes, she said, "You may go, sir; I am quite well." Am I singular in this treatment? I see no reference to it by any of the writers in the JOURNAL. I have used cold affusion outside the uterus; but have never injected inside. I have introduced my hand into the uterus after expulsion of the placenta. I would do so if necessary; and would also carefully inject tincture of perchloride of iron. I have never, in my own practice, lost a patient by *post partum* hæmorrhage. M. FOSTER, Huntingdon.

V.

So much has been written, and well written, on the above subject, that it may be supposed nothing more can be said. A few observations, however, I must ask permission to make. In the first place, I cannot help deprecating the very unnecessary personal remarks that have been made during the correspondence. The reason I desire to make a few comments is chiefly that, although my name has been alluded to, my method of applying the perchloride of iron in obstinate cases of *post partum* hæmorrhage has not been mentioned by any of the writers, although Dr. Barnes, when he brought his plan before the Obstetrical Society, in his reply, said "that the method of applying the perchloride of iron advocated by Dr. Wynn Williams might be the more advantageous in some cases". My plan is this, which I have already designated the ready method. We must suppose that all the usual means have been employed without stopping the hæmorrhage and causing contraction of the uterus, not only for the moment but permanently; such cases have happened, and will happen again in spite of everything said to the contrary. The hæmorrhage still goes on, and the uterus does not contract. Is the patient to be left to die? I saw one death from *post partum* hæmorrhage thirty years ago, fortunately not in my own practice; I never saw another, and I hope I never shall. I attribute this to my having had recourse to the ready method, namely, the introduction of a sponge saturated with either the tincture or solution of the perchloride of iron; the latter I now prefer. Having by the hand in the uterus, relieved it of all clots, I pass up a sponge over which I have poured half an ounce of the solution of iron. This is easily done through the hollow of the left hand. I then sponge the whole of the distended uterus carefully over with it, beginning at the fundus, which immediately becomes corrugated, and contracts forcibly, forcing down the hand and the sponge. I have also found that the neck and lower part of the uterus has firmly grasped my wrist, showing that the passage of the sponge saturated with the iron has caused those parts also to contract. Indeed, in the first instance in which I used it, I had so much difficulty, owing to this contraction, in withdrawing my hand with the sponge in it, that I always since have had a string attached to the sponge and have left it to follow the hand or not, as I consider the retention of it for a short time rather beneficial than otherwise. Now, does this mode of applying the perchloride of iron lessen any risk there may be in its use? I believe it does; and for this reason. It is generally admitted that the injection of a liquid in any quantity into a puerperal dilated uterus for any purpose, is fraught with no small amount of danger to the patient, and has been followed by death; for, if even only cold water do by any means come into contact with the periosteum of a puerperal female, it will almost to a certainty cause rapid and fatal peritonitis. I feel convinced in my own mind that most, if not all, of the fatal cases that have followed, or been caused by, the injection of the solution of perchloride of iron would have equally occurred if any other liquid had been employed. In conclusion, I hold that it is not the perchloride of iron that is the delinquent, but the liquid it is mixed with. Those who doubt the corrugating powers of the perchloride of iron on the mucous membrane of the uterus, I would only beg, in the next case of subinvolution of the uterus they meet with, to roll some cotton-wool on the end of a sound, dip it in solution of iron, and pass it into the uterus; and its powers will soon be demonstrated to them. A. Wynn Williams, M.D.

CLINICAL MEMORANDA.

BLUE PUS.

I have on several occasions noticed blue stains on linen dressings from suppurating sores, but had attributed them to a surreptitious visit to a quack in this neighbourhood who treats sores with strong lotions of sulphate of copper. In a case, however, which was under my care a year ago, I satisfied myself that the blue colour was really due to chemical change in the discharge itself. The case was that of a girl, ten years of age, with extensive granulating surfaces on the front of both thighs, the result of severe burns. The discharge, when secreted, had the ordinary characters of laudable pus, but it left stains on the dressings of a distinct æruginose blue. The dressing consisted of linen rags smeared with zinc ointment, and the mother firmly denied using any other application; nor could the colour have come off any dyed woollen articles, as there were none near. I observed it on several different occasions, and it did not appear to bear any particular relation to the progress of healing in the sore. I regret that the stains were not subjected to analysis. My own conjecture at the time was, that they were the effect of some particular product of oxidation of the discharge. It may be remembered that the recent infusion of the indigo plant is yellowish, but changes to blue on exposure to the air. A similar change of colour takes place with great rapidity in the juice of several fungi of the genus *Boletus*.

H. Franklin Parsons, M.D., Beckington.

AMPUTATION OF THE HIP BY ESMARCH'S BLOODLESS METHOD.

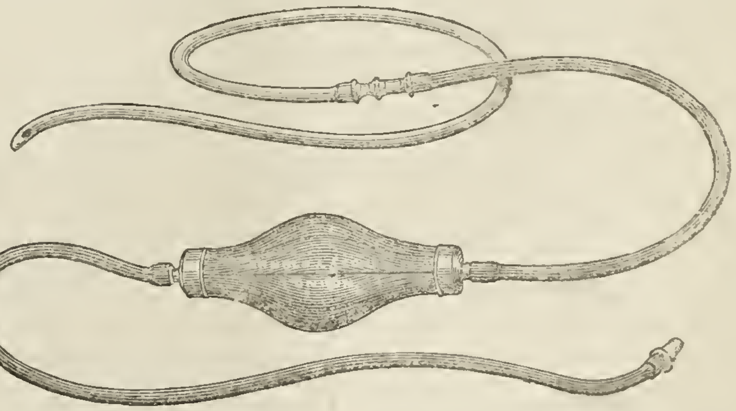
Having occasion last week to amputate the left leg of a youth eighteen years of age, at the hip-joint, for malignant disease of the femur, I did so by Esmarch's method; and the result was so satisfactory, that I desire to record the case, more especially as, so far as I am aware, this is the first time amputation at the hip-joint has been performed by the bloodless method. The tumour was a very large one, and the limb œdematous. The elastic bandage was applied from the toes to the perinæum; a good sized pad of linen was placed over the aorta, just below the umbilicus; and seven or eight turns of elastic tubing made over it. Not a drop of arterial blood was lost till the ligature was loosened, and then only one vessel spouted, all the others having been readily secured. When the femoral vessels were divided, about two ounces of venous blood escaped. No inconvenience was experienced from the application of the tubing tightly round the belly; and, after the operation, neither the lad's countenance, nor his pulse, indicated that any great shock had been sustained. I am indebted to Dr. Page, the house-surgeon of the Infirmary, for having suggested to me the use of Esmarch's method.

Charles J. Gibb, M.D.,
Consulting Surgeon to the Newcastle Infirmary.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

AN IMPROVED SYPHON STOMACH-PUMP.

For some time past, I have felt convinced that the stomach-pump now in use is far from a perfect apparatus. It is costly, not particularly portable, and, above all, a dangerous instrument, cases being known where the stomach-tube has been pushed through the coats of the stomach or œsophagus. I wish, therefore, to bring before the notice of the profession a stomach-pump on a novel principle, which has been made for me by Messrs. Arnold and Sons, the well known instrument makers in West Smithfield. The advantages I claim for my instrument are freedom from danger, cheapness, and increased portability. It can be easily carried in the coat pocket, its cost does not exceed 15s., and it is almost impossible to perforate the coats of the stomach or œsophagus by means of it, be the operator ever so clumsy or ignorant. The instrument consists of an India-rubber tube, about half an inch in diameter and four feet in length, provided with a ball of the same material, which is three or four inches in diameter, and situated about eighteen inches from one end of it. In fact, it is almost a *fac simile* of one of Higginson's enema syringes, but without a valve. To the shorter length of tube the stomach-tube proper is attached by a simple contrivance. This stomach-tube is nothing more or less than an enlarged Thompson's India-rubber catheter, with two large oval holes situated near the extremity. Let us suppose the instrument to be used in a case of poisoning, where it is desired to wash out the stomach as speedily as possible. The patient being seated in a chair, or reclining on a couch, the stomach-tube is oiled and then passed back in the mouth in the usual way, until it has reached the upper part of the pharynx. Its passage down the œsophagus, as in the case of Thompson's catheter in the urethra, is effected by twisting it round and round in the hand until it has reached the stomach. I need scarcely point out how much less pain this soft flexible tube must cause than the hard somewhat inelastic tube generally used. The rest of the instrument is now adjusted to the stomach-tube, the work of a second, and then, a jug of water being obtained, the end of the tube beyond the ball is introduced into it. The operator, with one hand pinching the India-rubber tube somewhere between the ball and the patient's mouth, with the other compresses the elastic ball, and thus forces out some of the air contained in it, which bubbles up through the water in the jug. When this has been repeated two or three times, all the air is forced out, and the ball becomes filled with water. If the jug be now raised a foot or two above the patient's stomach, and the pinching of the tube be discontinued, the instrument acts at once as a syphon, and the water flows from the jug in a continuous stream into the patient's stomach. When enough has been introduced, the tube is pinched somewhere between the ball and the patient's mouth, and the flow of water into the patient's stomach is at once stopped, the water being retained in the ball by the atmospheric pressure. If the end of the tube be now taken out of the jug and put into a basin, below the level of the patient's stomach, upon the pinching of the tube being discontinued, the contents of the stomach will at once flow out into the basin in a continuous stream; the instrument acting,



of course, again as a syphon, only in the reverse way to that previously. When it is considered that the stomach is nearly empty, the tube is pinched between the ball and the basin, the end of the tube put back into the jug, and the whole thing repeated over again. The object of pinching the tube when the end of it is being shifted from the jug to the basin, and *vice versâ*, is, of course, to retain the water in it by means of the atmospheric pressure, thus enabling it to act as a syphon. In a case of opium-poisoning, I have lately used this instrument, and by means of it thoroughly washed out the patient's stomach in a very brief space of time. In case the holes at the end of the stomach-tube become clogged with food, they can be easily freed by pinching the tube between the ball and the jug, compression of the ball will then force out the fluid contained in it, and thus clear the holes. In conclusion, I would draw especial notice to the low price at which this instrument can be obtained. I do not think I am wrong in asserting that the great majority of general practitioners do not possess a stomach-pump. This is chiefly due, I believe, to the high price of the instrument hitherto used. This objection being now removed, there can no longer be an excuse for any practitioner being henceforth unprovided with an instrument, the want of which may materially tend to lessen the chances of recovery in a case of poisoning.

Louis H. Tosswill, M.B.Cantab., Exeter.

SELECTIONS FROM JOURNALS.

PATHOLOGY.

Osteoma of the Frontal Sinus.—J. Arnold reports in Virchow's *Archiv*, vol. lvii, two bony tumours of the anterior region of the skull, which are remarkable examples of what has been called by Virchow enostosis, or osteoma developed from the diploë. Both tumours agreed almost entirely in their situation and mode of development, but differed in the rate of growth, in that one only of them represented an advanced stage. Both had their origin at the posterior and lower part of the wall of the frontal sinus, where the ethmoid bone approaches the part (here alone was there a close connection between the tumours and the wall of the sinuses), and thence grew into and distended the sinuses. One of them broke through the wall at separate points above, below, and in front; the large projections of the other pressed on the orbits, nasal cavities, and skull, destroying the anterior lamellæ of the frontal bone, so that the only guide to its origin in the frontal sinus was the presence on it of some mucous membrane with ciliated epithelium. Both tumours had a thin layer of connective tissue on their outer surface. The smaller one consisted entirely of ivory-like masses, while the larger one had this structure on the outside only, the interior being formed of a spongy tissue. Arnold believes that in these two cases, and in twelve others of which he has been able to find records, the tumours must have either been developed from the endosteum by the direct formation of bone-substance, or by bony transformation of enchondromata which themselves had their origin from the endosteum or from the remains of cartilage. In one of Arnold's cases, the patient was only twenty-three years of age; and Virchow has already observed that the occurrence of the disease in early life points to its origin, in many cases, in disturbance of the formation of bone.

Statistics of Intussusception.—Dr. O. Lichtenstern of Tübingen has collected and compared the statistics of 593 cases of intestinal invagination (*Vierteljahrschrift für praktische Heilkunde*, and *Medicinisch-Chirurgische Rundschau*, January 1874), and has arrived at the following results. A. *Frequency according to Age and Sex.* 1. Inflammatory intussusception occurs more frequently (the average being 28 per cent.) in males than in females; the proportion being 1.8 to 1.0. Inflammatory intussusception occurs most frequently in the first year of life (131 cases). It is at this time six times as frequent as in the second year (22 cases), and thirteen times as frequent as in the third, fourth, and fifth years (each 10 cases). The frequency rapidly diminishes in the sixth year; it then remains nearly stationary between the sixth and fortieth years, and then increases, especially after the fiftieth year. 3. The disorder is very rare under the age of three months; it occurs most frequently between the fourth and six months of life. B. *Seat of Intussusception.* 4. The most common form of intussusception is the ileo-cæcal; then follow, in order of frequency, intussusception of the small intestines and the colic and the ileo-colic forms. 5. *a.* Ileo-cæcal intussusception predominates in childhood up to the tenth year, especially in the first year of life. It decreases in frequency with increasing age. *b.* Intussusception of the small intestines is very rare in the first year of life, and increases in frequency afterwards, especially after the fifth year. In adults, this form of intussusception is rather more common than the ileo-cæcal. *c.* Invagination of the colon is more frequent in children than in adults; but it occurs more rarely in the first year than between the second and tenth. 6. The most usual seat of primary invagination of the small intestines is the lowest part of the ileum. It occurs very rarely in the middle of the ileum, but more frequently (though less so than in the lower part) in the jejunum and highest part of the ileum. 7. The most frequent point of primary intussusception of the colon is the lower part of the descending colon, or the sigmoid flexure. 8. The proportion of males to females in ileo-cæcal intussusception is 2.3 to 1; in intussusception of the ileum, 1.9 to 1; in ileo-colic intussusception, 1.7 to 1; and in invagination of the colon, 1.5 to 1. C. *Relations of Extent and Growth in the Seat of Intussusception in different Regions of the Intestines.* 9. As regards the size of intestinal invaginations in the adult, those of the ileum occupy on an average the first place, immediately followed by the ileo-cæcal and the colic forms. Intussusception of the ileum through the ileo-cæcal valve is generally of very small extent. Ileo-cæcal intussusceptions in early childhood increase more rapidly, and attain a relatively greater length, than in adult age. On the other hand, ileo-cæcal intussusception increases more slowly, and differs greatly in this respect from invagination of the ileum, which increases rapidly. D. *Ascending or Retrograde Invagination*, of the acute or inflammatory kind, occurs very rarely; it is found in the small as well as in the large intestines. E. *Multiple Invaginations* are rare; but credible cases of acute double and, more rarely, of triple invagination (forming five or seven layers), have been recorded. These have hitherto been met with only in the large intestine, and, with one single exception, in cases of primary ileo-cæcal intussusception; never in the small intestines. F. *Lateral or Partial Intussusception.* Pouch-like invaginations of a greater or less portion of the intestinal wall into the canal are usually the result of polypi of the mucous membranes; these produce first lateral invagination, which, by continued traction, is enlarged and becomes central. This form is very rare. G. *The Origin of Internal Hernia and Obstruction from Intussusception* occurs in two ways. 1. In cases of ileo-cæcal intussusception, the mesentery of the ileum becomes unfolded and lies parallel with the meso-colon at the point of invagination, so that a pouch of greater or less depth, with a wide opening, is formed. This cleft may be drawn open by the dragging of the mesentery and meso-colon, so as to allow the passage into it of more or less of the intestine lying above the intussusception. 2. In ileo-cæcal, and perhaps also in colic intussusception, it sometimes happens that a loop of the upper ileum, or of the jejunum or ileum, passes between the middle and inner cylinders of the invaginated portion. In such a case, the primary intussusception must evidently have attained a considerable size.

THERAPEUTICS.

Administration of Podophyllin in Habitual Constipation.—Van den Corput recommends the following formulæ. 1. Podophyllin, 20 centigrammes (3 grains); soap, 1 gramme (15 grains); essence of fennel or of canella, as many drops as are sufficient; the mass to be divided into ten pills, of which from two to four are taken daily. 2. Podophyllin, 30 centigrammes (4½ grains); extract of nux vomica, 50 centigrammes (7½ grains); extract of belladonna, 30 centigrammes; to be divided into ten pills, of which two or three are a daily dose.

The Diaphoretic Treatment of Bright's Disease.—In a paper read at the last meeting of German Naturalists and Physicians, Dr. Koloman Müller described some experiments which he had made on dogs with regard to the antagonism between the skin and kidneys. He introduced cannulæ into the ureters of the animals, and counted the number of drops of urine which escaped in each minute. The hair of the animals having been shorn off, compresses dipped in hot and in cold water were applied to the skin; the former always diminished the renal secretion, while the latter increased it. In one case, the normal rate of urinary discharge was thirty drops in a minute; the application of cold to the skin for fifteen minutes increased the number to forty-one drops. In another case, where the normal rate of secretion was twenty-six drops per minute, the application of warmth in ten minutes reduced it to fifteen drops, and in twenty minutes to seven. He therefore concludes that continued diaphoretic treatment relieves the kidney in the inflammatory forms of Bright's disease. To show the palliative effect of diaphoretic treatment on the œdema of the skin in Bright's disease, Dr. Müller mentioned a case where, after being subjected once to the hydrotherapeutic plan, the patient lost ten pounds in weight. Dr. Bartels said that he had observed similar results at Kiel from the diaphoretic treatment of Bright's disease.—*Allgem. Medicin. Central-Zeitung*, January 28.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, FEBRUARY 14TH, 1874.

MEDICAL AEROSCOPY.

THE question of the nature of the solid bodies to be met with in the atmosphere has of late years attracted much attention, though the statements made upon this subject have been not a little contradictory. This question forces itself upon the attention of medical men, because of its intimate connection with the germ-theory of disease, and with the still wider problem as to the occurrence or non-occurrence of "spontaneous generation". Dr. Douglas Cunningham's report* is a valuable contribution to our knowledge upon this subject. It contains the result of observations on the nature of the solid bodies present in the atmosphere of Calcutta and the neighbourhood, which were principally carried on in the year 1872. It deals, for the most part, with "common atmospheric air", and is intended as a starting-point for further investigations into the nature of the bodies to be met with in special localities.

The report commences with a very complete summary of facts and opinions previously recorded, which will prove useful to future workers in this direction, though its consideration need not now detain us. Dr. Cunningham's own more systematic observations (fifty-nine in number) were made within the two large gaols of Calcutta—the date of the first being the 26th February, and that of the last the 18th September, 1872. Thirty of them were taken at Alipore, and twenty-nine in the Presidency Gaol. The apparatus employed was an aëroscope devised by M. Pouchet, modified by Dr. Maddox, and subsequently improved by the author himself, of which a figure is given in the work before us. Briefly, it may be said to consist of a tubular vane, rotating freely under the influence of wind. The ingoing air passes through a funnel opening by a narrow aperture near the middle of the tube, slightly in front of a perforated diaphragm, in the centre of which is placed a microscopic cover-glass, smeared with pure glycerine. This viscid fluid retains the solid bodies borne by the air impinging upon it. "In the Presidency Gaol the supporting post was placed within the largest enclosure, on an open space of grass to the east of a large tank, in which the native prisoners bathe. The most convenient locality at Alipore was found to be the compound of the gaol hospital. . . . The mouth of the apparatus, when *in situ*, was at a level of about five feet from the ground." The observations were made once a week at each place, and on each occasion the instrument was exposed for a period of twenty-four hours.

The microscopic examination of the dust thus collected disclosed the following elements: particles of silica, amorphous granular masses, carbon, lime, starch-corpuscles, cells, hairs, and other fragments of vegetable tissues, fibres of cotton, hairs and scales of insects, oil-globules, pollen-grains, spores and cells of fungi and algæ. Among the rarer constituents of this atmospheric dust were disintegrated acari, specimens of which occurred in four preparations; also bacteria, which "were observed in one or two instances only, and then in very small numbers". Bodies which could be supposed to represent the higher infusoria hardly ever occurred, and "no entirely unequivocal specimen was ever detected". All the preparations "abounded more or less in minute monad-like molecules and globules of an undefined nature". Thus Dr. Cunningham's results in Calcutta are found closely to accord with those obtained by Dr. Maddox in this country. He says (*Monthly Microscopical Journal*, June 1st, 1870, p. 290): "Hitherto I have found, besides (*débris*) organic and mineral matters, pollen-grains, minute germs of various fungi or protophytes, and excessively minute bodies of 'molecules' or 'globules'." Thus, amongst the bodies having any certain title to be regarded as "germs" or reproductive particles, pollen-cells were very frequently encountered, belonging largely to the common grasses of the country. Spores of fungi were also numerously represented; but an examination of the very excellent coloured figures with which this memoir is richly illustrated, and of those by Dr. Lauder Lindsay, illustrative of lichens, in the last two volumes of the *Transactions of the Linnæan Society*, makes it appear highly improbable that many of the bodies regarded by Dr. Cunningham as spores of fungi, are in reality sporidia of common crustaceous lichens. "Green algoid cells" occurred in some specimens, though such bodies were by no means abundant. Some of these algoid-looking cells might also have been lichen gonidia, products which are often quite indistinguishable from one another. It is, indeed, a most noteworthy fact, that all the reproductive particles or bodies which are with certainty recognisable in ordinary atmospheric air, seem to have been derived from aërial or non-aquatic organisms. The rare "algoid cells" are the only apparent exceptions mentioned by Dr. Cunningham; and even the presence of these, as above suggested, may not contradict the general rule. Bacteria are even much rarer than the algoid cells, whilst distinct infusorial animalcules of a higher type, or their germs or ova, were not once unmistakably recognised. The validity of this distinction between the presence of aërial and the absence of aquatic organisms seems to be still further substantiated by the fact, that such extremely common and easily recognisable aquatic organisms as diatoms do not, under ordinary circumstances, exist in the air, whilst particles of silex (many of them larger than diatoms) are amongst the commonest constituents of the dust of the atmosphere. On only one occasion was a diatom found in Dr. Cunningham's preparations.

With reference to the number of "spores and similar cells" collected from this continual draught of air of varying velocity, kept up for periods of twenty-four hours, the minimum number was 35; in twenty preparations the number was below 100; whilst in nineteen it exceeded 200. Dr. Cunningham says: "In those cases where the numbers registered are low, they may be taken as absolutely representing all the bodies detected; but, on the other hand, where they are very high, they can only be considered to indicate that at least so many were present, as in such cases the whole of the bodies observed were neither drawn nor counted." But Dr. Cunningham admits that in some specimens "many of the cellules present may possibly have been due to processes of development", or multiplication occurring in cells after their deposition in the glycerine. It seems quite possible that this may have occurred in many instances, more especially where thirty-six or forty-eight hours elapsed between the period of deposition and the time when the total number of organic corpuscles was estimated. It is to be regretted that the glycerine employed was not mixed with one-fourth or one-fifth of its bulk of carbolic acid, with the view of eliminating this possible source of error. In forty observations, each extending over a period of twenty-four hours, made by Dr. Maddox in the spring of 1870, near Southampton, the largest recognisable number of spore-like bodies in any one collection was 21; whilst in subsequent observations, extending over many months, the numbers were found to be extremely variable. On some days not a single spore-like body was to be found, though on others (the periods of exposure being now eight to ten hours) the numbers varied from 112, 87, 60, etc., down to 1. On one day the number of such bodies present rose even to 250. Thus it would appear that there is no very notable difference between the number of spores and germs existing in the air in the neighbourhood of Southampton and in that of Calcutta. And it further appears from these extended observations, that the large amount of air which may be driven through a tube with an orifice five inches in diameter in the space of twenty-four hours, yields either no recognisable spores or germs at all, or may yield as a maximum 500 of such bodies—that is, a maximum average of about 20 in one hour. This is the only positive basis which exists for the panspermic hypothesis, or for the germ-theory of disease, so far as air is concerned. Beyond, all is doubt and uncertainty.

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* *Microscopic Examinations of Air.* By D. Douglas Cunningham, M.B., Surgeon H.M. Indian Medical Service (on special duty). Attached to Sanitary Commissioner with Government of India.

This remaining uncertainty principally concerns the fine particles, or so-called molecules, which almost invariably exist in some abundance not only amongst dust filtered from the atmosphere, but also amongst that which is deposited upon ordinary surfaces. So far as they are organic in nature, we may ask, Are such molecules germinal particles of bacteria, or are they mere products of the disintegrations of organic tissues? Are they dead or living particles, whether germinal or disintegrative? We are told by Dr. Burdon Sanderson, that bacteria and their germinal particles cannot resist desiccation; nay, further, we are told by him and others that bacteria or their germinal particles do not exist in the atmosphere in a living state. And these assertions are made upon the strength of a qualitative evidence altogether transcending that of the microscope. Fluids capable of putrefying when brought into contact with living bacteria-germs, do not putrefy when freely exposed to the atmosphere; therefore the existence of living bacteria-germs in the atmosphere is disproved, and we seem to learn, at all events, that these "molecules" are not. Dr. Cunningham appears to have forgotten this evidence when he says, "it is impossible to deny that many of them may be of a bacterial nature, and capable of growth and multiplication on coming into contact with a favourable medium". The evidence which he himself adduces on the subject is merely a repetition, on a small scale, of Pasteur's experiments, in which he inoculates certain previously pure liquids with atmospheric dust. They do not entitle him to come to any distinct conclusion, and of this Dr. Cunningham seems to be aware. Before anything definite can be deduced from such experiments, it must be proved that the appearance of living organisms could not be accounted for by the introduction of mere dead organic particles. But this is a question still *sub judice*.

Certain other observations, however, made by Dr. Cunningham upon the subject of the possible presence of bacteria-germs in the air are of considerable value. He says: "The water collected during heavy tropical showers furnishes a good subject for such investigations, as it is likely to contain specimens of the solid particles contained in the atmosphere, washed down by the rain in its descent, affords a medium in which they can develope to some extent, at all events, and is, moreover, one in which, with due precautions, risk of contact contamination can be reduced to a minimum." Out of ten observations conducted upon rain-water collected with great care, seven revealed the presence of spores of the ordinary kind, which soon gave rise to a more or less abundant mycelium: and in six of these seven cases the mycelium was accompanied by bacteria, or bacterioid bodies, though no bacteria occurred in the cases in which fungi were absent. On one or two occasions, amœbæ and tailed zoospores, resembling cercomonads, also made their appearance, which were ascertained to have arisen from the protoplasmic contents of cyst-like bodies developed in the course of some of the mycelial filaments. Dr. Cunningham's observations also led him to believe that the bacteria which appeared in these specimens of rain-water had not been derived directly from the air, but had in some way derived their origin from the mycelial filaments, although the mode itself could not be followed out so distinctly as in the case of the amœbæ and cercomonads—organisms similarly unrecognisable as constituents of atmospheric dust. Such a genetic relationship between bacteria and fungi is contrary to the views of De Barry, Hoffmann, Burdon Sanderson, and Rindfleisch; though it is, as Dr. Cunningham points out, consistent with the views of Huxley, Hallier, Lüders, Karsten, Poletebnow, and Lister, who agree in regarding bacteria as natural, if not constant, products in the life-history of fungi; or it is equally consistent with the views of Bastian, Grimm, Faeal, Crivelli, and Maggi, all of whom believe that bacteria may arise from fungi, as well as from the elemental parts of other organisms, though they do not regard such a process as a "normal term in the development of the parent organisms, but a formation of new different organisms out of the material furnished by the former ones". Whilst believing in the origin of these bacteria from pre-existing fungi, Dr. Cunningham does not say definitely whether he regards the relationship as of a homogenetic or of a heterogenetic nature. It is, however, very worthy of note in this connection, that in every case the bacteria appeared in or around decaying filaments whose protoplasmic matter was breaking up or disintegrating.

The author says in his concluding remarks, "It is hardly safe to venture on the vexed questions regarding the origin of bacteria". We do not exactly understand what Dr. Cunningham mean by the word "safe" in this connection. We feel assured, from the work which they have already achieved, that both Dr. Cunningham, and his colleague Dr. Timothy Lewis, may be safely entrusted with such a difficult inquiry. We hope, therefore, such an expression is not to be taken as an indication that the scope of their researches is under official limitation. This question of the origin of bacteria now directly faces them, and they will be hampered in future inquiries unless they have worked it out: it is, moreover, one of immense importance for the science of medicine, so that we hope they will not receive instructions to evade it, more especially as there seems little chance of the problem being boldly faced by our sanitary authorities at home.

The consideration of Dr. Cunningham's observations on the air of sewers, in which bacteria were sometimes found, may be well postponed until more extensive researches have been made. It now only remains for us to add, that the investigations concerning the solid constituents of the air in the gaol-courts were carried on with special reference to the prevalence of certain diseases amongst the inmates of these gaols during the same periods. This part of the inquiry appears to have been conducted with great care, and is illustrated by elaborate tables and charts, to which we must refer the reader. We must content ourselves by citing the conclusion to which Dr. Cunningham arrives with reference to the number of spores or cells in the atmosphere and the prevalence of these diseases. He says: "No connection could be traced between the numbers of cells present and the prevalence of diarrhœa, dysentery, cholera, ague, or dengue; nor between the presence of any special form and such prevalence."

THE NURSES AT KING'S COLLEGE.

It is with great regret that we have heard of the complications that have arisen with regard to the nursing at King's College Hospital. We cannot, of course, pretend to understand the reasons which have actuated the Committee of Management in giving six months' notice to quit to the sisters of St. John's House, under whose care the nursing of the hospital has been conducted for seventeen years. There is probably something beyond what has appeared in public, that may suffice to explain the seemingly extraordinary action of the Committee in dissolving the connection which, by their own showing, in their annual reports and published appeals to subscribers, has been of such great value to the hospital; but the Committee certainly owe to the public a full and sufficient explanation of the step they have taken. One thing is abundantly evident, and that is, that no fault can be found with the manner in which the nursing has been performed. The spontaneous remonstrance of the medical staff to the Committee, and their assurance "that any change which would remove the nursing from the care of the sisters of St. John's House is greatly to be deprecated, and would be calamitous to the hospital and to the interests of the patients", is of itself incontestable proof that the nursing is all that can be desired; and the reasons must be powerful indeed which would justify any hospital committee in changing a system which has elicited so strongly worded an appeal from those who alone are qualified to judge of the mode in which the work has been done. We understand that the difficulty is mainly due to controversies that have arisen between the nursing and administrative staffs of the hospital. But as a hospital is a place, the primary object of which is the care and cure of the sick, not one in which it is essential that the Committee or their secretary should be able to exercise an absolute and autocratic rule, it would certainly appear to be the duty of all concerned to attempt to find some solution of the controversy that does not involve the injury to the patients that the substitution of a doubtful and untried system of nursing, for one that is admittedly good, necessarily implies. Any one who knows what the routine of hospital administration is, must be aware that it is absolutely impossible for the members of a committee, however zealous and active they may be to acquire, of themselves, any reliable knowledge of the mode in which the working of the hospital is conducted. If, as is reported, the secretary has, ever since his appointment, shown a bitter animosity against the ladies who conduct the nursing, it is not difficult to understand that there may be much truth in the allegation that the reports of what takes place have been so coloured as to give the members of the Committee an erroneous and prejudiced impression. The comfort and authority of the secretary, however, are of very secondary importance to the welfare of the patients; and it is that, and that alone, which should be made the primary consideration. The friends of St. John's House maintain—with what degree of justification we are unable to say—that there are a few active and strongly prejudiced members of the Committee of Management who have been the main agents in bringing about this unhappy difficulty, and that they have never, even yet, brought any distinct and specific charges against the sisters and their work. We know enough of public institutions to feel sure that this is, at least, a possibility; and the Governors of the hospital owe it to the institution they support by their subscriptions to sift these assertions to the utmost. We can hardly believe it to be possible that they will accept the verdict of their Committee, which we understand is far from being unanimous, without a thorough and judicial investigation of all the facts of the case. To do so would be to overlook the strongly expressed wishes of their medical staff, in a way that would be little short of insulting to a body of gentlemen who give so much gratuitous service to their hospital, and who are much more nearly interested in the nursing than any one else can be, inasmuch as on its efficiency depends the success of their work. We believe that the Council of St. John's House have strongly urged the Committee of Management to submit the whole facts of the case to the arbitration and decision of the Council of King's College, but that they refuse to do so. A body constituted like the Council of King's College is one the impartiality of which might be thoroughly depended on by both sides; and we can see no reason, except a fear of the weakness of their cause, which should prevent the Committee from adopting this suggestion. It would afford at least a prospect of solving a difficulty which all who have the interest of the hospital at heart must deeply lament; and we would strongly urge the Governors to insist on their Committee submitting the whole case to arbitration. Should this bring to light defects of management, which, it is strongly hinted, exist, it would surely be to the interests of the hospital that they should be discovered and remedied. Should the arbitrators, on the other hand, decide that the Committee have good grounds for the action they have taken, then the friends of the hospital and the medical staff will at least have the assurance, which they certainly do not now feel, that justice has been done.

SUBCUTANEOUS INJECTION OF CARBOLIC ACID.

Dr. Hueter of Greisswald has published, in the *Centralblatt für die Medicinischen Wissenschaften* for Jan. 24, an article in which he advocates the subcutaneous injection of carbolic acid as a remedy in certain local affections. He says that, although its antiphlogistic action in wounds is well known, and it has been used as an antipyretic in intermittent fever, its use as a local antiphlogistic in the form of subcutaneous injection appears not to be known. No doubt there has been a certain amount of fear, not without cause, of producing general symptoms of carbolic acid poisoning. Having this in view, Dr. Hüter did not make any experiments with the subcutaneous injection of carbolic acid in the human subject, until he had ascertained by experiments on frogs that its general action is limited to the production of changes in the red corpuscles. These experiments have been described by him in his *Allgemeine Chirurgie*, and also in the *Deutsche Zeitschrift für Chirurgie*. When carbolic acid is injected subcutaneously or into parenchyma, most, if not all, is absorbed by the lymphatics; and only small portions gradually enter the circulation, so that poisoning of the blood does not take place. On the present occasion, Dr. Hüter confines his remarks to the practical value of the subcutaneous injection of carbolic acid as an antiphlogistic remedy in local inflammatory conditions.

He uses a solution of 2 parts of carbolic acid in 100 of water. This is injected by means of a Pravaz's syringe, which holds about 0.9 gramme of the solution, or rather less than 0.02 gramme (three-tenths of a grain) of carbolic acid. The injection of two syringefuls of the solution at the same time has not been found to produce any symptoms of poisoning, nor has any darkening of the colour of the urine been observed. Dr. Hüter has not exceeded the quantity of two syringefuls at one injection; and he repeats the operation, when necessary, only after an interval of one or two days. No pain or swelling follows; the point where the needle is inserted only becomes a little tender. The injection is attended with so little pain, that it does not produce any even in small sensitive children.

The antiphlogistic action of the parenchymatous injection of carbolic acid was well marked in nearly all cases; and Dr. Hüter specially mentions some of the diseased conditions in which its effects have been distinctly observed.

In hyperplastic granular synovitis (white swelling) of the knee, the injections are made at the most central part of the joint, so that the needle touches its surfaces. The result is abatement of the pain, falling of the evening temperature, which had been persistently high, and distinct reduction of the swelling. The injections must be repeated at intervals of two or three days, according to the chronicity of the disease.

In subacute glandular swellings having a tendency to suppuration, and in inguinal and femoral buboes, the injection leads to abatement of the pain, redness, and œdema; while the glands become reduced in bulk. It is sometimes necessary to repeat the injections several times before the cure is complete.

In acute phlegmon of the subcutaneous and subfascial connective tissue, the injection is made at the periphery, as it may be calculated that the lymphatics will carry the remedy towards the centre; when the phlegmon is extensive, two injections are made at different points. The result is to produce contraction of the tissue in a few hours, with cessation of the pain. Recovery takes place without suppuration, even if this, though imminent, have not already appeared.

In traumatic erysipelas, Dr. Hüter makes an injection at different points along the edge, so as, for instance, to prevent the erysipelas from spreading from the forehead to the hairy scalp. He has, however, not yet ventured to treat the entire circumference of the erysipelas with numerous injections, so as to cut it short. Dr. Wilde of Plau has also recorded some successful cases of treatment of subcutaneous erysipelas by the injection of sulphocarbolate of soda.

Dr. Hüter attaches great importance to making the injections into the parenchyma, so that the carbolic acid may be carried into the cavities of the largest joints, into the connective tissue surrounding the vessels, and into the interior of the lymphatic glands, and there exert its antiphlogistic influence. He regards the parenchymatous injection of carbolic acid as the most powerful antiphlogistic means which we possess; neither the application of ice, nor withdrawal of blood, nor any other means short of operation, can be compared with it in this respect. He hopes that the parenchymatous injection of carbolic acid will be adopted not only in surgical practice, but in the treatment of diseases of internal organs. There can be, he says, no essential impediments to the injection of carbolic acid into the parenchyma of the lungs, spleen, liver, and kidneys; but its effects must be first tried on animals. In this case, direct injection into the veins must be avoided, lest symptoms of poisoning be induced. The needle of the syringe having been introduced, the operator should observe whether any blood escape. If it do so, the needle must be withdrawn a little, or pushed deeper; and the injection should not be made until blood ceases to escape.

The remedy appears to Dr. Hüter to be applicable in the treatment of non-malignant tumours, such as fibroma; but he has not met with a case in which it has been perfectly successful, and abstains from speaking too enthusiastically on this point. Injections may also be made in the neighbourhood of malignant tumours, especially if they act as anæsthetics, and not as irritants. He concludes with a warning against making carbolic acid injections into very vascular tissues and tumours, as poisoning may very easily be produced.

DR. R. FARQUHARSON has been appointed Lecturer on Materia Medica at St. Mary's Hospital.

DR. G. H. SAVAGE, Assistant-Physician to Bethlem Hospital, has been appointed Lecturer on Mental Diseases at Guy's Hospital.

DR. GILBART SMITH has been elected Physician, and Mr. Pugin Thornton Surgeon, to the St. Marylebone General Dispensary.

DR. ARTHUR EDIS has been appointed one of the Secretaries of the Obstetrical Society of London, in the place of the late Dr. Phillips.

DR. HERBERT DAVIES, having retired from the Senior Physicianship of the London Hospital after twenty-eight years of faithful service as Assistant-Physician and Physician to the Hospital, has been appointed Consulting Physician, and has received a warm and unanimous vote of thanks from the Governors for his long and valuable services. A court will be held to elect a physician on Tuesday, the 24th instant.

IT will be observed that, in view of the intended Annual General Meeting of the Association in Norwich early in August next, the members of the Councils of the Cambridgeshire and Huntingdonshire and East Anglian and South Midland Branches have decided to recommend the postponement of the combined meeting, which it was agreed to hold at Cambridge at the end of June next, until the year 1875.

LECTURES AT THE ROYAL COLLEGE OF PHYSICIANS.

THE following courses of lectures will be delivered during the present year, on Wednesdays and Fridays, at 5 P.M.: the Goulstonian Lectures on the Origin and Relations of New Growths, by Dr. Payne, on February 27th, March 4th and 6th; the Croonian Lectures on Functional Derangement of the Skin, by Dr. Murchison, F.R.S., on March 11th, 13th, and 18th; the Lumleian Lectures on the Influence of Bright's Disease (1) on the Heart and Arteries, and (2) in the Production of Inflammation, by Dr. Sibson, F.R.S., on March 20th, 25th, and 27th. By arrangement with the authors, as has been already stated, these lectures will be published in the JOURNAL from the authors' manuscripts.

NEW SOURCE OF FOOD-SUPPLY.

THE advance in the value of wool, and consequently in the cost of meat in Australia, has necessitated the closing of many of the meat-preserving establishments, and anxiety is felt as to the continued supply. Under these circumstances, the attention of gentlemen interested in a cheap supply of food has been directed to countries nearer home, but only recently opened to railway facilities. It was found, however, that these countries not only presented opportunities for the profitable production of meat preserved in tins, which is in course of satisfactory arrangement, but a new source of supply for fresh meat, poultry, etc., has unexpectedly been opened up. Consignments of fresh meat have been received, and invitations issued to gentlemen connected with the press and others to inspect and taste the various articles.

MONOGRAPHS ON MENTAL DISEASES.

THERE will this year, we understand, be issued from the West Riding Asylum, in addition to the volume of medical reports, the first of what promises to be an important and valuable series of monographs upon mental diseases. Dr. Crichton Browne, who will edit these monographs, has conceived the project of combining the efforts of a number of independent investigators in the elucidation of one malady, so that, by their convergent labours, the pith of it may perchance be reached. Selecting general paralysis, an obscure and very fatal disease, with well marked and tolerably parallel psychical and physical symptoms, as the subject of the first essay, he has secured the co-operation of several able associates, who will explore it from various points and in various ways. Besides the members of the medical staff of the West Riding Asylum, Dr. Clifford Allbutt, Dr. Lauder Brunton, Dr. Batty Tuke, Dr. Ferrier, Dr. Milner Fothergill, and Dr. Rabagliati are to take part in the work, and Mr. Charles Darwin has promised to supply a contribution on the physiognomy of the disease.

LIVERPOOL ROYAL INFIRMARY.

A VACANCY has occurred in the surgical staff of this institution, in consequence of the resignation of Mr. Stubbs, who retires after a long servitude, carrying with him the sincere regret and the best wishes of his colleagues, of the students past and present, and of all who are interested in the Infirmary and the School of Medicine. He has well earned, by a faithful discharge of his duties, and by his unfailing interest in all that concerned the welfare of the hospital, the repose which he now seeks. The vacancy will, we understand, in all probability be filled by the promotion of our well known associate Mr. Reginald Harrison, who for about seven years has held the office of assistant-surgeon. The laws of the hospital render an election necessary; but Mr. Harrison's claims have been so generally recognised by his professional brethren, that no opposition was expected until within the last few days, when a gentleman has come forward hitherto unknown to fame as an operating surgeon, but who bases his claim upon the fact that, beyond the ordinary qualifications of a physician, surgeon, and apothecary, he has "studied in addition—added also a knowledge of—the homœopathic mode of treating diseases," which "additional knowledge," he goes on to say in his address to the trustees, "did not deprive me of any knowledge or ability I already possessed, but it gave me additional means of combating disease, both medical and surgical." Not the slightest doubt or anxiety, we believe, is felt as to the result of the election; but it is considered somewhat annoying that a candidate whose claims have been at once acknowledged by all those of his professional brethren who might otherwise have come forward, should be subjected to the annoyance and trouble of a contest, the issue of which may be predicted with such certainty as to render it apparent that it can be but a sham fight after all. It is much to be regretted that gentlemen who hold such eccentric views of medical practice, and who have institutions of their own, where, from their own account, they practise successfully for their patients and work harmoniously amongst themselves, should waste their time and energies in hopeless attempts to thrust themselves into positions which, even if attainable, from the very nature of things must be most unsatistory to themselves and to the entire medical staff, composed as it would be of incompatible elements, and certainly not conducive to the interests of the hospital or to the welfare of the patients.

THE CHARITÉ HOSPITAL MEDICAL SOCIETY.

A SOCIETY of this name has just been formed, the members of which are the medical staff of the Charité Hospital in Berlin and of the institutions connected with it (the Pathological Institute and Polyclinics). The objects are, the scientific application of the materials supplied by that large hospital, and the promotion of friendly intercourse among the medical officers. The first meeting was held on January 15th, when the rules were agreed on, and the following officers were elected: *President*, Dr. Mehlhausen, medical director of the Charité; *Vice-*

President and Secretary, Professor Henoch; *Treasurer*, Herr Spinola, managing director of the hospital. Papers were read by Dr. Traube on Colitis (with exhibition of specimen), and on Acute Peritonitis; by Dr. Bardeleben, on a rare Fracture of the Skull (with exhibition of the patient after recovery); and by Dr. Westphal, on Lead-Colic (with a microscopic demonstration). By the rules of the Society, no communication must exceed fifteen minutes; and each speaker in the discussion is limited to five minutes, unless the time be extended by a majority of the votes of the Society. The meetings are to be held twice a month (on Thursdays), from 7.30 to 9 P.M. At the end of the first meeting, the members supped together.

OUTBREAK OF YELLOW FEVER.

THE *Western Morning News* publishes a telegram from its Bermuda correspondent reporting a fearful outbreak of yellow fever on board Her Majesty's ship *Aboukir*, at Jamaica. Mr. Drew, secretary to Commodore de Horsey, Navigating-Lieutenant Thompson, and twenty-five men were dead. Nearly every case had proved fatal, the fever being of a very malignant type. The *Aboukir* had on board two hundred supernumeraries for the Pacific, in addition to her crew.

ACCIDENTAL POISONING BY CROTON OIL.

THE Liverpool coroner lately held an inquest on the body of Margaret Walker, 53 years of age, wife of a labourer. Deceased, who had been ailing for some months, was under medical treatment. One day, she took, in mistake for a cough-mixture, a lotion containing croton oil; it was labelled "poison", but the deceased was not able to read. It appeared that no doctor had been called until shortly before her death; and the jury, in returning a verdict that deceased was accidentally poisoned, censured the husband for not calling medical assistance at an earlier period.

AERATED WATERS.

THE communication which we publish from an eminent Fellow of the Royal Society, on the result of his examination of some artificial aerated waters—soda and seltzer waters—sold in "syphon bottles," discloses, in all of them, dangerous contamination with a poisonous metal. There was quite enough lead in all the waters which were examined to undermine the health. When we examined the ordinary "aerated mineral waters" of commerce some time since, we found that they were of the most various composition, and that they only occasionally corresponded with what was implied in their name. A great many of them, too, were made with well-water which was anything but pure, and some of which was dangerously impure. The discovery of lead as an habitual constituent in certain "syphons"—we cannot suppose, strong as is the evidence, that it is present in all—is an unpleasant addition to our knowledge, and may possibly plead rather strongly in favour of the use of a pure natural effervescent water, such as the sparkling water from the Apollinaris Brunnen, which is now coming into use, and in favour of which an eminent authority, Dr. Hermann Weber, writes strongly to us this week.

THE SEQUEL OF AN EPIDEMIC.

MR. SAMUEL PEED, Chairman of the Urban Sanitary Authority of Cambridge states that the typhoid outbreak at Cambridge is subsiding: only two or three fresh cases have occurred in the last fortnight, all the previous cases being convalescent; and there were five cases from the town remaining in the hospital. He believes that this report will give much satisfaction to the inhabitants of Cambridge and the public generally, especially to those who have friends at the University. Possibly it may, to persons who know nothing more of the facts than appears in that short statement. To those, however, who know all the facts, and can appreciate the gravity of a state of things such as exists under the nose of the sanitary authority of Cambridge, this report can only suggest the most lively apprehensions. It has already been abundantly demonstrated by the reports of the British Association, and by the reports of the BRITISH MEDICAL JOURNAL, followed by those of the *Lancet*, that the drainage-system of the town is one which is eminently fitted—nay, which seems specially devised—for the purposes of storing and diffusing the germs of typhoid; and until the Urban Sanitary Authority takes steps, in conjunction with the Improvement Commissioners, to reform the system of drainage, and to prevent the sewage from being poured into the river in immediate proximity to the Colleges, we can see no reason whatever for any satisfaction at Mr. Peed's report, but, on the contrary, very great reason to apprehend that, as the warm weather comes in, typhoid may become sporadic, if not endemic, in Cambridge.

UNQUESTIONABLY VEGETABLE.

AT Guildhall, Mr. Baylis, the solicitor to the Commissioners of Sewers, applied to Alderman Carter to condemn a quantity of coffee which had been seized as unfit for human food. Mr. Job Payne said that he was one of the sanitary inspectors of the City of London. The previous day, he seized thirty-one bags of coffee and three chests of coffee and dust called coffee, on the premises of Mr. Syers, 44, Mincing Lane. The coffee was unsound and unfit for human food. Mr. Charles M. Tidy said that he was Professor of Chemistry at the London Hospital, and Officer of Health to the parish of Islington. He had tested the samples, which were unfit for human food; they were unquestionably vegetable. Mr. Syers said the coffee was sold to go abroad, and more was wanted. He had drunk it himself. It was not unfit for food. He had seen worse coffee sold in Mincing Lane. Alderman Carter said that, for the credit of Mincing Lane, he hoped that he was mistaken. What was the value of it in its present condition? Mr. Syers said 25s. per cwt. Alderman Carter, after further discussion, ordered the coffee to be destroyed.

THE SANITARY STATE OF LISBON.

IN his address at the opening of the session of the Medical Society of Lisbon on January 10th, the President, Dr. Arantes Pedroso, spoke in very plain terms of the neglect of hygiene in Portugal. The state of the country, he said, in relation to public hygiene and medical police, was disgraceful; but it was the first sign of progress to confess this failing, and to perceive that Portugal was far behind other nations. With regard to Lisbon, reason and science affirmed that its condition must be very unsanitary.

> "The system of sewerage and cleansing in the city is imperfect, absurd, mephitic, and altogether detestable. The general sewerage is in great part miserable, irregular, made to suit the circumstances of the moment, without design, method, or plan, formed of the worst materials, without a rapid outflow, with many junctions which impede the passage of fluids, arrest organic matter and infect the subsoil, without ventilation, and communicating with the interior of houses, introducing into them the products of decomposition. The drains are made of permeable materials, and are in other respects formed in a defective and absurd manner, against which the most elementary principles of hygiene protest. The atmosphere of the city is almost always vitiated, charged with miasma, fetid, and unbearable. The bank of the Tagus, from Beato to Alcantara, is ornamented with a most offensive mass of filth, consisting of human and animal excreta, the refuse of manufactories, dirty water, and innumerable bodies of dead animals. Finally, most of the houses in the city are absurdly built dark dwellings, into which the entrance of air and light is a favour."

A city in such a state, notwithstanding the high position which it once occupied in the history of the world, and notwithstanding the progress which it had made in some directions in modern times, could not aspire to the honour of a position among modern states in the matters of public hygiene and urban police.

> "We have still much to undertake and to do to make Lisbon healthy, well policed, and decent. . . . It will not be enough to have a system of drainage which shall respect public decency; to prevent the streets of the capital from being inundated with all manner of filth; to relieve inhabitants from the disgusting and brutal spectacle which Lisbon, in imitation of the mediæval cities, has presented to us, and which indicates the decadence of a people content to live in such a way —a spectacle which the legislator of the Israelites sought to avoid from regard to hygiene and public decency. . . . Without an abundant and

well arranged water-supply, it is impossible to carry out the principal precepts of public and private hygiene."

The water-supply of the city, he said, was at the most eighteen *litres* a day for each inhabitant—a quantity utterly inadequate for all purposes, public and private. Contrasting this supply with that of other cities, Dr. Pedroso said that the proportion to each inhabitant in London was 130 *litres* a day; in New York, 508; in Marseilles, 500; in Montpellier and Nantes, 60; in Bordeaux, 170; in Madrid, 119; in Brussels, 80; in Paris, 100, soon to be 200 or 230. He believed that the provision of a good supply of water would be at once appreciated by the people, and that the "national hydrophobia" now prevalent would be removed. No legal or religious authority would be required to enforce its use.

THE PUBLIC HEALTH.

DURING the week ending last Saturday, 5241 births and 3491 deaths were registered in London and twenty other large cities and towns of the United Kingdom. The natural increase of population was 1750. The mortality from all causes in these towns was at the rate of 34 deaths annually to every 1000 persons living. In the metropolis, 2318 births and 1411 deaths were registered, the former being 243, and the latter 323, below the average. The 1411 deaths included one from small-pox, 48 from measles, 13 from scarlet fever, 7 from diphtheria, 53 from whooping-cough, 20 from different forms of fever, and 8 from diarrhœa; thus to the seven principal diseases of the zymotic class 150 deaths were referred, against numbers declining steadily from 244 to 171 in the five preceding weeks. The deaths referred to diseases of the respiratory organs and phthisis, which in the seven preceding weeks had decreased from 1112 to 464, rose again last week to 512, which were, however, 102 below the corrected average weekly number; 248 resulted from bronchitis, 150 from phthisis, and 71 from pneumonia.

THE LEICESTER INFIRMARY.

IT has been proposed to increase the honorary staff of the Leicester Infirmary from six to eight, by the addition of a physician and a surgeon. This proposal has been met by a remonstrance from the medical officers, which appears to us so reasonable, so temperate, and so dignified, that it can scarcely fail to have great weight with the governors. points out that "the average number of in-patients to each is now only twenty-six or twenty-seven, and the acute cases are barely sufficient to sustain professional interest. The rotation of days of admission is once in three weeks; the proposed addition would reduce it to once in a month only, and leave the medical officers in charge of merely convalescent cases the latter half of each period of four weeks". There are only two ways of securing the services of the highest class of practitioners—either by adequate remuneration, or by the opportunities afforded them of acquiring valuable professional experience. So long as the staff is honorary, no step should be taken which will impair the professional value of the appointments, otherwise the efficiency and reputation of the infirmary are sure to fall off. But this is not the only ground upon which the remonstrants rest their case. They point out that the impulse has come from the out-patient department, "and the difficulty in that has arisen from the fact that tickets are issued in such numbers to the subscribers, and that they are given away so indiscriminately to applicants". The honorary staff very properly, as it appears to us, maintain that there is no sufficient reason for adding to the number of the medical officers. They remind the governors that there is everywhere a growing feeling in favour of curtailing rather than enlarging out-patient departments; and they assert, with great justice, "that in these days of high wages and independence of the working classes, self-supporting dispensaries and Poor-law attendance should almost, or entirely, meet all out-patient requirements; and that indiscriminate and gratuitous supply of medicine is morally injurious in many instances, as discouraging to forethought, self-reliance, and provision for sickness." With these sentiments we entirely agree, and we are confident that, if the governors refuse to listen, they will be doing no real benefit to the poor, while they will be inflicting an injustice upon the medical men. There is already one provident dispensary in the town of Leicester, which has now more than 13,000 paying members, but the population of the place is over 100,000. Rather than to increase the out-patient department of the infirmary, we believe it would be better to establish a second provident dispensary, and perhaps to affiliate it to the hospital in the manner which has often been recommended. A town of the size and character of Leicester ought to be well able to maintain two, if not three, such self-supporting medical institutions. We can hardly doubt but that the governors will allow themselves to be guided by the memorial, and that they will decline to develope further the old system, which has long been *sub judice*, and which is now "condemned equally by the philanthropist, by the medical profession, and by the discriminating public".

MEDICAL PRIVILEGES.

ONE of our Scottish members, Dr. A. J. Kinloch of Delside, though a landed proprietor, is a registered practising medical man, and was lately compelled to act as a juryman. On looking into the subject, it has been found, we are informed, that any medical man in Scotland is, by a recent Act, liable to be summoned to act as a juryman. Our old medical privilege has been taken away. The Aberdeenshire Branch means to take up the subject vigorously, and bring it before the Association and Parliament at an early date. We beg to call the attention of all the members of the Branch, and the other Scotch members, to the communication which Dr. Kinloch has sent us.

IRELAND.

THE IRISH ELECTIONS AND THE MEDICAL PROFESSION.

So far, the Irish elections have contributed three professional names to the roll of the new Parliament—Dr. Brady returned at the head of the poll for Leitrim, Sir John Gray for Kilkenny, and Dr. O'Leary for Drogheda. The two former are known as worthy supporters of professional interests. Irish medicine claims another representative in the senior member for Glasgow, Dr. Charles Cameron, a distinguished medical graduate of Dublin University. It is remarkable that, of the few representatives of the press returned to Parliament, two, Sir J. Gray and Dr. Cameron, should be Irish medical men. Dr. Evory Kennedy has been unsuccessful in the election for the county of Donegal.

DEATH REGISTRATION IN DUBLIN.

SCARLATINA still continues to prevail as an epidemic in Dublin, sixteen deaths being registered during the last week of January. Since we last referred to this subject, the mortality from this disease has again increased. The deaths registered during the last four weeks of last year were 12, 4, 8, 9 respectively, having risen on a previous week to 23. Since the commencement of the year, the rate has been again increasing, the number of scarlatina deaths for the first four weeks being 8, 18, 12, and 16 respectively. Fever has again been on the increase, the prevailing form being typhus.

THE CONJOINT EXAMINATION SCHEME FOR IRELAND.

THE Committee of Reference appointed under the Conjoint Examination scheme for Ireland have, after long and careful consideration, agreed upon a report as to regulation of examination and curriculum of education to be required of the candidates for examination under the scheme. The report will, we believe, be presented to the co-operating authorities during the ensuing week. The Queen's University still holds aloof from the scheme; upon what grounds it is difficult to see, as the London University has even taken the trouble to obtain power from Parliament enabling it to co-operate in the English scheme.

THE IRISH APOTHECARIES AND THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE recent deputation of the Irish Apothecaries' Company to the Marquis of Hartington has been brought under the notice of the College of Physicians; and the matter has been deemed of such importance, that the College has appointed a committee to take the matter into consideration, and advise the College as to the propriety of action in the matter.

REPORTS
ON
SANITARY ENGINEERING IN HOUSES, HOSPITALS, AND PUBLIC INSTITUTIONS.

BY WILLIAM EASSIE, C.E.

X.—WARMING AND VENTILATION.—(*Concluded.*)

IT would be presumptuous in any engineer to explain in a journal such as this what is meant by ventilation. The medical profession has made this a study, nothing being of more consequence than the removal of impurities from the atmosphere of a sick room or a hospital-ward. The whole matter has, moreover, been exhaustively treated by Dr. Parkes in his most valuable work.* My remarks will simply refer to the ventilation consequent upon the combustion of fires and lights. A sound general knowledge of the best means for the withdrawal of the foul air which these engender is not common amongst us. There are thousands of dwellings in every town and city constructed as if man had been created expressly for the house, not the house for a man. It is especially so with fireplaces; the air would appear to have been intended for the use of the grate, not for the benefit of the occupants of the house.

We may at once assume that both fresh-air inlets and foul-air outlets are required in every room. Where inlets are unprovided in a room heated by a common fireplace, the air to support combustion is drawn down to the fire through the flue which was intended for the withdrawal of the smoke; and when this incoming air is *blown in* by the wind, the ascending smoke is puffed into the room. But inlets of cold air from without at carpet-level prove intolerable, and unwarmed air is best brought in about eighteen inches below the ceiling. The inlets may be distributed round the room; but none of them should be so close to the foul air outlet as to cause the fresh air to be at once led off. There is less risk of draughts if the main inlet be placed in the wall opposite the fireplace, but a great deal depends upon whether the air is led into the room direct from the outer air or borrowed from a passage. The best inlet is the upturned louvre pattern, fitted with a suitable regulator. If these pure-air inlets be made equal to twice the sectional area of the flue, there will be no chance of draughts.

A room heated from an ordinary or unventilating fireplace by radiation only, greatly varies in temperature at different parts of the room, and, according to Dr. Parkes, as much as from 4 deg. to 6 deg. Fahr. The variation of temperature in the different portions of a room heated by warm air from the Galton stove does not exceed 1 deg. Fahr. This is a strong recommendation of the ventilating grates. With the latter grates, there is also a perfect intermingling of the air in the room with the warm air passed in from the air-chamber. As a general rule, the thermometer will read the same at floor, at window, and at ceiling heights. It is very different with an ordinary fireplace. An experiment was made in February last year by Dr. Russell of St. Bartholomew's Hospital, in a room 15 ft. by 13½ ft. by 10½ ft. high (2,126 cubic feet of space), with the roughly fitting doors and windows closed, and with a fire and three gas-burners alight. Two persons only were in the chamber making observations, and thus the conditions were exactly the same as in thousands of houses during the winter season. After three hours had elapsed, the temperature at nine inches below the ceiling had risen 17.5 deg., at five feet above the floor-line it had risen 15 deg., and at floor-level 4 deg. above the temperature taken before the doors and windows were shut, and when the room was filled with fresh air.

A room requires, as well as an inlet, a foul-air outlet to be provided, which should be as near the ceiling as possible, otherwise the air will be respired over and over again. Such an outlet would be an Arnott's or other valve fixed in the chimney-flue at the top of the room. This is not quite an automatically working cure; and there is, moreover, a danger of cold air and even smoky down-draughts when the smoke-flue is pierced. A brick air-flue, say 9 in. by 4 in., should therefore be built alongside the smoke-flue, curving with it and terminating with a suitably large air-brick under the chimney-cap. If such a separate flue be fitted up with a grating near the ceiling, the rarefied air in the flue will maintain a constant ventilating action. The products of combustion from the gaseliers can also be led into the same flue. At *b*, fig. 103, is represented on plan a terra cotta smoke-flue and foul-air shafts combined, which is much used, especially in the North, where stone is abundant, and where they can be inserted in thick walling. They would quite divide an ordinary brick-wall and destroy the bond. When these are piled up sufficiently high in the work, a length is introduced, having a piece cut out, in order to receive a valve or grating, as shown in elevation at *a*.

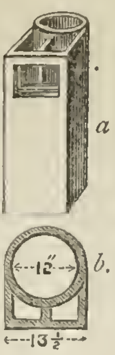

Fig. 103.

Such outlets in the smoke or foul-air flues are not, according to some, absolutely necessary when ventilating grates are adopted, because most of the foul air is burnt in the grate; they will, however, be found indispensable in the summer time, when the fires are not lighted, and should, indeed, be always provided when building a house. Sometimes a tenant will not use ventilating grates, but will replace them with more showy registers, in which case he would have to insert a valve in the smoke-flue, but with a certainty of blackening his cornice. A separate foul-air shaft, which properly takes advantage of the heat passing up the chimney, cannot be built afterwards, except at a very considerable expense.

Another wise thing is to provide in the walls, at various parts of the room, a shaft four or five inches square, leading up to the top of the house, and terminating outside with an air-brick or down-draught preventing valves. These flues are easily built, by the bricklayer drawing up a piece of wood scantling as the work proceeds. If a room be very large, and there be only one ordinary fireplace, the outlet at the chimney-breast will be insufficient to remove the respired air on a close summer day; and these auxiliary flues, fitted up with a valved opening at ceiling, can be made to assist in this work by simply lighting a jet of gas in one or two of them just above floor-line. In a bitterly cold winter, too, such a large room cannot be heated by one unventilating fireplace, and such a shaft will suit admirably for the accommodation of the gas calorigen, which I gave at fig. 102. I have frequently seen large rooms thoroughly heated in this way, a common radiating grate being supplemented by a scientifically constructed ventilating stove.

The ventilating fireplaces do not seem to interfere with the natural currents of air in a room. In a place heated by a good ordinary fireplace, and when doors and windows are closed, the air rushes from the foot of the door along the floor towards the fire; part passing to the fire itself and part being carried up the chimney-breast, then across the ceiling, down the walls opposite, and across the floor to the fire again. When the fire is fed with exterior air, by way of the underside of the grate, etc., the current of fresh air from the door is not required, and part of the air which enters from under the grate passes up the chimney, the remainder being circulated in the room in the manner before mentioned. When ventilating fireplaces are in use, the air follows the same course. For instance, the entering air, warmed in the chamber behind the Galton grate (fig. 97), is passed into the room through the ventilator near the ceiling, and this freshly warmed air is then blown along the ceiling to the walls opposite, down which it descends and flows along the floor to the fire. The warmed air takes a similar course, whether it proceeds from the front of the chimney-piece, as drawn at fig. 98, or from the orifice on the top of the calorigen, sketched at figs. 100 and 102.

The foregoing remarks will apply to house or cottage alike, whether the ordinary grate, air-supplied grate, or ventilating grate be adopted; but it may be called *single room treatment* only. The majority of the better class of houses are now provided with entrance halls, etc.; and if the cold air be allowed to fill them each time the front door is opened, this cold air will penetrate into the sitting-rooms, and much of the benefit to be derived from the use of improved contrivances within them will be lost. There can be no question, then, that in winter, rooms should receive their air-supply from a general lobby constantly replenished with pure warmed air. When the door of a room is open, there can then be no sudden rush of cold air upon the inmates. It might not be necessary to build a fireplace or erect a stove in the vestibule, as well as in the hall, in order to prevent a rush of cold air into the lobby when the front door is opened; but it is certain that to render a house comfortable in winter, the air in the passages should be heated by a contingent of warm air. The best stove for the purpose would be a calorigen stove, but coils of hot water would afford the completest means of heating hall and passages. If considered advisable, such heat could be led into the adjoining rooms at skirting level through suitable gratings. When coils are used, they are always covered over with fixed ornamental gratings, and the dust drives through the openings, and, lodging on and around the heated pipes, taints the air. These casings should run on wheels or castors, and so enable the servants to sweep all round the pipes.

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* *Manual of Practical Hygiene.* Fourth edition. London: Churchill. 1873.

I have noticed *single room* heating, and also the warming of a few chosen rooms from a general lobby or hall. The ventilation of each of such rooms will, however, require separate attention, and cannot be made general. It remains now to notice a system of warming and ventilating which shall include the whole house, and which shall not depend upon the individual action of any particular portion of such house, besides being to a great extent automatic. There has been no lack of inventions, both at home and abroad, which claim to have accomplished all this; but many of them are based upon untried calculations, and appear, moreover, to be too costly for general use. The most sensible system of whole-house treatment which I have noticed is that explained by Drs. Drysdale and Hayward,* who have erected residences in Liverpool, in which the system is carried out. For the details, however, the work itself must be consulted. Fig. 104, which is a reduced section of Dr. Hayward's house, will explain this plan of which I speak. We will suppose that pure fresh air has been admitted by the primary inlet, filtered through a canvas screen, and heated by a coil of hot-water pipes in the basement or in the lobby. The next thing is the question of the inlets of this air into the rooms, and these are provided directly from the lobby, and controllable by valves, in order to temper the supply to the varying number of occupants. The foul-air exits are situated at the top of the rooms, and take the form of flues, which run up an inner wall to a foul-air chamber at the top of the house, connected with which is a common shaft kept permanently heated. The air in this common abstraction-shaft or flue can be kept at a proper temperature by a jet of gas, or a few coils of hot-water pipes brought from the boiler which heated the coil in the lobby. In the sketch given, this flue, after collecting the vitiated air from each room, closet, and gaselier, is brought down to below the floor of the kitchen, and carried up behind the fire, round the smoke-flue, and out at the chimney-top. An indispensable matter is the emptying of all the flues of the house into the intermediate foul-air chamber, and thence into the permanently heated abstraction-shaft, which sucks equally from every room, and is so proportioned to the size of the house as to change the air in it every twenty minutes. A study of the arrowings will render sufficiently clear much which I have not explained.

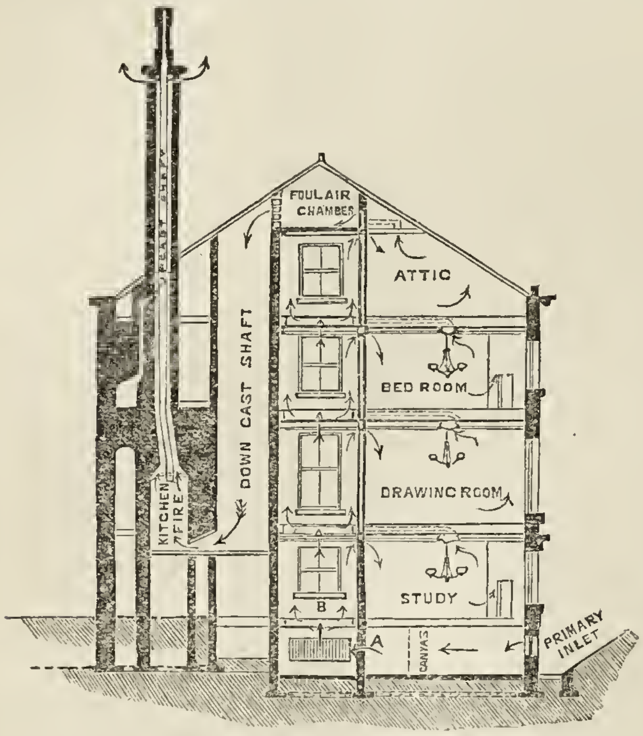

Fig. 104.

Another method of ventilating the whole of a house by means of a single apparatus has been introduced in New York by Dr. Griscom. It consists in utilising the chimney of the hot-air stove for the withdrawal of the foul air into supplementary flues adjoining those which convey the warmed air. As seen in fig. 105, each hot-air opening occurs near the skirtings of the rooms—viz., at points 1, 1, 2, 2. Sliding apertures are also fixed close to the ceilings, which act as outlets for the vitiated air which is contained in the gradually enlarging flues, and which is on its passage to the chimney-top.

If simple flues were employed to renew the air of a room, it is thought that the air which they would contain might be either colder or heavier than than that of the rooms themselves, and might, consequently, produce an effect contrary to that wished for. The chief advantage claimed for the above system is the ease with which a constant action is maintained. It has also the advantage of being independent for each room in the house, of working during the night, owing to the heat stored up in the stove, and of acting in summer and winter alike, if only the inlets and outlets are attended to. It must be borne in mind that this attention on the part of some one or another is indispensable. As I have elsewhere said, with reference to the whole house system of warming and ventilation, the condition of pure comfort and perfect heathfulness is dependent upon the supervision of the owner or servants, according as the varying weather, the wind, or the atmospheric pressure, makes such attention necessary. Some one must govern the working of warming apparatus in proportion to the coldness outside, attend to the valves which regulate the current, according to the number of inmates; know how to occasionally isolate rooms, and how at times to dirvest the bulk of the fresh warmed air, for instance, into the bedrooms during a severe winter night.

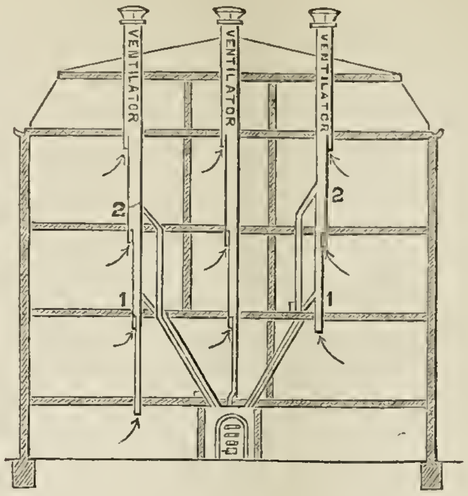

Fig. 105.

I have not referred to the quantity of fresh air required in order to insure good health; but it may be taken for granted that the following is a safe scale for this country.

	Cubic feet of space required per head.	Cubic feet of fresh air required per head, per hour.
In dwellings	750	3000
In schools (per scholar)	250	1000
In workshops	Various	2000
In stables (per horse)	1500	2500
In cow-houses (per cow)	1000	1500

This air, as we have seen, is moved and changed either by natural or artificial ventilation: a great deal depends upon the size of the inlets through which the air is allowed to enter. In deciding upon the size of the inlets, care has to be taken that they are not so small as to cause the air to rush in too quickly and so engender draughts. The air should be changed at least four times an hour—that is, a quantity of fresh air equal to the cubic contents of the room should find its way in and out of the house or room every twenty minutes. The proper size for the outlets which lead into the abstraction-flues have also to be carefully computed. The superficies, height, and shape of a room, must always be taken into consideration.

Dr. Parkes deplores that there is no agreed standard amongst medical men as to the amount of fresh air required under varying circumstances and conditions either by man or beast. The public may be certain that unless such a standard is arrived at by the faculty, and fixed by the legislature, that considerable blunders will continue to be made by the constructive professions. Surely an uniformity is as much wanted upon this question as upon weights and measures, and upon coinage.

THE CASE OF MR. JACKMAN.

THE following subscriptions have been received by the Rev. J. Reed of Swimbridge up to February 7th:—

	£	s.	d.
Sums under £1 received in the district	6	18	0
Dr. H. T. Sylvester	5	0	0
J. N. Pyke-Nott, Esq., Bydown	3	3	0
T. Law, Esq., Barnstaple	3	3	0
Dr. H. Kinglake, Taunton	3	3	0
John Smyth, Esq., Swimbridge	2	2	0
Sir W. Jenner, M.D., London	2	2	0
Dr. Shapter, Exeter	2	2	0
T. Smyth, Esq., London	2	2	0
Dr. James Ford	2	2	0
Rev. J. Russell, Swimbridge	1	1	0
Dr. James Duncan	1	1	0
T. Carr Jackson, Esq.	1	1	0
Dr. Walshe, London	1	1	0
Dr. E. B. Gray, Oxford	1	1	0
H. Morgan, Esq., Lichfield	1	1	0

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* *Health and Comfort in House-building* (London: Spon. 1872); "Some of the non-Medical Duties of the Physician", paper by Dr. Hayward, 1873.

E. Nason, Esq., Bampton	1	1	0
Dr. Prance, Plymouth	1	1	0
Rev. R. K. Kestell-Cornish, Landkey	1	0	0
T. Mock, Esq., Barnstaple	1	0	0
S. C. Gray, Esq., Oxford	1	0	0
J. Questior Tamlyn, Esq., Horswell	1	0	0
S. J. Noake, Esq.	0	10	6
Dr. Sydney Ringer, London	0	10	0
A Brother Practitioner	0	10	0
Rev. A. W. Loveband	0	10	0
R. Greene, Esq.	0	10	0
In small sums of five shillings and under	1	8	0
	£48	3	6

The following sums have been received at the office of the JOURNAL.

	£	s.	d.
Dr. W. C. Begley	2	0	0
F. Le Gros Clark, Esq.	2	0	0
Dr. Connel	1	1	0
Dr. Eastwood	1	1	0
J. Ewens, Esq., Cerne Abbas	0	5	0
J. W. Jeans, Esq., Grantham	0	10	0
Messrs. Norton	1	10	0
Dr. A. P. Stewart	0	10	6
A. T., *per* Dr. Stewart	0	7	0

ASSOCIATION INTELLIGENCE.

NORTH WALES BRANCH.

THE next intermediate general meeting of this Branch will be held on Tuesday, the 24th instant, at 11.30 A.M., at Cambrian Hotel, Pensarn, Abergele, under the Presidency of R. Davies, Esq., Llanfairtalhairn.

The dinner will take place at 2.30 P.M. Tickets, 6s. 6d. each, exclusive of wine.

Gentlemen having papers or cases to communicate, and who purpose dining, will be good enough to send early intimation to the Honorary Secretary.

D. KENT JONES, *Hon. Sec.*

Beaumaris, February 3rd, 1874.

CORRESPONDENCE.

INSTRUCTION OF MIDWIVES: *POST PARTUM* HÆMORRHAGE.

SIR,—If you will permit me, I will answer in a single communication two letters contained in a recent number of the BRITISH MEDICAL JOURNAL referring to me. One from Dr. Aveling, and the other from Dr. Barnes; the former disapproving of my remarks on the subject of the education of midwives; the latter referring to what I wrote about the treatment of *post partum* hæmorrhage.

In answer to Dr. Aveling, I must repeat that I cannot understand anything more derogatory to the position of the Obstetrical Society, as a scientific body, more contrary to its functions, or more offensive to the medical profession, than the desire to reintroduce the attendance of women in midwifery, which was so many years ago repudiated as bad. Any one having the least knowledge of the world will be aware how easily women possessing any kind of certificate can impose upon the credulous; and I can imagine no greater nuisance to the medical men practising there than the presence of such women in a country town. It is true that the poor are at present unfortunately obliged to be attended by women, but, as their attendance is confined to the most natural labours, and as the promoters of the better education of midwives profess to desire to restrict these women within the same limits, there is no need of Government coercion or of the authority of the Obstetrical Society in order that they may be educated enough to perform their duties. If a little further education be really necessary, let it be obtained in the hospitals, where now, in my view, they are amply taught; and do not let us see the humiliation of medical men of position recording their testimony to the efficiency of women as medical advisers, which in fact they will be doing. Whatever explanation may be given, it is nothing less than the reintroduction of women to midwifery practice, and can any one doubt the combination of the two circumstances—this movement, and the one for the introduction of female practitioners as Fellows of the Obstetrical Society? My belief is that the movement has already, with other undoubted circumstances, irreparably damaged the Obstetrical Society, and that no long time will elapse before the Society collapses. Let the question be tested by the opinion of its Fellows or of medical men at large, and I am certain my opinion will be confirmed. Although a very humble Fellow of the Society, having greater regard for my own reputation than the Society has for its position, I have ceased to belong to it; and I will call on all who have any regard for the dignity of their class, to oppose any such steps as those now being advanced. Let them take the thing in hand, and show by their opposition that they are not intending to allow a retrograde movement to detract from the position they hold as members of a profession of the highest order.

In answer to Dr. Barnes, I will ask him to look again at my paper to which his letter is the reply, and he will find that, although I wrote that I had witnessed the mischief of the use of perchloride of iron, I did not write that I had seen death result from it. I cannot therefore describe the *post mortem* appearances in the order he suggests; but as it appears that he himself, fortunately for science but not for his patients, has really had opportunities, such as he imagined I had had, of witnessing the fatal effects of the perchloride, it would be most interesting if he would record the *post mortem* appearances of all his cases in the order he proposes. Dr. Barnes writes, "who has not seen women die bleeding and swallowing brandy to the last"? To this I can only reply, that I myself have never seen a woman die from uterine hæmorrhage when under my own care, either in hospital or in private practice, under any circumstances whatever; and if Dr. Barnes had used brandy, as advocated by me *at the first*, he would not have witnessed so many dying women drinking it "*at the last*". In making this reply to Dr. Barnes, I am unable to resist alluding to Dr. Snow Beck's able papers upon the subject of perchloride injection, and thanking him for them. He is well able to defend himself from any accusation of inaccuracy. No one will disbelieve his statements. His arguments on the use of the perchloride are based on the clearest conviction, and his exposition of his views is too clear and too convincing not to be appreciated by all who read it.

I am, etc.,

G. T. GREAM, M.D.

THE OBSTETRICAL SOCIETY OF LONDON AND MIDWIVES.

SIR,—Dr. Aveling has devoted so much time and labour upon what may be called "the midwife question," that anything from him on the subject deserves careful consideration. I have, however, the misfortune to differ so widely from some points in his letter, that I feel bound to notice them. My sympathies are quite with Dr. Gream and Dr. Tyler Smith, that "midwives are a mistake," and an attempt to enforce their education, examination, and legal recognition, if it succeed, will prove "derogatory alike to the profession, to science, and to the Obstetrical Society." I base my opinion upon the full and able disquisition on the subject published by Dr. Tyler Smith in 1849, confirmed, as it has been, by my subsequent opportunities of observation in this populous town. Dr. Aveling admits that Dr. Smith's "argument against midwives was a good one," but adds, that "he completely altered his opinion on the subject." Surely, in changing his mind, he does not necessarily change a good argument into a bad one.

Dr. Aveling assumes "that midwives are a necessity," because they are so largely employed; but that is begging the whole question. As well might he affirm that prescribing druggists, bonesetters, and other pseudo-practitioners, are a necessity, and ought to be improved and licensed because many persons will seek their aid.

I fail to see the analogy of the comparison between obstetric practitioners and workers in the church or in the army; and, as regards the latter, I would remind him that, although it is true that every soldier is not a general, yet every private is, or ought to be, a trained and competent soldier; and likewise, although every accoucheur cannot be in the first rank of the profession, he ought to be, for the safety of his patient, a properly educated and competent practitioner. But we are told that midwives are only to be entrusted with natural labour. Now, as no labour can be defined to be natural until it is completed; and, as some of the most perilous complications arise suddenly at various stages of its course, how can it be predicted, with any reasonable certitude, that a given case under the care of a midwife will prove a natural labour?

In flooding, occurring, as it generally does, suddenly, the life or death of the woman would often mainly depend upon the competency or incompetency of the practitioner by her bedside at the moment. It has been my misfortune to be called by midwives, as fairly qualified as such women can be made by the Obstetrical or any other society, only in time to see the patient die from hæmorrhage, which, *perhaps, at least*, might have been controlled by the prompt treatment which an educated practitioner alone can apply with efficiency.

One of the most eminent of the Fellows of the Obstetrical Society, although warmly advocating the recognition of midwives, in the heat of debate, in his cooler moments when writing his opinions for the perusal of the profession, states :—"Nature, though always requiring skilful watching, in the majority of cases, does not want active assistance. But the cases are many in which pain and agony may be averted; in which positive danger has to be thrust aside; in which action must be prompt and skilful." (*Barnes's Lectures*, p. 3.)

The College of Surgeons very properly grants a diploma in midwifery to no person, male or female, who has not received a scientific and medical education. Obstetric teachers are complaining of the comparative inefficiency of the present standard of obstetric teaching in our schools, and the Medical Council have been appealed to on the subject. It has been left to the Obstetrical Society to advocate a lowering of the standard, virtually declaring to the profession and the public that the management of natural labour can be taught to those who are ignorant of the elements of anatomy, physiology, mathematics, or mechanics, carrying us back to the dark ages of medicine, when physicians were monks, surgeons were barbers, and accoucheurs were ignorant women. What would be thought of a scheme for training as physicians or surgeons men or women by giving them an imperfect and incomplete instruction to qualify them to treat minor injuries and diseases? And yet this is precisely what it is proposed to do in the obstetric department of the profession.

The least creditable part of the scheme, in my opinion, is, that it contemplates that the services of these pseudo-obstetricians are to be mainly devoted to the exigencies of the poor.

It has been said, that it is the very rich and the very poor who can command the highest professional aid in sickness; but, as regards child-birth, the poor must be content with such attendance, as but very few, if any, of their more fortunate fellow-women will venture to risk their own safety. If the scheme as suggested by another correspondent, Mr. F. W. Lowndes, is to work its own cure by exterminating the race of midwives, the experiment will prove, not simply useless, but highly dangerous to the safety of the parturient women of this country. So far as it may succeed in creating an inferior class of recognised obstetric practitioners, and thus divorcing obstetric practice from scientific medicine, so far will its influence be to obstruct the progress and to degrade the position of obstetrics as a branch of medical science.

I cease, not because the arguments are exhausted against this well-intentioned, but, as I conscientiously believe, grievously mistaken effort on the part of the Obstetrical Society of London, but because time and space warn me to a close. I look with much interest for the verdict of the great body of accoucheurs throughout the country, whose views have not yet been expressed, and which cannot, of course, be adequately known and represented by the Society in London.

I am, etc., A. B. STEELE.

Liverpool, February, 1874.

THE APOLLINARIS WATER.

SIR,—Having received numerous inquiries during the last few months regarding the nature and action of the Apollinaris water, I venture to send you a few remarks, as they may be of service to members of the Association:

The Apollinaris water from Apollinarisquelle, near Neuenahr, in the Ahr valley, is one of the best and, probably, the most agreeable of the natural acidulated soda waters suitable for dietetic use in certain morbid conditions or tendencies. It is cold (about 63 degs. Fahr.), and contains, in 10,000 parts, 25.5 of solid matter, consisting principally of carbonate of soda (12.57), chloride of sodium (4.66), sulphate of soda (3 0), and carbonate of magnesia (4.42). The Apollinaris is richer in free carbonic acid than almost any other spring, and, through this, not only most refreshing, but also particularly adapted for transmission, without suffering any material change in its chemical constitution.

Amongst the waters more generally used for dietetic purposes, those of Geilnau, Giesshübel, Selters, and Roisdorf most nearly approach the Apollinaris; but none of them possesses the same amount of carbonic acid. The presence of small quantities of sulphate of soda and chloride of sodium in the Apollinaris distinguish it from Geilnau and Giesshübel, and we must regard this as a decided advantage for some constitutions requiring a more active state of the bowels. The Apollinaris, at all events, has a moderately aperient effect in some persons, but possibly this may be partly due to the stimulant effect of the carbonic acid. (Conf. Braun's *Balneotherapie*, 3rd ed., p. 385.) Selters contains less carbonate of soda and carbonate of magnesia, much more chloride of sodium, but no sulphate of soda.

Having largely used the Apollinaris water during the last seven years, I have found it of great value as an article of diet in gouty dispositions, in lithic acid diathesis, in tendency to gallstones, in some forms of catarrh of the bladder, and in chronic catarrh of the respiratory organs; in the latter, either treated by itself, or mixed with hot milk or hot whey. To many persons, the Apollinaris forms an agreeable and useful addition to bitter waters, and a good vehicle for some medicines.

The Apollinaris is, however, not to be recommended in anæmic conditions, in tendency to boils, in phosphatic diathesis, and in certain forms of indigestion with flatulency. In the latter cases, however, if a mild alkaline beverage, free from sewage contamination, be desired, the water may be deprived of part of its carbonic acid by repeatedly pouring it over from one glass into another.

I am, etc., HERMANN WEBER.

10, Grosvenor St., Grosvenor Sq., W., Feb. 10th, 1874.

CONTAMINATION OF AERATED WATERS.

SIR,—Suspecting that lead might exist in potash-water contained in the ordinary syphon-bottles now generally in use, I placed six such bottles in the hands of Mr. Brownen, the expert chemist working in the laboratory of Messrs. Savory and Moore of Bond Street. I send herewith his report, and also results obtained from the examination of soda and of seltzer water contained in syphon-bottles.

It is highly important that this source of poisoning by lead should be made known, not only to the profession, but to the public; and I shall feel much obliged if you will insert this communication and Mr. Brownen's report in the BRITISH MEDICAL JOURNAL.

February 9th, 1874. I am, etc., M.D., F.R.S.

Examinations of Aerated Waters for Mineral Impurities, especially Lead.

Six syphon-bottles of potass-water, one of soda, and one of seltzer, were examined. All the samples contained lead. In two instances this metal was associated with zinc. The latter metal was identified by the white colour of its sulphide, its solubility with alkalies, and precipitation with potassium ferrocyanide. The proportion of lead in these bottles of water varied greatly, but in no case could it be estimated gravimetrically. The proportions were therefore estimated colourmetrically by comparison with a standard lead solution containing .1 of a *gramme* per *litre*, and precipitated by hydrogen sulphide from an acidified solution.

The following are the results obtained; the quantities stated being the amount of lead in a *litre*. No. 1 potass water, .012 *gramme;* No. 2 ditto, .011 *gramme;* No. 3 ditto, .013 *gramme;* No. 4 ditto, .006 *gramme;* No. 5 ditto, .007 *gramme;* No. 6 ditto, .010 *gramme;* soda water, .0081 *gramme;* seltzer water, .012 *gramme.* As even carbonate of lead is somewhat soluble in carbonic acid water under pressure, it does not preserve the bottle, pewter cock, or luting from the well known solvent action of alkaline salts on lead or zinc.

143, New Bond Street, Feb. 6, 1874. GEO. BROWNEN, F.C.S.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE MEDICAL OFFICERSHIP OF THE CITY OF LONDON.

DR. LETHEBY has resigned the important office of Medical Officer of Health for the City of London. There are many candidates spoken of, but it is stated that Dr. Sedgwick Saunders, well known as an old active member of the Corporation, will receive the appointment. If Dr. Saunders be a candidate, it is unlikely that any other gentlemen, of whatever scientific claims, would enter upon a contest with a gentleman who has enjoyed, for so many years, the personal intimacy and friendship of his colleagues, with whom the appointment lies.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ALTRINCHAM.—Mr. Atwell, the Medical Officer of Health for this township, reports that, during the past quarter, the district has been remarkably free from any prevalence of infectious disease, and that the mortality has been at the rate of only 14.5 per 1000 persons living. It is evident, however, that this result has not been brought about by any special effort on the part of the Local Board of Health for the town, because it is made clear that well-known causes of disease, which have been repeatedly brought under their notice, still remain untouched. The question of dealing with the excremental nuisances of the place has hitherto been all but ignored; and although the Board has been urged to enforce dryness of contents as a necessary condition wherever midden-privies exist, and also itself to undertake the removal of the refuse of the population, neither of these recommendations has been adopted. It is true that, after some considerable persuasion, they were induced, nearly two years ago, to pass a resolution to the effect that, as regarded any future erection of closets, no rain-water should be allowed to drain into the middens, yet no means whatever have been taken to carry this beneficial provision into effect, and it is, in consequence, utterly ignored. The best advice this Board can take is, to seize upon the favourable opportunity which is now afforded them, in order to carry out such sanitary improvements as will tend to give a permanent character to the present temporary freedom from zymotic disease which prevails in their district. Quite irrespectively of the general danger to health which excrement nuisances occasion, they afford, in the case of some diseases, such as enteric fever, the very means which are required for the rapid multiplication and spread of the poisonous disease-elements; and. through their influence, many a place, which has long enjoyed a reputation for healthiness, has, in the end, been the scene of a fatal and widespread epidemic.

Chailey.—Mr. R. Graveley, in a preliminary report, which he has presented to the Rural Sanitary Authority of the Chailey Union, draws attention to the bad sanitary arrangements in the villages of Ditchling and Newick, and to the general deficiency in the water supply of the district. The construction of several lines of sewers is recommended, but, as is the case in many similar reports which have come under our notice, nothing is said as to the ultimate disposal of the sewage. Many sanitary authorities are, to our knowledge, now carrying out works of sewerage, by means of which streams, which are already polluted, will be still further fouled, and some of the few water-courses, which have hitherto escaped pollution, will, at last, become contaminated. Although it may not be the duty of a medical officer of health to advise as to the details by which sewage may be dealt with at the outfall, yet he should studiously avoid giving such advice as will, if followed, result in the pollution of a water-course, for not only is such pollution illegal, but it is incumbent on each sanitary authority to prevent it, within its district; and the steps which have already been taken to compel the performance of this duty, as regards some of our larger streams, must, sooner or later, be applied generally throughout the country.

AMENDMENT OF THE LAW OF PUBLIC HEALTH.

Dr. E. J. Syson, Medical Officer of Health for the Huntingdon United Districts, writes to us:—

I think that you will find that the very defects of existing sanitary Acts will prove their own cure, by drawing attention and consideration to sanitation as a national, rather than as a local need. If you will invite suggestions towards amended legislation, and let these be pithily discussed in your columns, you will contribute towards accomplishing great and much-needed national good. Permit me, therefore, to contribute an instalment.

1. In any new or amended sanitary Act, let the word "may" be interpreted "shall," with the consent, or by order, of the Local Government Board.

2. At present, unless the magistrates will let "premises" be strained, so as to include wells, supplies of polluted water cannot be shut off or up. Therefore, I suggest a clause to the following effect:—"That, on the certificate of the Medical Officer of Health, that any well, pump, or spring, contains water unfit for drinking purposes, the Local Sanitary Authority shall have power to cause such well, etc., to be closed. Provided that, if at any time afterwards, on the certificate of their Medical Officer of Health, the Local Sanitary Authority shall be satisfied that the water has become, or has been, rendered fit for drinking purposes, they may allow such well, etc., to be reopened." There should be a penalty for breach of order.

3. The powers of urban and rural sanitary authorities should be assimilated.

4. The Unwholesome Food Act should be amended, so as to allow the police to seize suspected purchases, and private persons to bring them to the Medical Officer of Health, or to the Inspector of Nuisances. Also, the term, "to be dealt with by a magistrate," requires definition. At present, this is interpreted variously in different magistrates' courts.

5. The term, "persons in charge" of infectious cases, should be defined, so as to include, in some cases, master, or mistress, or parent, or schoolmaster, or mistress, etc. At present, as a rule, only the morally unoffending can be readily punished.

6. A clause should be inserted, applying to all sanitary authorities, similar to the one now contained in the Salford Improvement Act, 1872, viz., "That, on the certificate of the Medical Officer of Health, that any house, or part of a house, is unfit for habitation, they may, by notice affixed to such house, or part of a house, declare the same to be closed. Penalty for opening after such notice, and power of reopening on satisfaction of fitness for habitation."

7. All plans for all buildings should be submitted or approved by the Local Sanitary Authority. Penalty for unauthorised deviation from plans.

8. All forms for returns, etc., should be issued by the Local Government Board, so as to secure uniformity.

Doubtless other correspondents will have many other suggestions to make.

⁂ We shall be glad to receive and publish the comments of Medical Officers of Health, and others, on Dr. Syson's suggestions.

AN ASSOCIATION OF INSPECTORS OF NUISANCES.

Mr. Haviland has had the happy idea of bringing together the sixteen inspectors of nuisances of his sanitary combination, and of inducing them to form themselves into an association. He holds that, by meeting at intervals, and comparing notes of experience, they will learn from each other, and come to concord, in matters where concord is desirable, strengthening their own hands, and the hands of the Medical Officer of Health. He would have them, moreover, set themselves to work to study, with some system, the different subjects which concern their duties, as, for example, to study such characters of soil as relate to water-supply; and to this end he advised them to begin at the beginning, taking for this purpose Professor Gaskie's Geological Primer. The relations he had had with them, hitherto, had been that of a service willingly and cheerfully accorded, and he wanted no other and more direct control, as was at times urged by some. They were to look upon him as their consultant in medical points, as they looked upon the Clerk to the Sanitary Authority as their consultant in legal points. And so, with all this good advice and pleasant intercourse, the association was launched, and it was commended as an example to follow by other Medical Officers of Health for large combined districts. But it did not seem to occur to Mr. Haviland how this position of consultant, in the sense he put it, brought into prominence an inherent defect of combined sanitary districts, as now organised. If "medical points" may, as they must, arise, on which it is necessary for the Inspector of Nuisances to consult the Medical Officer of Health, it follows that the decision of what these points shall be must be left to the Inspector. And thus we have the inspector invested with a quasi-medical character, which the necessities of time and space in a big district, where the single Medical Officer of Health cannot even emulate Mr. Buckstone's celebrated army of two, will foster to most pernicious proportions. In fact, the inspector of nuisances must, in some way, act as an assistant medical officer of health, and do, in addition to his own duties, such work as he can compass, which the Poor-law Medical Officer ought to have been appointed to do, if the Medical Officer of Health is to do his duty in any decent fashion. Mr. Haviland, and others, may flatter themselves that it will be possible to work combined districts satisfactorily in this fashion. We need not prophesy in this matter, but we may express a fervent hope that, when their five years of probation ends, they will not find themselves amongst the victims of Gwydyr House muddling.

Dr. E.—The interest of such a report as that sent is altogether lost, if the name of the locality dealt with is not stated. There is nothing in the facts of scientific or other novelty.

Adulteration of Food Act: The Public Analyst of Chelsea.

Sir,—I wish to draw attention to an almost insuperable difficulty that occurs in the working of this Act in the parish (Chelsea) in which I write. I have no wish whatever to make a personal attack on the Food Analyst; but my complaint against him is, that he continues to hold his appointment made under the former Act, and receives a very inadequate salary, and does not even attempt to put the Act in force. He is directed by a Sanitary Committee, which, like the Vestry, consists almost entirely of shopkeepers and retired ones, who do not appear to want anything done at all. But one prosecution has been instituted, and that (I believe) at the mere instance of the Inspector of Nuisances, and without any direction from the Food Analyst, Sanitary Committee, or Vestry, in the first instance. That was of course successful; but it is abundantly apparent that the shopkeepers in this parish are not more immaculate than those in others. Very prettily reading quarterly reports make their periodical appearance, saying how two or three were warned, and no doubt soon saw the error of their ways; but the whole matter is a farce. Neither the majority of the Vestry nor of the Sanitary Committee want anything really done; and the Food Analyst pockets his little salary, and does what is perhaps all he can be expected to do for the money; viz., nothing. It strikes one that he ought either to resign his office, or really do the work which is implied in its title. I understand that he has never made any application for an increase of his salary.

I am, etc.,

February 1874. An Indignant Ratepayer.

MILITARY AND NAVAL MEDICAL SERVICES.

GRADUAL ABOLITION OF THE ARMY MEDICAL DEPARTMENT.

AN army medical officer writes to us: "According to Paragraph 28 of the new Army Hospital Regulations, March 6th, 1873, the increased duties and extended responsibilities of medical officers are to be assumed by them as soon as the requisite subordinate establishment is furnished. Now, a glance at the accompanying statistical table of the strength of the army medical department during the last six years (to the lists of which only I have access) will show a marked and alarming diminution in the number of officers by whom these increased duties, etc., are to be undertaken.

January Army List.	ADMINISTRATIVE RANK.		Total of *Administrative* Ranks.	EXECUTIVE RANK.			Total of *Executive* Ranks.
	Inspectors, or Surgeons-General.	Deputy Inspectors, or Deputy Surgeons-General.		Surgeons-Major over 20 years' service.	Surgeons-Major and Surgeons under 20 years' service.	Assist.-Surgeons, or Surgeons.	
1869	8	35	43	92	255	702	1049
1870	8	33	41	101	244	664	1009
1871	8	34	42	98	236	630	964
1872	9	33	42	104	232	635	971
1873	10	34	44	104	224	619	947
1874	10	34	44	117	290	504	911

"Total diminution of executive rank, 138, or 23 *per annum;* so that, at this rate, the army medical department will soon be eliminated from the list of 'Departments attached to the Army.' And, though the Regulations are generally in force, there is as yet no proper supply of the subordinate staff; and, in all probability, by the time it is furnished, the superior one may have ceased to exist.

"But the matter is still worse: we are carrying on what the Press calls a 'doctors' and engineers' war,' by which 73 or more medical officers are withdrawn from the general service; so there are in reality 211 less to undertake the 'increased duties and responsibilities.' I see, too, by the Gazettes, there has been a still further reduction of 9 during the last month.

"Comment is unnecessary; as I think I have proved that a continuance of the present system (penny-wise and pound-foolish) must lead, if not to the abolition, at least to overwork and consequent inefficiency of the army medical department.

"P.S.—Leave of absence has become a tradition in the service."

OBITUARY.

HERBERT R. HARRIS, M.R.C.S.Eng., Bury, Lancashire.

MR. H. R. HARRIS, whose death we have to record, was the youngest son of the late Joseph Harris, Esq., who accompanied, as surgeon, the expedition under Sir John Moore to the Peninsula, and was afterwards a magistrate and colonial surgeon at Perth, Western Australia. At the age of twenty-one, Mr. H. R. Harris passed an examination before a medical board, and was appointed colonial surgeon and acting assistant-surgeon to the troops stationed at Albany, Western Australia. Having resigned these appointments, he came to England and pursued his medical studies at the Manchester School of Medicine and Surgery. He took his diploma at the Royal College of Surgeons of England in 1858, since which time he has practised in Bury, and was well known and highly esteemed for his ability, courtesy, and gentlemanly conduct. The deceased gentleman, who was only forty-two years of age, was in the enjoyment of his usual good health up to Monday, January 12th. On the next day he complained of being unwell; medical assistance having been called in, it was then found that he was suffering from an attack of typhus fever, which he had, in all probability, contracted in the course of his professional visits. Every possible medical and domestic attention was shown him, but he died at two o'clock on the morning of the 19th, little more than five days having elapsed since the first symptoms of the disease were manifested.

MEDICAL NEWS.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ARMY MEDICAL DEPARTMENT—Surgeons. Applications to T. G. Logan, Director-General.
AXMINSTER UNION, Devon—Medical Officer for the Lyme Regis District.
BAILIEBOROUGH UNION, co Cavan—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Shercock Dispensary District: £70 per annum, and fees. Applications, 18th instant, to Stephen Radcliff, Hon. Sec., The Rectory, Shercock.
BOLTON INFIRMARY and DISPENSARY—Senior House-Surgeon.
CUMBERLAND INFIRMARY, Carlisle—Surgeon. Applications, 26th instant, to John Laver, Sec.
DEVON COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £120 per annum, increasing to £150. Applications, 25th instant, to T. E. Drake, Solicitor, Exeter.
DEVONSHIRE- Public Analyst. Applications, 26th instant, to H. Ford, Clerk of the Peace, Exeter.
DUMFRIES AND GALLOWAY ROYAL INFIRMARY—House-Surgeon, Clerk, and Apothecary: £50 per annum and board.
DURSLEY UNION, Gloucestershire—Medical Officer and Public Vaccinator for District No. 3: £80 per annum. Applications, 25th instant.
EASTERN DISPENSARY, Bath—Two Honorary Medical Officers. Applications, March 2nd, to F. Savage, Esq., Honorary Secretary.
GUY'S HOSPITAL—Lecturer on Mental Diseases.
HOLBEACH UNION, Lincolnshire—Medical Officer for the Sutton Bridge District: £20 per ann , and fees. Applications. 16th March, to E. G. Ayliff, Clerk.
HOSPITAL FOR SICK CHILDREN—Assistant Physician. Applications, 18th instant, to S. Whitford, Sec.
INDIAN MEDICAL SERVICE—Eighteen Surgeons. Applications, 16th inst., to Major-General Pears.
INVERKIP, Renfrewshire—Parochial Medical Officer: £15 per annum, and an allowance of £100 for the first year.
KILKEEL UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc , for the Kilkeel Dispensary District No. 1: £100 per annum, and fees. Applications, 23rd instant, to James Walmsley, Hon. Sec.
LITTLEMORE PAUPER LUNATIC ASYLUM, near Oxford—Resident Assistant Medical Officer: £80 per annum, increasing to £120, furnished apartments, and board. Applications, 23rd instant, to the Superintendent.
LIVERPOOL ROYAL INFIRMARY—Surgeon. Applications, 17th instant.
LIVERPOOL SCHOOL FOR THE INDIGENT BLIND—Honorary Physician.—Honorary Surgeon. Applications, 28th instant, to Courtenay Cruttenden, Treasurer.
LONDON HOSPITAL—Physician. Applications, 17th instant, to W. J. Nixon, House-Governor and Secretary.
LOWESTOFT Urban, Lowestoft Port, and Mutford and Lothingland Rural, Sanitary Districts: £50, £20, and £50 per annum, and private practice. Applications, 21st instant, to Wm. Rix Seago, Lowestoft.
METROPOLITAN FREE HOSPITAL, Devonshire Square—Assistant Physician. Applications, 21st instant, to George Croxton, Secretary.
MIDLAND RAILWAY COMPANY—Medical Officer for the Sheffield District.
NARBERTH UNION—Medical Officer for District No. 1, and the Workhouse: £55 and £20 per annum, and fees. Applications, 21st March, to John Thomas, Clerk.
NEW ROSS UNION, co. Wexford—Medical Officer for the Templeudigan Dispensary District: £50 per annum. Applications, 19th instant, to Edward Kavanagh, Hon. Sec.
NOTTINGHAM GENERAL HOSPITAL — Physician. Applications, 10th March, to E. M. Kidd, Sec.
PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—Junior House-Surgeon: £80 per annum, with board, washing, and lodging. Applications to R. Blair, Esq., Preston.
QUEEN'S COLLEGE, Birmingham—Professor of Medicine.
RHAYADER UNION—Medical Officer for the whole Union: £80 per annum.
ROYAL MATERNITY CHARITY—Two Physicians.
ROYAL SEA-BATHING INFIRMARY, Margate—Resident Surgeon. Applications, 26th instant, to J. T. Walker, Sec., 1, Queen Street, Cheapside.
ROYAL SOUTH LONDON DISPENSARY, St. George's Cross—District Surgeon: £20 per annum. Applications, 17th instant, to W. Hentsch, Resident Medical Officer.
ST. MARY'S HOSPITAL, Paddington—Aural Surgeon. Applications, 14th inst., to J. G. Wilkinson, Secretary.
ST. MARY ABBOTTS, Kensington—Public Analyst: £50 per annum, and 5s. per analysis. Applications, 16th instant, to G. C. Harding, Vestry Clerk.
SHEFFIELD PUBLIC HOSPITAL and DISPENSARY—Surgeon.
STOCKBRIDGE Rural Sanitary District—Medical Officer of Health. Applications, 17th instant, to G. M. Footner, Clerk to the Authority, Romsey.
TEIGNMOUTH, DAWLISH, AND NEWTON INFIRMARY—House-Surgeon: £50 per annum, board, lodging, and washing.
TORBAY INFIRMARY AND DISPENSARY, Torquay—House-Surgeon and Secretary: £100 per annum, board, and apartments. Applications, 7th March.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication.

DEATHS.

CASKIE, John, M.B., C.M., at Stewarton, Ayrshire, aged, 23, on February 5th.
*MORGAN, Major Butler, M.R.C.S., at Lichfield, aged 71, on February 5th.
*LONG, Edward, Surgeon, Thornbury, of bronchitis, aged 40, on February 7th.

PRESENTATION TO DR. MACNAB.—On the evening of January 16th, Dr. Macnab, of Loch Inver, Sutherlandshire, was invited to meet a deputation of the inhabitants of Assynt for the purpose of presenting him with a silver service of plate, along with a purse of sovereigns, as a mark of their high appreciation of his services and worth. Dr. Macnab has for several years practised his profession in Sutherland, and has, by his attention to the sick under his care, and by his courtesy to all with whom he associates, gained the respect and gratitude of the people. The inscription on the plate was as follows: "Presented to John Macnab, M.D., F.R.C.S.E., by a number of friends in Assynt, as a mark of esteem and regard for his services and worth."

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY .St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. Cotton will exhibit a Steam Kettle for use in Pulmonary Affections: Mr. Jabez Hogg, "A Case of Hemopia"; Mr. F. J. Gant, "On Strangulated Femoral Hernia"; Dr. Farquharson, "On some peculiarities of Pneumonia in early life."

TUESDAY.—Pathological Society of London, 8 P.M. Dr. R. Liveing: Extensive Atheroma of Pulmonary Artery, with Mitral Stenosis. Dr. Peacock: Dissecting Aneurism. Dr. Peacock: Typhoid Perforation of the Bowel. Mr. Nunn: Tumour which was attached to the Cervical Vertebræ. Dr. Morell Mackenzie: Congenital Papillomatous Web uniting the Vocal Cords: Removal *per vias naturales*, and Establishment of Voice. Dr. Coupland: Tuberculosis of the Choroid. Mr. Howard Marsh: Hydatids of the Spermatic Cord. Dr. F. Taylor: Aneurism of the Aorta opening into the Pulmonary Artery. Mr. Myers: Aneurism of the Aorta which burst into the Pericardium. Mr. Knowsley Thornton: Ovarian Tumour affected by Secondary Cancer. Mr. Knowsley Thornton: Dermoid Ovarian Cyst.

THURSDAY.—Harveian Society of London. 7.15 P.M.: Adjourned Meeting of Council. 8 P.M.: Mr. H. E. Sewill, "On Neuralgia of the Face."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. H. H. PHILLIPS (Reading).—With pleasure, if condensed.

STUDENS.—Pages of solid type.

MR. CLOUGH'S communication appears to relate to an advertisement, and should be addressed to the General Manager, Mr. Fowke.

PERCHLORIDE OF IRON IN POST PARTUM HÆMORRHAGE.

DR. PALFREY.—Dr. Snow Beck has undertaken to forward for publication next week the record of his nine cases in which he alleges that death was caused by the use of perchloride of iron. The subject will then be in a better position for continuing the discussion.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE, EAST ANGLIAN, AND SOUTH MIDLAND BRANCHES.

FORASMUCH as the Annual General Meeting of the Association is to be held at Norwich early in August next, the members of the Councils of the above Branches have decided to recommend the postponement of the combined meeting, which it was agreed to hold at Cambridge at the end of June next, until the year 1875.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

THE DAY OF REST.

SABBATARIAN asks:—Would you be so kind as to publish the following queries in an early number?

1. What works may be consulted with advantage with reference to the prize offered by the Swiss Society for the Sanctification of the Sabbath; the conditions of which appear in the last number of the JOURNAL?

2. Are there any other people besides Jews, Christians, and Mahomedans, who observe a sabbath or anything equivalent to it?

C.M. INFIRMARY.—The degree of C.M. from a British University is a registrable surgical degree, entitling to the same privileges as any other surgical licence on the *Register*.

MEDICAL ETIQUETTE.

SIR,—Differences existing between medical men are at all times unpleasant, but should one member of the profession by his acts wilfully incur such unpleasantness, I think it but right (it being the only check we possess) that an exposition should take place through the medium of a medical paper.

Some time ago, my partner (Dr. Thompson) and myself were in attendance on a case when Mr. Haslam (of Market Drayton) was called in and attended. Not having received any intimation from him, we naturally deemed that etiquette was entirely set at nought, he being fully aware that she was at the time under our care. My partner wrote to him, expressing his surprise at such a proceeding, and asking for some explanation of his conduct. Of his letter no notice whatever was taken. A short time after, we found the same thing had occurred with regards to another patient, in which case Mr. Haslam acted the same way. I wrote to him then, and to my surprise, received in answer a letter from "his wife"! Not considering her explanations at all satisfactory, I again wrote to Mr. Haslam. He, however, did not think it necessary to answer my letter. I regret not having any other alternative left but to ask if you will kindly insert this and the enclosed copies of the correspondence which has taken place in your JOURNAL (the copy of my partner's letter has been lost), and shall leave it to the profession to judge between us.

I am, etc., GEORGE H. ORMSBY, L.R.C.S.I., L.K.Q.C.P.I.

Ashley, Feb. 2nd, 1874.

No. 1. "Ashley, Jan. 22nd, 1874.

"SIR,—On Tuesday last Dr. Thompson and myself received a letter from Mrs. Vyse of Westwood, saying, 'she had met a friend of hers who had introduced to her a medical man who would attend her husband *free of charge*, and that she had accepted his services.' I heard to-day that you were the medical man attending him. The same thing has happened before in the case of Mrs. Platt, when Dr. Thompson wrote to you demanding an explanation of your conduct. Of his letter you took no notice, which proves that you must be totally ignorant of medical etiquette and of the proper bearing of one gentleman to another. I shall feel obliged by your informing me whether it is the case or not that you are attending "Vyse"; and if so, your reason for so doing without first acquainting us of the fact. We do not care about losing the case in a pecuniary point of view, but consider we would be lowering the dignity of the profession, and making little of ourselves by allowing such conduct to continue. If you do not deem it necessary to answer this letter, or give a satisfactory explanation of your conduct, I shall feel it my duty to lay the matter before the profession, and shall send the correspondence to the leading medical journals. Hoping to hear from you by return,

"I am, Sir, yours, etc., "GEORGE H. ORMSBY.

"To G. H. Haslam, Esq., Market Drayton".

Answer to No. 1.

"Market Drayton, Shropshire Street, Jan. 24th, 1874.

"SIR,—Mr. Haslam being so much engaged, wishes me to say for him, in answer to your letter received this morning, that as Mrs. Platt was his patient during some time of last summer he did not hesitate when sent for to attend to her case, and as she did not wish for a consultation (it was not under the distressing state she was in) for Mr. Haslam to delay operating, Mr. Haslam has been perfectly justified in whatever he has professionally done in Ashley. If any misrepresentations have been circulated to the annoyance of anyone, it is not Mr. Haslam who should be called in question. Please tell your partner Mr. Haslam did not feel inclined to answer his letter, which like your own amounts to a demand not usual in professional communications. If you feel inclined to publish any part of my husband's conduct, you will remember to act cautiously, as he has friends who will protect him from injustice and untruthfulness, and, if necessary, to give publicity to facts as well at yourself. "I remain, Sir, yours truly,

"To G. H. Ormsby, Esq. "E. M. HASLAM."

In answer to this I wrote No. 2.—G. H. O.

No. 2. "Ashley, Jan. 24th, 1874.

"SIR,—I was surprised to receive a letter this morning from Mrs. Haslam in reply to one addressed to you. I do not consider 'engagements' any excuse whatever for your not writing, especially when on professional business. Mrs. Haslam mentions the fact of your attending Mrs. Platt last summer as justification for your taking charge of her during her present illness. We do not agree with you at all in that aspect of the case, as she was at the time of your being called in under our care, and had been so for some time previously. All we wanted and expected was that you should acquaint us of the fact of your being called in, and there the matter would have ended. Instead of doing that, you took the case without our knowledge, and not only exulted over your success, but had not the common courtesy to answer a letter from my partner on the subject.

"Relative to the second case (Vyse), no mention is made of it in Mrs. Haslam's letter. In his case also you acted the same way, and had not even the excuse of 'former attendance', with which you try to justify yourself in your conduct towards us in Mrs. Platt's case. According to medical etiquette, you should have refused to attend till you had either seen us or informed us by letter of your being called in, but we received no such intimation; and unless you can offer some better excuse or apologise for acting as you have done, we feel it our duty to the profession at large to expose the whole correspondence.

"I am, Sir, yours, etc., "GEORGE H. ORMSBY.

"To G. H. Haslam, Esq., Market Drayton.

"P.S.—What have you to say in Mrs. Allman's case, whom I have just heard you have taken in the same way?—G. H. O."

Notice to Advertisers.—Advertisements should be forwarded direct to the Printing-Office, 37, Great Queen Street, W.C., addressed to Mr. Fowke, not later than *Thursday*, twelve o'clock.

D. B. asks the favour of an opinion regarding a case that he is attending, particulars of which are annexed. It seems to him to be a case of intermittent fever with rheumatism superadded; but how to account for the rash he is quite at a loss.

C. M., a shepherd, aged 44, has been subject to slight attacks of rheumatism for about ten years. He was for five weeks previously to his present illness daily on the hill, exposed to wet and cold, almost every day wet through, and obliged to change his clothes on arriving home at night.

On January 1st, 1874, he felt severe pain in the left knee, accompanied by swelling of the part, incapacitating him from work. For a day or two he felt as if suffering from cold and had a slight cough, pain (occasionally) in the head, back, and joints, especially the left knee; he never felt shivering. On January 4th, I was called to visit him and found him in bed. There was nothing unusual in his general appearance; he complained of pain in the left knee, which was found to be slightly swollen. There was slight pain in other joints at times. He had pain in the left side over the region of the heart. He felt a sense of oppression at the pit of the stomach and over the chest. There was frequent yawning; pulse about 75; tongue moist, covered with thin white fur; skin moist; urine acid, with a thick light yellow deposit of lithates.

I prescribed a brisk aperient (calomel and jalap), bicarbonate of potash mixture, and Dover's powder at bedtime. A blister was applied to the left side, which removed the pain. On January 6th, the patient had a distinct rigor at night, then a hot and sweating stage in succession, followed by a measly eruption about the face and neck. The spots were distinctly papular on the neck. He was now given quinine mixture. On the 8th, there was a copious eruption over the body and extremities. The spots were in crescentic clusters of a deep red colour. On January 12th, he complained of slight pain in the abdomen and flatulency. He had voided urine for the last twenty-four hours. On the 14th, he had had an intense paroxysm the previous night, and more eruption appeared after it. He complained of sore-throat—felt it sore. Since the 12th the fauces had been dusky red. On the 18th, the fauces were of a claret colour and sore; and there were small aphthous patches between the pillars. The paroxysms recurred regularly every night about or after midnight, but now were of shorter duration and not so intense; probably owing to an extra dose of quinine taken before they came on. The eruption still continued, appearing and disappearing alternately. When it disappeared it left a faint redness in the skin on the neck, forehead, and crown (which is bald). On January 21st, the eruption was faint on the forehead and neck. The patient felt quite well. On the 24th, the eruption was entirely gone away. The tongue was moist and clean; pulse about 60; throat better. He seemed quite well and free from paroxysms. On January 29th, the eruption reappeared in small slightly raised vesicles on the chest. On February 2nd, the patient had a distinct cold stage, followed by a hot and sweating stage about 10 A.M. After perspiring profusely, he felt quite well, as if there were nothing the matter with him. The tongue was clean and moist; pulse about 60; appetite good. He was without quinine for the last twenty-four hours, to which probably the relapse was owing.

The Obstetrical Society of London.

Sir,—If you could exercise your powerful influence in such a manner as to induce the Council of this great Society so to modify its laws or bye-laws, as the case may be, so as to permit authors to read their own papers (the usual course adopted by the Medical and other societies), you would render a real service to the Fellows of the Society in general, and to the authors in particular.

It is a little too bad, after a man has spent days, or, in some cases, perhaps weeks, in the careful preparation of a valuable paper, to have it so hashed and hacked about, in the process of what is called *reading*, as to render it all but unintelligible.

At the last meeting of the Society (February 4th), the paper of the evening, a most important one by Dr. Playfair, was so shamefully mangled by "official reading", as to render it next to useless for discussion, as it was impossible for the most careful listener to intelligibly to follow the thread of the author's argument. A more humiliating display it would be impossible to conceive.

As the secretaries just appointed will, in all probability, hold office for two or more years, it is not difficult to conceive how much injury may result to the Society, as it cannot be expected that the Fellows will give up other, and often more agreeable, engagements, to attend the Society's meetings, if such *readings* are to be continued.

By way of a remedy for this evil, I would respectfully suggest, for the consideration of the Council, three alternatives; viz.—

1. That the Council shall so modify the laws of the Society, as to permit authors to read their own papers—the most practical and prudent course.
2. That all papers to be read at the Society's meetings shall be printed in good type, at the cost of the Society.
3. That the Council shall create a new office—that of "reader" to the Society—whose duty it shall be to read all papers brought before the Society; and further, in order to attract gentlemen who can read writing, I would suggest that a certain stipend should be attached to the appointment. This, I am sure, would attract gentlemen who are able to read correctly and intelligibly.

If you, sir, would kindly aid the Council in this important matter, you would place the Fellows of the Obstetrical Society of London under lasting obligations.

London, February 1874. I am, etc., A Senior Fellow.

Club Practice.

Sir,—I beg to thank you for taking up the very important subject of club-practice; and I think I cannot better illustrate the degrading effect which it produces on the profession than by stating what has lately occurred in this district.

A few months ago, a man broke his thigh, and was attended by the colliery doctor. After some time had elapsed, that gentleman found that no union had taken place, and he called in consultation a very experienced F.R.C.S.; but, when the two doctors arrived at the house, they found that a "bone-setter" had been there before them. They, therefore, retired.

A few weeks ago, a man belonging to the same colliery received a severe injury to the spine, from which eventually he died. He was attended by the same colliery doctor; and the men of the colliery did not think that he visited the case often enough. They, therefore, had a meeting, and came to the conclusion that, having regard to the two cases, they would no longer have M.B. as colliery doctor; and they wrote a note to him to say that, after a certain date, not a man at the pit would pay to him.

It is proper here to say, that there are about fifty-two men at the colliery, each of whom pays 4½d. per week to the doctor; and that at this pit no money is "kept off" for anyone but the man favoured by the owners; and that, in consideration of this privilege, M.B. attended all accidents without fee or reward!

To go on with my story. The men arranged to have another meeting to decide who should be the colliery doctor. To this meeting M.B. went; and I am informed that he was questioned somewhat as follows. Was M.B. capable of setting a fracture? If so, why did he not do so? Why did he bring F.R.C.S.? Were his assistants qualified men; not competent, but "qualified," and their names in the *Medical Directory*, and were they duly registered? M.B. had only visited K—— Square a certain number of times himself. If they agreed to pay him again, would he attend oftener? Eventually, it was agreed by the men that those who wished should still pay to M.B., and the others might pay to M.D.; and the men further said that M.B. and M.D. were to apply to the colliery owners for fees for accidents, and that they (the men) would back them out. M.B. assured them that probably the bone-setter would soon have done with the fractured thigh; and that he would then attend the case, and give it his best attention.

The pitmen are a shrewd, intelligent, well-organised body of men, and doctors would do well to study their tactics; but if the club system is to produce the unpleasant result of an educated man, a member of an honourable profession, having to endure the indignity of answering such questions, in order to be employed by the men, then the sooner the club-system is put an end to the better.

Another evil result of the club-system is, that it leads to unnecessary visiting. A medical man who is "a good attender" has much more chance of getting a good word from the pitmen, than the man who brings, perhaps, more skill to his cases, but who only sees them when he considers it necessary to do so.

Again, the club-system can only be effectively worked by having a staff of assistants; and the annoyance and worry so caused are almost incredible. If the old apprentice plan were adopted, the thing would work better. As it is, if you get a good assistant, he does not stay very long, as he naturally wants to get on for himself; and if you get a bad one, you are better without him.

The club-system makes the doctor the slave of his patients. They can change when they like, and do not hesitate to do so if the doctor be "too independent;" and some other doctor is only too ready to take them as patients. It is common enough for them to send for a doctor, pay to him so long as they are ill—say a fortnight—and then give over paying.

The club-system spoils the people. They become exacting—send at any unreasonable hour, and expect the medicine to be such as they approve of, and to have it supplied as often as they think proper.

One more illustration of the evils and annoyances of club-practice. I had a patient, a stout old woman, with varicose ulcers. She sent, every second day, a pint bottle for lotion; she had a large box of salve twice a week; she sent for lint; she had a "bad stomach," and she was in want of pills. She got all she wanted, even to quinine to put in port wine; but, because I did not find it convenient to call every time I rode past her house, she informed me that she was not going to pay 9d. per fortnight for nothing, and that I was no longer her doctor.

A druggist can make more money than a club-doctor.

Please take the matter up, and deeply oblige Yours, etc., Artem.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail; The Blackburn Times; The Glasgow News; The Glasgow Herald; The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Sir William Fergusson, London; Dr. Desmond, Liverpool; Sir W. Linton, London; Dr. Southey, London; Dr. Playfair, London; Rev. J. Reed, Swimbridge; Dr. Broadbent, London; Dr. Smart, Haslar; Mr. Erichsen, London; Dr. George Johnson, London; Mr. Holmes, London; Mr. J. T. Clover, London; Our Paris Correspondent; Mr. H. Morris, Petworth; Dr. Gream, London; Dr. T. Snow Beck, London; Mr. Warburton, Pateley Bridge; Dr. Crane, Leicester; Mr. A. Napper, Cranleigh; Mr. H. H. Phillips, Reading; Mr. F. Barlow, Cambridge; Mr. R. Jackson, Birkenhead; Dr. A. Mackintosh, Callington; The Secretary of the Pathological Society; Mr. E. Cripps, Cirencester; Dr. Aitken, Woolston, Southampton; Dr. Ransome, Bowden; Mr. Carter, West Derby; Mr. Rigden, Canterbury; Dr. G. O. Rees, London; Mr. Jay, Chippenham; Dr. A. Ogston, Aberdeen; Dr. Cassells, Glasgow; Mr. R. E. Gibson, Norwich; Dr. Wynn Williams, London; Mr. Anningson, Cambridge; Dr. I. Mackenzie, Sidmouth; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Mr. Foster, Huntingdon; Dr. Cobbold, London; Mr. Burroughs, Weston Zoyland; Mr. Karkeek, Torquay; Dr. Hope, London; The Secretary of the Harveian Society; Mr. Eassie, Child's Hill; Dr. Hermann Weber, London; Dr. Bradbury, Cambridge; Dr. Crichton Browne, Wakefield; Mr. Tosswill, Exeter; Dr. A. R. Simpson, Edinburgh; Dr. Lowe, Lynn; Dr. Priestley Smith, Birmingham; Dr. Begley, Hanwell; Mr. Clough, Eastbourne; Dr. Watt, Ayr; The Director-General of the Army Medical Department; Dr. Palfrey, London; Dr. G. H. Savage, London; Our Correspondent at Cape Coast Castle; Our Dublin Correspondent; Mr. Fairlie Clarke, London; Mr. Gordon Brown, London; The Secretary of the Obstetrical Society of London; Mr. W. Date, Crewkerne; etc.

LECTURES
ON
THE PATHOLOGY AND TREATMENT OF DIABETES MELLITUS.

BY
T. LAUDER BRUNTON, M.D., D.Sc.Edin., M.R.C.P.Lond.,
Lecturer on Materia Medica and Therapeutics, and Casualty Physician
to St. Bartholomew's Hospital; etc.

LECTURE III.

HAVING considered the effect of increased formation of sugar, we must now look at the diminished combustion of it as a cause of diabetes.

The healthy organism is able to consume not only all the sugar produced within itself, but even more; and, if a solution of glucose or glycogen be injected in small quantities under the skin or even into the veins of an animal, no sugar will appear in the urine.[†] This destruction of sugar probably goes on chiefly in the blood, lungs, and muscles, though it may take place in other tissues as well. Its occurrence in blood after it has been drawn is shown by the sugar contained in it disappearing after a short time when it is kept at a moderate temperature; and there is no reason to suppose that this does not go on within the body, more especially as Binz[†] and Zuntz have shown that the formation of acid, which goes hand in hand with the destruction of sugar, occurs even more quickly while the blood is still fluid, or, as we may say, alive, than after coagulation has taken place. The important part played by the lungs in the destructive process is evident from the great diminution which the sugar sometimes undergoes during its passage from the right side of the heart to the carotid artery; and the powers of muscle in this respect are shown by the observation of Ludwig and Genersich[‡], as well as of Bernard[§], that the blood which passes through the vessels of a contracting muscle contains much less sugar when it issues from the vein than when it enters the artery. And yet, strangely enough, Ludwig and Scheremetjewski[‖] found that, after grape-sugar had been injected into the veins of an animal, little or no increase took place in the oxygen consumed or the carbonic acid given off from the lungs—a result which indicates that grape-sugar, *as such*, is not burnt off in the body. On the other hand, however, they found that, when lactic acid as well as other organic acids, combined with soda, were injected into the veins, the amount both of oxygen and carbonic acid rose greatly, showing that these acids underwent combustion with great facility. Glycerine also undergoes combustion readily. Now, Bernard finds that, as the sugar disappears from blood, its place is taken by lactic acid[¶]; and, as Du Bois-Reymond has shown, an accumulation of sarcolactic acid in muscles occurs after they have been kept in action.[**] Muscles after death acquire an acid reaction by the formation within them of lactic acid from sugar or glycogen which they contain[††]; and, when added to a solution of grape-sugar, they will cause the formation of acid in it also. That this conversion of sugar into lactic acid is due to a ferment, is shown by the close correspondence between it and other processes of fermentation[‡‡]. Thus, if the blood be heated so as to destroy the ferment, the sugar will remain unchanged[§§]; and Binz and his scholars have shown that quinine and other substances, which lessen fermentation, likewise diminish the production of acid in blood. Bernard has also demonstrated that blood, like other ferments, acts more rapidly on glucose than levulose; whereas alkalies, to which the destruction of the sugar in the blood was long attributed, act more rapidly on the latter kind of sugar than on the former.

The interesting experiments of Schultzen show more clearly than any others how sugar is decomposed in the body. A year or two ago, he found that, in animals poisoned by phosphorus, the processes of oxidation are arrested in the organism, but those of decomposition by ferments go on.[‖‖] In such animals, urea disappears from the urine, and is replaced by leucine and tyrosine, which, in the healthy organism, are converted into urea.[*] No sugar appears in the urine, but a kind of lactic acid is found in quantities exactly proportional to the amount of sugar afforded to the animals by their food. This kind of lactic acid agrees exactly in its properties with the aldehyde of glycerine, and Schultzen considers the two bodies to be identical.[†] He thinks that, in the normal condition, sugar is split up by the action of a ferment into this glycerin-aldehyde and glycerine in the manner indicated in the following formula: Glucose $C^6H^{12}O^6$ + Hydrogen H^2 = Glycerin-aldehyde $C^3H^6O^3$ + Glycerine $C^3H^8O^3$. When the ferment is absent, as he supposes it to be in some cases of diabetes, the sugar is not split up, and so does not undergo combustion, but is excreted in the urine. In diabetics, the processes of oxidation are not impeded; for the nitrogenous waste products appear in the urine as urea, and not as leucine, as they do when oxidation is impaired in phosphorus-poisoning. The imperfect combustion of the sugar is due, he considers, to the want of ferment which should prepare it for oxidation, and not to the want of oxygen.

In view of these facts, we are, I think, justified in believing that the sugar which is present in the blood becomes converted by the aid of a ferment in the blood, muscles, and probably lungs also, into lactic acid and glycerine; and then undergoes combustion, thus sustaining the temperature of the body. Supposing, however, that this ferment is deficient, a greater or less proportion of the sugar will not undergo conversion into acid, and will then remain unconsumed, as in Ludwig and Scheremetjewski's experiment.[‡] Unless the combustion of that quantity of sugar which does undergo transformation with the aid of fat, etc., be sufficient to sustain the temperature of the body, it will fall more or less below the normal; and this is actually what we find in a considerable number of diabetic patients. The muscular weakness which is observed in them is just what we would expect from the muscles being unable to make full use of the sugar which ought to supply them with energy for their work, though it is not improbable that excess of sugar in the blood may itself cause muscular fatigue. Whether this be the true explanation of their weakness or not, it is difficult to say; for we do not yet know how it is that chemical action is transformed in muscle into mechanical work; nor are we acquainted with the manner in which oxygen is stored up during the hours of rest, in order to be expended during the time devoted to labour. Whenever we do learn this, we shall gain a deeper insight into diabetes; for Pettenkofer and Voit have found that patients afflicted with this disease have not the power which a healthy man possesses, of absorbing more oxygen during the night than they need at the time, and using it up during the day. They are thus obliged to work as it were from hand to mouth, and are incapable of any great exertion.

The formation of lactic acid depends on the sugar as well as the ferment, and it is quite possible that the former may be in fault as well as the latter. I have already mentioned that different specimens of glycogen are acted upon by ferments with varying degrees of facility; and it would seem to be the same with sugar even when derived from similar sources, for Bernard, when arranging the different sorts according to the ease with which they are destroyed in the body, ranks sugar obtained from the liver above diabetic sugar.[§]

The destruction of sugar probably goes on in the blood, brain, glands, etc., as well as in the muscles, but to a much less extent. In order that the sugar in the blood may be destroyed in the muscles, however, it must pass into them. Now, very little blood circulates through muscles when they are at rest, but the flow is much increased when they become active. More sugar will thus be carried to them and destroyed; but, as I have already mentioned, muscular exertion raises the blood-pressure, and increases the circulation in the liver and the formation of sugar in it, so that the balance is maintained. We can readily see that, if the liver go on producing sugar, and it be not destroyed in the muscles, it will accumulate in the blood, and at last appear in the urine. This, I believe, takes place in animals paralysed by woorara. Bernard thinks that the glycosuria produced by this poison, and also by large doses of morphia, is not due to their action on the muscles, but is to be ascribed entirely to their causing paralysis of the hepatic vaso-motor nerves and increased formation of sugar in the liver. I believe that woorara does exert this action; but the glycosuria is not due to it alone, but to its effects on the muscles also. My belief is founded on the experiments of Dock[‖]; and, to make the grounds of it more intelligible, I shall shortly give the results of his research. 1. When rabbits are starved, glycogen disappears from the liver. 2. In such rabbits, puncture of the fourth ventricle does not produce diabetes. 3. After a few injections of cane-sugar into the stomach of starved rabbits, glycogen reappears in the liver. Injections of water, albumen, or fat, have not this effect. 4. If the fourth ventricle be punctured before the injection, no glycogen appears in the liver, and no sugar is found in the urine. 5. Poisoning by woorara produces diabetes in starved rabbits, although puncture of the fourth ventricle does not. 6. After poisoning by woorara, injections of sugar into the stomach do not produce glycogen in the liver; but sugar is abundantly found in the urine.

[†] Tieftenbach, *op. cit.*

[†] *Archiv für experimentelle Pathologie und Pharmacologie*, vol. i, p. 20.

[‡] Ludwig's *Arbeiten*, 1871, p. 75.

[§] Bernard, *Revue Scientifique*, 2nd series, tome iv, p. 1022.

[‖] Ludwig's *Arbeiten*, 1869, pp. 144, and 141.

[¶] Bernard, *Revue Scientifique*, 2nd series, tome iv, p. 1159.

[**] Du Bois-Reymond, *Journal für Chemie*, 1859, vol. lxxvii, p. 233.

[††] Bernard, *op. cit.*, p. 1159.

[‡‡] Some time ago I tried to separate this ferment from muscles by Von Wittich's method, by glycerine, but was only partially successful.

[§§] Bernard, *Leçons au Collège de France*, tome i, p. 230.

[‖‖] Schultzen und Riess, *Ueber acute Phosphorvergiftung*, Separatabdruck aus den *Annalen der Charité*, Band x.

[*] Schultzen und Nencki, *Zeitschrift für Biologie*, vol. viii, p. 124.

[†] Schultzen, *Berliner Klinische Wochenschrift*, 1872, No. 35. p. 417.

[‡] Ludwig and Scheremetjewski, *op. cit.*, p. 145; Schultzen, *op. cit.*

[§] It is possible that this may be due to the sugar from diabetic urine consisting sometimes of a mixture of sugar derived from the liver, and sugar absorbed from the intestine.

[‖] Dock, Pflüger's *Archiv*, vol. v, p. 571.

I must also mention that Weiss[*] has discovered that a considerable amount of glycogen remains in the muscles of starved animals after it has completely disappeared from the liver; and they retain their muscular activity as long as it is present in the muscles. The explanation of these results is by no means difficult. Indeed, it would have been easy for any believer in Bernard's theory of the causation of diabetes by puncture of the fourth ventricle, to foretell that it would not induce glycosuria in animals when their livers contained no glycogen; for, this being absent, no increase in the hepatic circulation could increase the formation of sugar. When the puncture is made, and the hepatic vessels are consequently dilated, before cane-sugar is injected into the stomach, no glycogen is found in the liver; for it is converted into sugar, and washed away by the blood as soon as it is formed. It does not appear in the urine, for it is used up by the muscles as quickly as it is absorbed from the intestines. When the animals are poisoned by woorara, there is no accumulation of glycogen in the liver, for the poison paralyses the hepatic vessels, and thus produces the same effect as puncture; but it also prevents the muscles from using up the sugar, which therefore appears in the urine.

The occurrence of sugar in the urine of starved animals after woorara-poisoning must be due to the glycogen in the muscles undergoing conversion into sugar, and its transformation being arrested at this stage, instead of changing into lactic acid and glycerine, and undergoing combustion as it ought to do.

There are some other substances, such as nitrite of amyl[†] and nitrobenzol[‡], which probably cause diabetes chiefly by arresting the decomposition of sugar, although they may also act on the liver.

Since sugar has to be converted into lactic acid before it is burned off, and it is not improbable that the amount of this conversion is more or less regulated by the demand, we would not unnaturally expect that the injection of easily combustible organic acids into the blood, by preventing the combustion of sugar, might lead to its accumulation in the blood and its appearance in the urine. And such, in fact, is the case. According to Eckhard,[§] sugar appears in the urine of a rabbit after the introduction into its veins of carbonate, acetate, succinate, or valerianate of soda; and G. Goltz[||] noticed it after putting lactic acid into the stomach of the same animal.

To recapitulate shortly what has already been said: The liver has two functions—1, that of taking up the sugar which it receives from the intestines, and converting it into glycogen; and 2, that of forming sugar again from glycogen. The muscles probably possess three functions. 1. They take up sugar from the blood and convert it into glycogen. 2. They form sugar again from this glycogen. 3. They change both the sugar they form and the greatest part of that which they receive from the blood into lactic acid and glycerine, which undergo combustion. Diabetes may arise—1, from excessively rapid digestion of starch or sugar; 2, from failure or imperfection in the glycogenetic function of the liver, and possibly to some extent also of the muscles; 3, from increased transformation of glycogen into sugar, due to accelerated circulation through the liver, or a larger proportion of ferment in the organ or the blood. The circulation may be quickened either by increase of the general arterial pressure or by dilatation of the vessels of the liver, and especially of the hepatic artery. Increased blood-pressure may be due to muscular exertion, such as occurs in epilepsy, or to contraction of the arterioles, such as is caused by impeded respiration, exposure to cold, cholera, and Bright's disease. The hepatic vessels may be dilated reflexly by irritation applied to the vagus, either at its ends in the lungs, liver, or intestine, in its trunk, or at its roots in the medulla, or to the cerebrum, cerebellum, pons, and probably some of the sympathetic ganglia. They may also be dilated, and the current in them accelerated, by section of their vaso-motor nerves at any point between the medulla and the liver, provided that the intestinal vaso-motor nerves are not also divided, and the supply of blood so much diminished that no increase in the hepatic circulation follows the section. 4. Increased formation may also occur in the muscles from lessened combustion, due either (*a*) to insufficiency of the ferment which should convert the sugar into lactic acid and glycerine, (*b*) to an altered quality of the sugar which enables it to resist the action of the ferment, or (*c*) to diminished circulation through the muscles preventing the sugar from coming sufficiently into contact with the ferment.

DIAGNOSIS.—We now come to the somewhat difficult task of trying to distinguish between the cases of diabetes depending on these different causes; and this, I am afraid, I can very imperfectly perform. I have already mentioned that too rapid digestion of starch and imperfect glycogenesis in the liver would both give rise to glycosuria, occurring after meals, and arrested by abstinence from starch and sugar; but diminished combustion might lead to a somewhat similar result. In the latter case, however, the temperature would probably be below the normal, and in the former would not. The appearance of the patients, too, as Harley[*] points out, is very different. When the diabetes depends on diminished combustion, they are weak and emaciated, while in diabetes from increased formation of sugar, they are often ruddy and plump. Diabetes depending on increased transformation of glycogen in the liver will go on, even though an exclusively flesh-diet be employed, and may thus be distinguished from diabetes depending on imperfect glycogenesis. If it be due to increased transformation alone, and there be not at the same time diminished destruction of sugar, the temperature will not be below the normal. A temperature below the normal may be regarded as indicating that combustion of sugar is imperfect; but it by no means signifies that the disease is due to this cause alone,[†] for at the same time there may be other conditions present which cause increased formation of sugar. Supposing that, the temperature being normal, we find that sugar continues to appear in the urine although the patient has been restricted to a diet of flesh alone, and we have thus determined that the diabetes is due to increased transformation in the liver, the next question is, On what does this depend? Is it due to increased blood-pressure, or to dilatation of the hepatic vessels? A general rise in the blood-pressure may be readily detected by the combined use of the stethoscope and sphygmograph. The tracing taken by the latter instrument will show an oblique rise and slow descent of every pulse-wave. Such a tracing indicates high pressure, if the cardiac sounds be at the same time loud. A similar form may be obtained when the heart is feeble, although the blood-pressure is not above the normal; but the cardiac sounds will then be feeble also. If there be no rise in the general blood-pressure, we may suspect dilatation of the hepatic vessels; but it will be difficult to discover the cause of it. We must bear clearly in mind the various afferent and efferent nerves, irritation or paralysis of which may cause glycosuria, and localise the lesion as best we can by other symptoms which may point to one part or another. Thus, if we find glycosuria coming on in a phthisical patient, we may suspect irritation of the pulmonary branches of the vagus by the tubercle to be the exciting cause; while intestinal irritation or impaired mental or motor functions will direct our attention to the abdominal branches of the vagus, or to the cerebrum and cerebellum. A history of ague will induce us to consider whether the source of irritation may not be in the nerves of the liver or spleen. One would expect that certain aneurisms of the subclavian artery, by stretching and paralysing the fibres forming the annulus of Vieussens, would cause glycosuria; but I am not aware of any cases of this sort.

TREATMENT.—The indications for treatment in diabetes are 1, to lessen the production of sugar; and 2, in cases where its combustion is imperfect, to aid its transformation, and to supply easily combustible materials, so as to sustain the temperature of the body and impart muscular strength.

The reason for lessening the production of sugar is that, when an excess of it is present in the blood, it causes dryness of the mouth, thirst, and discomfort, symptoms which disappear when its quantity is reduced. In order to effect this, all articles of food containing starch or sugar should be excluded from the patient's diet. Thus, no sugar at all will be formed in the intestine, any glycosuria depending on imperfect glycogenesis will disappear, and the treatment will also constitute a means of diagnosis. At the same time, less glycogen will be formed in the liver, for a diet of meat does not afford nearly so much material for it as one containing starch or sugar. Thus glycosuria, depending on increased transformation of glycogen in the liver, will also be diminished.

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[*] Weiss, *Sitzungsberichte der Wiener Academie*, vol lxiv, p. 284.

[†] Gamgee and Rutherford, quoted by Brunton in Sanderson's *Handbook for the Physiological Laboratory*, p. 515; and Hoffman, Reichert und Du Bois Reymond's *Archiv*, 1872, p. 746.

[‡] Ewald, *Centralblatt der Medicinischen Wissenschaften*, 1873, p. 819.

[§] Eckhard and Kulz, *Pester medico-chirurgische Presse*, Feb. 1873, p. 113.

[||] G. Goltz, *Centralblatt für die Medicinischen Wissenchaften*, 1867, p. 705.

[*] George Harley, *The Urine and its Derangements*, p. 240.

[†] Rosenstein, Virchow's *Archiv*, xiii, 1858; and Harley, *op. cit.*, second edition, p. 265.

The patient must be supplied with a diet consisting of nitrogenous food, such as butcher-meat, fish, eggs, and soups. Fat (which does not contribute in the least to the formation of sugar) may be given in all its forms, such as cream, butter, cheese, and oil. Spinach, lettuce, and cresses may be freely used, but celery and radishes only sparingly; while potatoes, carrots, parsnips, turnips, peas, French beans, cabbage, Brussels sprouts, cauliflower, brocoli, asparagus, sea-kale, and fruit of all kinds, both fresh and preserved, should be avoided, with the exception of nuts and almonds. Instead of bread, the patient should take either the gluten-bread supplied by Bonthron, 106, Regent Street, and Van Abbot, 5, Princes Street, Cavendish Square, or the bran- or almond-biscuit prepared by Blatchley, 362, Oxford Street.[*] Dr. W. Richardson strongly recommends[†] that the change from an ordinary to a restricted diet should be made very gradually, lest the patient become disgusted with his food. Rather than produce this injurious effect, it is better to relax the diet and permit him to eat sparingly of bread made of whole meal, or even of white bread toasted and potatoes. In the cases of diabetes which depends on imperfect glycogenesis, the restricted diet will be sufficient to prevent the appearance of sugar in the urine. Should it still continue notwithstanding the adoption of this regimen, the circulation in the liver must be reduced as much as possible. For this purpose, the blood-pressure should be reduced, and the blood should be drawn to the surface of the body by warm clothing and warm baths. The Turkish bath should be used occasionally. Bleeding is not likely to be employed now as a means of lowering the blood-pressure, but Lefèvre records a case in which diabetes was cured by its use conjointly with that of warm baths.[‡]

It is very difficult to determine the point at which the irritation is situated on which reflex dilatation of the hepatic vessels may depend, and even if we could localise it, we might be unable to remove it. We therefore direct our attention rather to the nervous centres, through which the irritation is reflected to the liver; and, by lessening their excitability, we diminish its power over the hepatic vessels. The two remedies which are most serviceable for this purpose are opium and its alkaloid, codeia. Bromide of potassium and atropia, which might be expected to be useful, have been found of no service by Kretschy and Duchek[§]. Half a grain of opium may be given three times a day to begin with, and the dose gradually increased[‖]. Codeia, an excellent remedy, which we owe to Dr. Pavy, may be given in doses of a quarter to half a grain three times a day at first. My friend, Dr. Image, of Bury St. Edmunds, informs me that in one case he began with half a grain three times a day, and increased the dose by half a grain every four days, till the patient was taking five grains three times a day. The sugar then disappeared from the urine, but the treatment was continued for some time longer. About a year after, mental anxiety again brought on the disease, and five grains of codeia were at once given twice a day. This did not prevent the appearance of sugar in the urine, but it disappeared on the administration of five grains three times a day.

Excellent results have been obtained by Kratschmer from the use of morphia, the sugar disappearing completely from the urine, and the nutrition of the patient being greatly improved.[¶] Harley recommends conia or cannabis Indica, and has seen great benefit derived from a combination of conium, cannabis, and hydrocyanic acid.[**]

In certain cases, quinine proves extremely serviceable; and, whenever there is a history of exposure to malaria, it ought to be tried. Blumenthal[††] narrates a case of diabetes occurring in a man frequently troubled with migraine, and of a very nervous temperament. The sugar was slightly lessened by a meat diet and the use of Carlsbad water, but the benefit was but slight, and the disease resisted codeia, arsenic, lactic acid, tannin, iron, and glycerine. Under the use of eleven and a half to thirty grains of quinine daily, the quantity of urine diminished; its specific gravity decreased; the thirst became less troublesome; the albumen, which had previously occasionally appeared in small quantities, entirely disappeared; and the nervous affections rapidly improved.

Several years ago, Salkowsky[*] discovered that the livers of animals poisoned by arsenic contain no glycogen, and that it is impossible to produce diabetes in such animals either by puncture of the fourth ventricle or by curare. He therefore proposed arsenic as a remedy in diabetes. From this recommendation, Leube[†] gave it to the extent of one-third of a grain daily with good effect.

Devergie and Foville, junior,[‡] have also employed it with advantage. They were induced to do so by observing the diminution in the quantity of sugar which it produced in a case where it was administered for prurigo occurring in a diabetic patient. They begin with one drop of Fowler's solution twice a day, and gradually rise to twelve or fifteen drops, occasionally diminishing the dose, or stopping it altogether, as the symptoms seem to require.

Alkalies were proposed as a remedy for diabetes by Mialhe[§] nearly thirty years ago, on the supposition that they would accelerate the decomposition and combustion of sugar in the organism. They frequently do prove very beneficial, but it is not certain that they increase the combustion of sugar. It is quite possible that they do so; but, at any rate, the experiments of Lomikowsky[‖] seem to show that they lessen the production of sugar by diminishing the quantity, or preventing the action, of the diastatic ferment by which glycogen is transformed into sugar. This author finds that, when bicarbonate of soda is given to dogs for some time, little or no sugar is found in their livers, even when they have lain for several hours after death. They contain glycogen, and therefore the absence of sugar must be due to want of ferment. Livers taken from other healthy dogs, which had got no alkalies, always contained much sugar when allowed to lie in the same way. Lomikowsky's conclusion is confirmed by the experiment of Pavy[¶], who found that the previous injection of carbonate of soda into the circulation prevented the appearance of sugar in the urine after removal of the superior cervical ganglion. A convenient way of giving alkalies is in the form of Vichy and Carlsbad waters. These seem to be more beneficial when the patient visits the springs than when he drinks them at home, probably because he is thus induced to take exercise, the use of which we shall presently see. The Vichy waters are purely alkaline, but the Carlsbad waters are purgative also, and are therefore to be preferred when any tendency to constipation exists. When the destruction of sugar is defective, we may endeavour both to increase it, and to supply easily combustible materials to the body in place of those products of the decomposition of sugar which normally serve as fuel to the organism.

Several months ago, I attempted to increase the decomposition of sugar in diabetics by supplying the ferment which I supposed to be wanting. Since sugar is probably decomposed chiefly in the muscles, the ferment which splits it up is probably contained to a much greater extent in them than in any other part of the body. By giving the patients raw meat, we may hope that the ferment contained in it will be absorbed from the intestine into the blood, and there act on the sugar. It is necessary that the meat be given raw, for the heat to which meat is exposed in cooking completely destroys all ferments. The patients on whom I tried this plan of treatment were under the care of Drs. Black, Andrew, and Duckworth; and I take this opportunity of expressing my thanks to these gentlemen for the readiness with which they afforded me the means of making observations, and their kindness in supplying me with every facility, as well as to Messrs. Russell and Sawtell for the assistance they rendered me. The meat was finely chopped up in a sausage-machine, mixed with pepper and salt, and was either spread upon bread and butter, German fashion, or was made into a paste with bread and milk. Shortly after I began the treatment of one case, I learned from Dr. Duckworth that it had been tried empirically with complete success by the captain of a merchant vessel, who had prescribed for himself. In the cases treated in the hospital, however, no cure was effected, although in certain of them there was some temporary benefit. In order to increase the oxidation, iron may be administered; and I find a combination of perchloride of iron with hydrochlorate of morphia and spirit of chloroform very satisfactory.

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[*] An excellent diet-table from which this has been taken is contained in Pavy's work on *Diabetes*, 2nd edition, p. 263.

[†] Richardson on *Diabetes*, p. 80.

[‡] Lefèvre, Magendie's *Journal*, 1824, p. 363.

[§] Kretschy, *Wiener Med. Wochenschr.*, 1873, No. 3 and 4.

[‖] I am not aware that the effect of opium in lessening the reflex dilatation of the hepatic vessels, which otherwise would occur when the central end of the vagus is stimulated, has ever been shown by direct experiment. Bernard has demonstrated the power of anæsthetics, such as chloroform, to lessen reflex dilatation of the vessels of the salivary glands (*Revue des Cours Scientifiques*, 1869, vi, page 383). Without being aware of his observations, I discovered, two years ago, that opium did so likewise. I was engaged in demonstrating to a class the functions of the various nerves connected with the submaxillary gland. The dog on which I was operating was deeply narcotised with opium; and, having exposed the nerves in presence of the class, I explained to them that, when I irritated the gustatory nerve by a galvanic current, the stimulus would be conveyed to the nerve-centre and cause reflex dilatation of the vessels of the gland, and a flow of saliva from its ducts. I then applied the irritation, but, to my surprise and disgust, not the slightest effect was produced. No change took place in the vessels, nor did the slightest trace of saliva issue from the duct. The opium had completely paralysed the nerve-centre, through which the effect was to be produced, and rendered the irritation fruitless.

[¶] Kratschmer. *Wien. Acad., Sitzungsbericht*, 1872.

[**] George Harley, *On the Urine*. 2nd edition, pp. 280 and 261.

[††] Blumenthal, *Berliner Klin. Wochenschrift*, 1873, No. 13.

[*] Salkowsky, *Centralblatt für die Medecin. Wissensch.*, 1865, p. 769.

[†] Leube, *Deutsch. Archiv für Klinische Medicin.*, 1869, vol. v, p. 372.

[‡] *Gazette Médicale de Paris*, 1870, No. 22.

[§] Mialhe, *Annales de Chemie*, 1844, sér. iii, tome xii, p. 120.

[‖] Lomikowsky, *Berliner Klin. Wochensch.*, Oct. 6th, 1873, p. 475.

[¶] Pavy, *On Diabetes*, 2nd edition, p. 176

As a great part of the sugar is probably broken up in the muscles by the action of a ferment, it is in the highest degree desirable that it should be brought as much as possible into contact with them. For this purpose, the circulation of the blood in which the sugar is contained must be increased as much as possible through the muscles, by making the patient take active exercise despite the languor of which he complains. Dr. William Richardson,[*] who himself suffered from diabetes, says, in his excellent work on this disease: "Ten years ago, when I was first seized with an acute attack of diabetes, which threatened soon to end fatally, I became so weak, and had so little muscular power, that I could not walk a hundred yards without great fatigue. The muscles of my legs were so powerless, that I fell two or three times; and, in going down the slightest slope, I had to pay unusual attention to my legs, or I was sure to fall. I began to take exercise regularly two or three times a day; wet or fine, I took it. Gradually, I gained strength, so as to be able to walk five or six miles a day without fatigue. I now regularly walk from three to five or six miles a day." He also gives the case of a gentleman who derived but little benefit from a meat diet, Vichy water, iodide of potassium, or liquor arsenicalis, till he exchanged his sedentary life for active exercise, when his symptoms rapidly improved, and he soon recovered perfect health. The advice which Dr. Richardson gives regarding exercise seems to me to be so good, that I take the liberty of quoting it. "The exercise should be regularly sustained day by day, even in wet weather it should not be intermitted; of course, great care should be taken against wet feet, and the shoes or boots ought to be changed in wet weather on returning home; it should never be carried to real fatigue; a feeling that exercise has been taken is the most that should be felt. To carry into effect regular and sustained daily exercise requires great moral courage and energy, the languor and feeling of weakness are so great; but, if the exercise be only carried out patiently and perseveringly, the task will become not only more and more easy, but soon no longer a task, but positively a pleasure."

Easily combustible material may be supplied to the body in the shape of lactic acid, glycerine, cod-liver oil, cream, etc. As has already been shown, the two former are likely to be of little use in cases of diabetes depending on increased transformation, and not on diminished combustion; glycerine being even hurtful, and lactic acid able to induce the disease in animals.

Lactic acid may be administered in doses of from fifteen minims to a drachm; but, instead of giving it alone, I should prefer to give it in the form of lactate of soda, as a double benefit would be thus obtained. The organic acid, as we have already seen, is burnt off when combined with soda, and the salt is converted in the blood into a carbonate; and in this way we get the benefit which is often obtained by an alkaline treatment. The form in which I always recommend it, however, is that of buttermilk, as this quenches the thirst, supplies food, and also contains a ferment which, if absorbed, may be useful in aiding the conversion of sugar into lactic acid within the body. I am inclined to attribute the benefits occasionally derived from the use of skimmed milk to its possessing similar properties to buttermilk; but I consider the latter superior. When it is allowed to become very sour, and all its milk-sugar has been converted into lactic acid before it is used, it would probably be still better. I first heard of the use of sour buttermilk from an old woman in the country many years ago. She was loud in her praises of its efficacy in wasting diseases, and had striking cases to narrate by way of illustration. The manner of employing it which she recommended was to put the buttermilk into a large vessel, and add a fresh quantity every few days to replace what was drunk. The vessel was not to be washed out, so that a little of the old and sour milk always remained and quickened the formation of acid in each new addition. I have never used it in this way; but, if I were living in the country, I should certainly give this plan a trial. I find that in London it is exceedingly difficult to obtain buttermilk at all.

Glycerine is strongly recommended by Schultzen[†] as a substance which readily undergoes combustion in the body. He finds that, when a patient is placed on meat diet, the sugar disappears from the urine, and the thirst is no longer felt; but the nutrition remains indifferent. When glycerine is given at the same time, the muscular weakness diminishes, and the patient rapidly improves. He gives about half a fluid-ounce to a fluid-ounce and a quarter by measure (20 to 50 *grammes* by weight) of glycerine, with about 80 grains (5 *grammes*) of tartaric or citric acid in rather less than four pints of water daily. The patient drinks it from time to time instead of plain water. If the quantity of glycerine be increased to about an ounce and a half (60 *grammes*), there are sometimes nausea and diarrhœa. If the patient be not very thirsty, the glycerine may be given in one-half or one-quarter the quantity of water. If Schultzen's theory of the decomposition of sugar be correct, a combination of glycerine or lactic acid or some buttermilk along with a meat diet ought to yield very satisfactory results. Pavy found that glycerine increased the quantity of sugar passed by a patient, and made him thirsty. He gave it in doses of ten ounces a day, and the unsatisfactory result he obtained is probably due to the quantity being so large; for the glycerine, being more easily combustible than the sugar, appears to have prevented its decomposition, and thus allowed it to accumulate in the blood. This case of Pavy's indicates to us that, where diabetes depends on the formation of sugar being increased without its combustion being diminished, we need not expect to benefit our patients by supplying them with easily combustible foods, such as lactic acid and glycerine. We need, therefore, hardly try these remedies, except when the temperature of the body is low, as ascertained by the thermometer, or by the feelings of the patients, who complain of cold, and like to be constantly near the fire or covered with warm clothing.

CLINICAL MEMORANDA.

CASE OF POISONING BY BERRIES OF THE MISTLETOE: RECOVERY.

On Wednesday, December 31st, 1873, at 9.30 P.M., I was called to see a boy, aged 14, who had been seized suddenly with alarming symptoms. The messenger (uncle of the patient), stated that, an hour previously to my being sent for, the boy had left the house apparently quite well; but soon afterwards (about forty minutes), he was found lying in the street in a state of insensibility.

I saw the boy at 9.45 P.M., and, from his general appearance, the first impression produced on my mind was that he was in a state of intoxication (alcoholic). He was then reclining on some chairs, with his head rested on his mother's breast. His countenance was suffused, the lips livid, the conjunctivæ injected, the pupils slightly dilated and fixed; the pulse was slow, full, and bounding; the temperature was normal; the breathing slow and stertorous. On pricking the soles of the feet, the limbs were quickly drawn up, showing there was no paralysis of the excito-motory functions. The odour of the breath gave no evidence of alcohol, in any form whatever.

Cold affusion was applied to the spine, by which means the patient was roused. He was now able to speak, but talked incoherently, had spectral illusions, and was inclined to be violent. At this stage he was induced to take an emetic, consisting of ten grains of sulphate of zinc, dissolved in four ounces of water, which he was able to swallow without difficulty. Vomiting speedily followed this administration. On the ejected matters being examined, eight partly masticated berries of the mistletoe were found. The emesis was encouraged, and diluents freely given.

The condition of the conjunctivæ, together with the other symptoms, seemed to indicate considerable cerebral hyperæmia; I therefore ordered a sinapism to be applied to the nape of the neck. The patient was then put to bed. He continued in a state of excitement for two hours, after which he fell asleep. On the following morning (New Year's Day), at 10 o'clock, I again visited him, when he declared himself well. He said he ate the berries at about 8.30 on the previous night (December 31st), soon after which he began to feel giddy, and from that time had no recollection of what had transpired. He assured me he had taken no spirit, wine, or beer, whatever. From the absence of any odour of spirit, either in the breath or vomited matters, and also from the fact of the presence of the berries in what was ejected, in addition to the boy stating that he commenced to be ill soon after eating the fruit of this plant, it seemed to me there can be no doubt as to the nature of the case.

I have never read, nor heard, of a similar case, though I have no doubt such may have been, and perhaps are, of not unfrequent occurrence. The symptoms presented by this boy, then, seemed to have been due alone to the action of this parasitic plant.

Joseph Dixon, L.R.C.P.Ed., etc., Whitehaven.

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[*] Richardson, *On Diabetes*, p. 91.

[†] Schultzen, *Berliner Klinisch. Wochenschrift*, 1872, No. 35.

LETTSOMIAN LECTURES
ON
SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

LECTURE III.—*Continued.*

Syphilitic Disease of the Cerebral Membranes.—The cases in which the membranes are more gravely affected, and the grey matter of the surface invaded or involved, or deprived of blood, present an inexhaustible variety of symptoms, from different combinations and successions of convulsive and paralytic affections and intellectual derangements. Speaking generally, paralysis of cranial nerves and of the limbs, gradual in their mode of access, are characteristic of disease about the base of the brain; convulsions and mental affections of disease on the convex surface of the hemisphere.

No strict line of demarcation can be drawn between the cases in which there is extensive exudation in the membranes, and those in which the morbid process results in the formation of distinct tumours. In the former, the deposit frequently here and there takes the form of a nodule, which projects into the brain-substance, and a syphiloma is accompanied by, or sets up, changes in the adjacent part of the meninges. I shall not, therefore, attempt to lay down distinctions between diffused and localised syphilitic exudations, but, in the brief comments I may make on the cases, show how I have come to my conclusions as to the seat and character of the lesion. The cases I give first will be illustrations of disease in the membranes about the base of the brain.

CASE I. James A., aged 58, a tinman, of drunken habits, was admitted into St. Mary's Hospital, under Mr. Spencer Smith, December 12, 1870. He had had some venereal affection twenty years before; had suffered from ulcerated sore throat two or three times since, but not from cutaneous eruptions. Eighteen months before admission, he had fallen and struck his head. After this, a swelling appeared, which, after nine months, was opened. There was a large discharge of pus, and the wound healed in five weeks. While the abscess was forming, he had a fit, which came on suddenly, while he was sitting by the fire; he was convulsed and unconscious, stupid during the night, and quite well next morning. Two months before admission, pain came on in the right side of the head, more at the back than in the forehead; at the same time the eyelid dropped, and soon afterwards numbness and weakness of the left arm came on. The pain in the head continued. When he came under my observation, there was complete ptosis of the right eyelid, and the only movement of the eye was a slight up-and-down motion; it could not be carried laterally in either direction. The eye was fixed in the median plane; the pupil was about the same size as in the other eye, sluggish in responding to light, and apparently more ready to act on the other eye being opened and closed, than when light was admitted to it. When both eyes were open, by the right lid being raised, there was double vision. There was no obvious facial inequality; he could whistle, and show the upper teeth well. A very little deviation of the tongue to the left was observed. Sensation was diminished on the left side of the face, and in the left arm, side, and leg, and the left limbs were decidedly weakened, without being absolutely paralysed. Pulse, 50. He lay in bed, taking no notice, unless compelled by questions; the expression was that of suffering, and he moaned from time to time; the face was flushed. He passed urine naturally; the bowels were confined. A depression could be felt near the posterior end of the sagittal suture, where the abscess had been situated. Leeches were applied to the temple. Iodide of potassium and bichloride of mercury were given, and he gradually recovered, except that paralysis of the right external rectus, supplied by the sixth nerve, persisted.

Here, with complete paralysis of the right third and sixth, and probably fourth, nerves, and partial motor and sensory paralysis of the entire opposite half of the body, there could be no doubt as to the seat of the lesion. It could only be at the base of the brain, round the right crus cerebri, involving the nerves of this side in the intracranial part of their course, and affecting the crus, which here contains the fibres, sensory and motor, of the entire opposite half of the body. The character of the morbid change was, with almost equal certainty, syphilitic inflammation, attended with gummatous deposit in the pia mater.

He was discharged about the middle of February, apparently well, but with paralysis of the right sixth nerve persisting, and was readmitted six weeks later, on March 30th, with right hemiplegia. He had remained well for a short time, but the headache again came on, and, two days before his admission, the paralysis. He had apparently been drinking considerably since he had left the hospital. He was in much the same condition as before, recognised me at once, and gave substantially the same history, as when first seen, except that he said the same limbs were paralysed in the present as in the previous attack, namely, those of the right side; whereas, as has been seen, from the notes taken at the time, the hemiplegia was left-sided, and the case was one of cross paralysis. The right hemiplegia was more marked, the face being decidedly affected, and the tongue deviating considerably; the hand was very weak, and though he could walk, it was with a halt, in which, however, the right foot was kicked out, and not dragged. The internal strabismus of the right eye, left by the former attack, persisted, but no double vision was complained of, the right eye apparently having gone out of use. There was no affection of sensation. He again recovered, under similar treatment.

It is probable that the syphilitic inflammation and deposit had extended into the left fissure of Sylvius, compressing, and for a time obstructing, the vessels supplying the corpus striatum.

CASE II.—In the following case of a gentleman, aged about 45, seen with Dr. Carpenter of Croydon, the result was less fortunate. I have not the details of his syphilitic history; but he had had disease before marriage, and again within a comparatively short period of the attack of cerebral mischief which proved fatal. This dated from an epileptiform seizure three weeks before I saw him, which happened while the patient was away from home at Brighton. He was found by Dr. Carpenter after this attack in a sort of stupor, with general muscular weakness, but with no paralysis of the limbs, and only a slight drooping of the right eyelid. He had received little attention till Dr. Carpenter reached him, and was suffering from want of food. He gradually became worse; and a red spot, noticed on the top of the head (which was bald), had developed into a large rupial ulceration, while other rupial patches had appeared—one on the back, another in the right axilla, and a third on the right hand. He lay on the left side all in a heap, his head bent on the chest, the knees drawn up, the eyes closed, and taking no notice unless spoken to. He answered chiefly by monosyllables, but evidently understood questions, and replied intelligently, though he was not accurate in the time he named as the duration of his illness. When he was asked to open the eyes, the right remained closed; and, on examination, the third nerve on this side was found to be completely paralysed. The eye moved outwards readily, but never inwards beyond the median plane, and motion upwards and downwards was extremely slight; the pupil was dilated and immovable. Vision was said to be good, and not double; but, when tested by holding up a candlestick at a distance of about a yard and a half, for the purpose of ascertaining whether one or two images were seen, the patient called it three several times a teaspoon. The left pupil was large and sluggish, not contracting to the physiological extent when a candle was brought near. With the paralysis of the right third nerve, there were almost complete motor paralysis of the left limbs and face, greatly impaired sensation in the left arm and left side of the body, a slighter degree of impairment of sensation in the leg, and apparently no loss of sensation in the left face. Respiration was shallow; there was no chest-movement in ordinary respiration; in deep breathing, movement of the right chest only; no excavation of the abdomen. The pulse was 80, full and regular, while he was quiet; but, on speaking, accelerated and irregular in force. Iodide of potassium was given in large quantity, by enema as well as by the mouth, and the scalp was blistered, but without any result.

When seen again on July 10th, he lay on his back, moaning frequently, and moving the right leg. He was unable to speak, but he made attempts to put out the tongue when asked. Vision was lost for some days. Urine and fæces passed in bed. Swallowing was difficult; hiccup was troublesome; pulse very weak; respiration frequent, with an occasional cough. The paralysis in the left limbs and face was very obvious. He did not seem able to open either eye; and when the lids were raised, both eyes were turned outwards and motionless, and the pupils were large. The rupia had increased. The patient soon afterwards died. No *post mortem* examination was allowed.

Dr. Carpenter had come to the conclusion that the cerebral affection was meningitis, from extension inwards of inflammation from the rupial ulcer on the scalp; but the mischief was clearly at the base of the brain in the interpeduncular space, involving, as in the last case, the crus and the third nerve, and giving rise to one of the forms of cross paralysis, afterwards extending to the other side, and implicating the other third nerve.

CASE III. I saw a very similar case with Mr. Walter Coulson soon afterwards. A young gentleman, aged 24, was suffering from rupia, although the syphilis was of comparatively recent date. On August 9th, his face was distorted and his articulation indistinct, and next day there was left hemiplegia. He had gradually become worse, but up to Sept. 14th he was able to speak and swallow; he then had a kind of fit, and after this never spoke, and all food put in the mouth was returned.

I saw him on September 17th. He was lying on his back, apparently unconscious. The pulse was rapid and fluttering; the breathing stertorous, rapid, and irregular; the eyes closed; the face heavy looking, but not distorted. He pressed the hand when told, but did not open the mouth or show the tongue. The left limbs were paralysed—the arm more than the leg; sensation was not lost. There was resistance when the eyelids were raised. The right eye was turned outwards and immovable; the pupil was greatly dilated and insensible. The left eye moved freely, and the pupil acted. Here, again, therefore, there was paralysis of the right third nerve and of the left limbs—a cross paralysis caused by disease round the right crus cerebri.

Iodide of potassium had been administered freely. The patient died within twenty-four hours of my visit, and there was no opportunity for making a *post mortem* examination.

CASE IV. *Spinal and Cranial Pachymeningitis; Epileptiform Attacks; Paralysis of Cranial Nerves; after a time, Slight General Paralysis, with Exaltation; ultimately, Insanity.*—A gentleman whom I saw with Mr. Walter Coulson had had tertiary forms of syphilis, and was, in 1866, suffering from spinal meningitis, and from what I took to be general syphilitic inflammation of the dura mater. He had intense pain in the head, a feature of which was, that it would come on instantaneously when he lay down, in the part of the head which was lowest, and, when he turned round, would instantaneously shift to the side which rested on the pillow. His features had a heavy expression, and there were slight paralysis of the right external rectus muscle and double vision. He improved greatly under iodide of potassium, but was imprudent, courted excitement, ate voraciously, and took little exercise. Early in 1867, he complained, on several occasions, of a sudden powerful stink encountered in the street, which nearly overcame him, and he appeared not to know fully what he was doing afterwards. These were the precursors of epileptiform attacks of great severity, which were usually preceded by optic illusions, generally of a dog, which he called by name, turned to look at, and then fell down. His mind also became confused and weak, and his limbs deficient in vigour, so that his walk was shuffling. He was also wilful, violent, and unmanageable.

In June 1867, I found him in high spirits, but speaking rather thickly, and the words running together; the right side of the face was slightly paralysed. His memory, on some points, was good. A month later, he was more excitable and wilful, and the mental derangement was more marked, the left arm still weaker, and the gait more shuffling. For some time, his condition was similar in many respects to general paralysis of the insane. He walked feebly; his speech was indistinct; he was in a constant state of exaltation, talkative, extravagant, ordering all sorts of things, which his friends had to countermand, continually writing letters, which had to be intercepted, and liable to rounds of violent excitement, and to occasional epileptiform attacks. He improved, however, went to Aix-la-Chapelle, then to Australia, in 1868-9, returning apparently well, but still not the man he had been formerly. He married, however, and now new troubles began. He was usually impotent, was jealous, easily excited to fits of violent anger, in which he would threaten and even strike his wife, or otherwise inflict pain upon her; at other times, he would be kind and repentant. He was convicted of an indecent assault upon a woman in a railway carriage, and sent to prison, and eventually had to be placed in an asylum.

The most energetic treatment was pursued in the different stages. Iodide of potassium was given in doses, which, at one time, reached a drachm, three times a day. Mercury also was given; and blisters were applied. At times, there was improvement, and he appeared to be all but well; but, as has been seen, the damage to the cerebral grey matter was too great.

I should suppose, in this case, that syphilitic tumours growing from the dura mater, and projecting into the convolutions, constituted the principal cause of the symptoms, though there were, doubtless, other lesions.

CASE V. *Slight Unilateral Convulsion, followed by Temporary Hemiplegia; Bodily and Mental Torpor and Debility; Slow, Hesitating Speech.*—Andrew N. M., aged 50, a baker, came under my care on April 21st, 1873, after suffering more or less for five years. He was first taken with a sudden trembling fit, and partial loss of power in the right limbs. He was kept in bed for six months by the consequences of this attack, but afterwards gradually regained almost complete use of the limbs. He had had several attacks of the kind since, all leaving the right arm and leg weak for a time, and he had never been able to work. A fortnight before his admission, he had had, in the course of half an hour, while sitting before the fire, three or four attacks, in which the right hand was contracted; the thumb being drawn into the palm, the head was suddenly drawn to the right and thrown back, and the mouth opened. He made a strange noise also, and his face became quite scarlet. He was unable to walk for a time afterwards, and refused to speak much. While in the hospital, the patient was torpid in his ways, and wet the bed at times. His face was of a deep dusky sallow hue, the hands were habitually purple and cold, and the white spot made by pressure lingered long. He was very slow in answering questions, and no narrative could be got from him, though his answers were usually correct. He was never able to give an account of his illness, and the history given was obtained from his wife. He was apparently a little slow of apprehension, and there was always a prolonged hesitation before he began to speak. He had no voice, only a hoarse whisper, and spoke with evident effort a few words at a time very slowly uttered. He thought his memory was not good. He wrote slowly, and in large hand, but distinctly and correctly, and read the papers with apparent interest. He rose from the sitting posture with difficulty; his gait was clumsy, shuffling, and slow, the right toe being dragged, and both legs having a tendency to keep straight; he was unable to stand on either leg alone. Both hands were weak; there was great difference between them. The pupils were small; nothing abnormal was seen in the optic discs beyond slight hyperæmia. There was nothing in the larynx to account for the state of the voice. He had had syphilis twenty years before, and had numerous pigmented scars on the leg, and a mass of enlarged glands beneath the right angle of the jaw, discharging bloody matter from a small puckered orifice. Five children were said to be healthy, except that one had an eruption round the mouth. There had been a miscarriage in the sixth pregnancy.

Iodide of potassium was given in doses of eight grains, increased to sixteen on April 23rd, and to twenty-four on the 30th, with cod-liver oil and iron. A sharp attack of diarrhœa came on, which made it necessary to suspend the iodide on May 1st. It was resumed on the 7th, in doses of twelve grains, a little opium being also given. On the 10th, the diarrhœa was better, and his general condition had improved; he was brighter, and walked better; answered more readily and rapidly, his voice, however, remaining much the same. He continued to improve rapidly, the difference in his behaviour and ways being much more marked than was evident at my visit. He was inadvertently allowed by the resident medical officer to leave the hospital at his own request on May 16th.

I cannot feel quite sure that the first attack here was not due to the occurrence of thrombosis, and the subsequent symptoms to consecutive changes; but the improvement was more rapid and considerable than would have been likely had this been the case.

CASE VI. *Fits of uncertain character, followed by Left Hemiplegia, and later by Mental Enfeeblement and General Weakness.*—Job G., aged 32, a tailor, married, was admitted into St. Mary's Hospital, December 13th, 1872. He had been steady and temperate; he denied that he had suffered from syphilis, but presented marks of most severe ulcerations, with nodes and general enlargement of both tibiæ. Of seven children, five were dead; his wife had miscarried once. Twelve years previously, he had suffered from severe ulceration, which had lasted about four years. Since then, with the exception of discharges from the left ear and deafness, he had remained well till two years before his admission, when he had had a "fit," preceded for six weeks by pain in the top and on the right side of the head. It was described as a sudden loss of power in the left limbs, accompanied by speechlessness but not unconsciousness. He was also violently sick. For a day or two there was difficulty of deglutition, but the paralysis passed off in the course of a week, and he was able to resume work. His speech was said not to have been quite the same since. Afterwards he was liable to attacks of "numbness" without warning, in which he lost all power, but not consciousness; and twenty weeks before his admission he had a seizure, in which he was convulsed, foamed at the mouth, ground the teeth, rolled the eyes, passed his evacuations involuntarily, but, according to his own statement, never lost consciousness. When he came under observation he was childish, and in the hospital behaved very strangely, spent a great part of his time in the water-closet, and wandered aimlessly about the ward, requiring constant watching; at one time he would lie in bed, at others get up in spite of orders, and frequently he wished to go home. The grasp of both hands was weak, the left was more so, and they shook much. His appetite was good; the bowels were open; pulse 106; temperature 98 deg.; urine of specific gravity 1015; no albumen. He slept little. The optic discs were large, well defined, more pink than usual, but with no appearance of swelling. He was only in the hospital for twelve days, as he insisted on leaving, so that there was no opportunity for effectual treatment. Next day he came asking to be readmitted.

CASE VII. *Tertiary Syphilis; Fits; peculiar Mental Condition.*—Ed. P., aged 35, married, painter, was under observation in St. Mary's Hospital from May 19th to July 9th, 1873. He had had gonorrhœa, but, according to his own account, no chancre. Large pigmented scars were found on both legs, and the left shin was serrated; he had also the mark of an ulcer in the throat. He had been married eleven years, had had seven children, of whom five had died in infancy, and his wife had once miscarried. He had a fit in June, 1872, beginning with convulsive movements of the tongue, face, and jaw, after which he dropped down insensible; he was unable to work for a week, and had been strange ever since. Eight weeks before his admission, he had another fit while working on a roof, and rolled into the gutter. He said it was simply a fall, and that he struck his head, but his account was altogether confused. He complained of pain in the back of the head, and there was a tender and rather puffy spot near the posterior superior angle of the left parietal bone. The chief symptoms were, however, mental. Every time I saw him, he made a speech about some new suffering. A favourite complaint was loss of power in one or other arm with great pain, but he would perform a movement one moment which he had the moment before said was impossible, and would resist vigorously with the muscles said to be paralysed. One day, when he professed to be utterly powerless, he ran with extraordinary alacrity to restrain another patient. He would often cry because he had to eat his dinner at a table with other patients. When he was asked a question, there was often extraordinary delay in answering; he would stand with his mouth half open, the eyes fixed and gazing on vacancy, and sometimes would stop in this attitude in the middle of a sentence. There was no tremor of the lips, but at times a little stammering, and often movement of the lips, as if he were muttering. The grasp of the hands was good; the walk was rather unsteady, and he said his legs jumped in bed. The optic discs were always found in much the same state in repeated examinations, unusually pink, almost of the colour of the retina, but well defined and with a white spot in the centre; there was no appearance of elevation; the retinal arteries were small; the veins large. Iodide of potassium, given in large doses, and mercurial inunctions, made no impression on the condition.

CASE VIII. *Epileptiform Attacks; Slight Hemiplegia: Recovery.*—The following is an outline of a case under my observation since May, 1871. In 1861, at the age of 20, the patient had syphilis, sore throat, cutaneous manifestations, and ulceration of tongue; he was subjected to prolonged treatment, into which calomel vapour-baths entered. Five years later, when exhausted by excessive work as a solicitor, he had epileptiform attacks of a severe character. Five or six of these fits occurred within twelve months. He had much pain in the head, and sleeplessness at night. Afterwards, he remained well till February, 1871, when, being again overworked professionally, and working hard on Sundays in Sunday School and other similar work, he began to suffer from pain in the head and back, and he vomited every morning. Soon afterwards, apparently in consequence of exposure to cold and wet, he had, with the usual symptoms of a feverish cold, great pain in the head and violent delirium, the delirium outlasting the pyrexia and persisting altogether a fortnight. He went to the seaside for three weeks, and returned to his business apparently well, but altogether unequal to his usual amount of work. After two or three hours he flagged, began to have headache and to be confused, and was unable to compel his attention. After walking, also, it was noticed that his left foot dragged; and, although this was not obvious when he walked in my presence, the toe of his boot bore witness to the fact by the way it was worn. In the left upper extremity, also, though the grasp was vigorous and he habitually employed it, there were indications of weakness; he found himself instinctively supporting it by holding the coat or waistcoat, and he frequently had an inclination to open and shut it, or to rub the thumb and finger together. There were no optic changes. Dr. Hughlings Jackson saw the case with me, and coincided in the diagnosis and treatment; the latter consisting in the administration of iodide of potassium, in doses beginning at ten grains, increased later to eighteen, twenty-four, and thirty-six grains. The large doses were required, not by any aggravation of the nervous symptoms, but by the return of nocturnal pains in the bones. The slight paralysis soon disappeared, but he remained for some time irritable. Twice since May, 1872, when he appeared to be perfectly well and equal to any amount of work, he has had attacks of headache and fever, with vomiting and other symptoms, and of cerebral congestion, attended also with hyperæmia of the optic discs; but they have subsided under treatment, and at present the patient is well.

CASE IX. *Slight Motor Paralysis of Left Side, with Impairment of Sensation in Entire Left Half of Body and Face: Deafness: Loss of Smell and Taste: Recovery.*—In July, 1869, I saw a young medical man, tall, muscular, and well nourished, of somewhat irregular habits, but denying syphilis, who, after excitement and drinking, had become very deaf and had partial paralysis of the left side. The deafness was extreme—as to the left ear absolute—and it was necessary to shout loudly to make him hear on the right side. He said, moreover, that he could neither taste nor smell. The left upper and lower extremities were weak; he dragged the foot, and pressure with the hand was feeble and vacillating; there was slight inequality of the two sides of the face. Sensation also was very decidedly impaired on the left half of the body, and sensory impressions travelled very slowly. The left pupil was smaller than the right. He complained of great pain and tenderness in the left mastoid process and down that side of the neck, and the throat was very sore. He had no sleep at night. The face was expressive of extreme depression, physical and moral. He was kept quiet, took bromide of potassium and a large amount of nutrient fluids; a blister also was applied behind the left ear. The deafness and pain in the mastoid region were relieved, and he slept a little better, but a deep-seated sense of pain came on in the right side of the head, and a few days later severe frontal and orbital neuralgia, with intense congestion of the conjunctiva of the left eye. He had at the same time severe urticaria, which was, no doubt, an expression of nerve disturbance. The hemiplegia remained the same. Large doses of quinine were now given, and with benefit, but no impression was made on the disease until a distinct syphilitic manifestation was discovered, and iodide of potassium was given, when he rapidly recovered.

CASE X. *Syphilitic Inflammation of Dura Mater.*—Alfred P., aged 31, a shopman, was in St. Mary's Hospital, under my care, from October 2 to November 25, 1872, complaining chiefly of great pain in the head. He had contracted syphilis ten years before; had had slight and transient cutaneous manifestations, and nothing further till within fifteen months. He had begun to suffer from nodes and a tubercular eruption, for which he had been treated by Mr. Lane for nine months, taking iodide of potassium in doses of ten grains, with latterly fifteen or twenty grains of the bromide. For three weeks he had severe nocturnal pains in the head, attended with slight delirium at times. His appetite was bad; bowels confined; no vomiting; pulse 84; temperature 98 degs. I gave him eighteen grains of the iodide three times a day, with carbonate of ammonia and tincture of quinine, and chloral at night. On October 8, he was no better, and chloral in large doses, and morphia injections had failed to give him sleep. The dose of the iodide of potassium was therefore increased to twenty-four grains, and leeches were ordered to each temple, and next night one behind each ear. The leeches applied to the temples afforded relief, not those behind the ears, and on the 13th and 15th others were applied. The iodide was now again raised to thirty-six grains three times a day. On the 17th, he appeared better, had much less headache, and was eating well; complained of thirst. The urine was abundant, specific gravity 1125, no albumen; pulse and temperature normal. Two days later, however, the headache had returned, and he had pains in the limbs; a tubercular eruption also had appeared on the nose and face. I now gave him the one-twelfth of a grain of biniodide of mercury with quinine in the form of a pill twice a day, reducing the dose of iodide of potassium to eighteen grains three times a day. He continued, however, to grow worse, and, in addition to the pain in the head, he complained of soreness in all the limbs; his behaviour was strange, and his mind evidently affected. On the 27th, leeches were again ordered; but the relief given was slight, and erysipelas came on round the punctures. The medicines were consequently suspended, and the erysipelas was treated with local applications. On the 30th, the inflammation had subsided, but the tubercular eruption had increased on the forehead and nose, and appeared on other parts; the headache and bone pains had returned in a severe form; there was a slight loss of power in the left arm, and the mental condition was peculiar. He was perverse and unreasonable, very strange in his temper, and one day at my visit he produced his dinner, which he had concealed for the purpose. I now resumed the administration of the biniodide of mercury and iodide of potassium; the latter in doses of twenty-four grains. He remained in much the same condition for a week, at the end of which time the gums were affected. With this the headache had gone, the mental oppression had cleared off, and in a short time the eruption faded and disappeared. The mercury was discontinued, and the iodide of potassium reduced to sixteen grains. He was discharged, feeling well, on November 25. Since then, he has been under treatment again and again, and twice has required the administration of mercury. While taking the iodide of potassium in large doses—eighteen to twenty-four grains—he kept well; but once I allowed him to leave it off; on two or three occasions he neglected to attend at the hospital; and once it was found that the prescribed amount of iodide was not given. On each occasion a relapse occurred, and the iodide was not always found sufficient to give relief; but recourse was had to biniodide of mercury, and occasionally a leech was applied.

Case xi. In November 1872, I saw with Dr. Langmore a patient who was the wife of a man who at the time had severe syphilitic rupia. She had had one miscarriage, and no living children; no syphilitic manifestations. Six months before I saw her, she had had paralysis of the right side of the face, and numbness in the right arm, which recovered in six weeks. She had been complaining of numbness round the mouth and the left arm, and she suffered from intense frontal headaches, which generally came on at three A.M. Sensation was found to be impaired in the left arm, and the grasp was weak. She walked well. Sensation was also deficient over the lower part of the right side of the face, in the area of the distribution of the two lower divisions of the fifth, the anæsthesia transgressing the median line about the mouth. The forehead, the tip of the nose, and the tongue were not affected. The sight was not good, and she was unable to read long; the optic discs were pink, striated by vessels, and the retinal veins were large, but there was no appearance of swelling, and the discs were well defined. The patient was taking iodide of potassium in doses of six grains, and it was agreed that the dose was to be gradually increased to twenty-four grains. This failing, mercury was to be tried. Here the cross paralysis, incomplete anæsthesia in the two lower divisions of the right fifth nerve, and weakness and impaired sensation in the left arm, pointed to a lesion near the apex of the petrous bone, or the adjacent part of the sphenoid, involving the two branches of the trigeminus after their departure from the Gasserian ganglion, and also the crus cerebri. Had the entire fifth nerve been affected, the seat of the disease might have been the pons. The severe pain led me to conclude that the disease had its starting point in the bone or dura mater, and I anticipated difficulty in affording relief. I learn, however, that she improved greatly under the iodide of potassium. She is liable to headaches, but there is now no paralysis.

[To be continued.]

ON THE MEDICAL SERVICES OF THE NAVY AND ARMY FROM THE ACCESSION OF HENRY VIII TO THE RESTORATION.

By WILLIAM R. E. SMART, M.D., C.B.,
Inspector-General, Royal Navy.

[*Continued from p.* 200 *of last number.*]

Although the College of Physicians was endowed with power to license surgeons, it is doubtful that it ever exercised that power in the formation of what would have been a body of general practitioners, such as was ultimately constituted by the union of surgeons and apothecaries. But the College, while disdaining surgery, laid vigorous claim to preside over the faculty of surgeons as an inferior medical body.

Thus we find that, in 1572, the great Dr. Caius, on the part of the College, contended in the Lord Mayor's Court, and obtained a decision, that, "it was illegal and unreasonable for surgeons to give inward remedies even in the treatment of sciatica, the great pox, ulcers and wounds," which was inconsistent with the every-day practices of the state services. In the year 1602, the College followed up this claim by prosecuting a surgeon named Jenkins, for illegal practice, when Judge Popham decided that "there is no sufficient license without the College seal; and that no surgeon, as a surgeon, might practice physick, no not for any disease, though it were the great pox."

It might be thought that this limitation by legal process would have satisfied the physicians, and have kept the surgeons from trespassing on medical practice. If it had the latter effect, it failed in the former, as the College next invaded the surgical field, by obtaining an Order in Council, dated June 13th, 1627, to this effect: "As concerning the surgeons, that none of them in the city of London, or within seven miles thereof, do either dismember, trepan the head, open the chest or belly, or cut for the stone, or do any great operation with his hand on the body of any man, woman, or child, to which they usually are tyed to call their wardens or assistants, but in the presence of a learned physician, one or more of the College of Physicians, or of his Majesty's Physicians." As far as concerns Londoners, this was a complete subjugation of the practice of higher class surgery under the College of Physicians, the corollary of which would have been the bringing back of many of the effete practices of the middle ages, for surgery can flourish only where free to experiment, while the medicine of that age bound its practitioners by the theories and dogmas of the schools.

The only safeguard from being blotted out that remained to surgery, lay in its stronghold of the army and navy, which it possessed almost alone, in which its followers practised, under the protection of the state, medicine as well as surgery, being even provided with the means at the expense of the state; and these men, and those who benefited by them, became the strong assertors of the privileges of surgeons, counter to those of physicians. In the year 1635, "The surgeons suggested to the king, that no doctour would serve in His Majesty's navy, and therefore there was a necessity of their being licensed to practice physick." On this a College was called, when Drs. Hawley, Hamer, Goddard, and Dawson, announced their willingness to do this; but whether their services were availed of or not does not appear. It would seem that neither Lord Mayor's decisions, Bench judgments, nor Orders in Council sufficed to suppress the public demand for the attendance and treatment which surgeons could supply; as, in 1641, the College presented a bill for further protection to the House of Lords, against which the surgeons contended—"That if the surgeons shall be disabled to exercise their profession entirely on land, how shall they be able to practice the same at sea, or breed any for that service, wherein the charge of all, both sick and wounded, are upon them, without physicians or apothecaries:

"That surgeons have *ever* both practised and appointed physical remedies to the cure of all wounds, ulcers, imposthumes, great pox, fistulas, tumores, and all surgical diseases:

"That the surgeons in all times have served the king and the Commonwealth both by sea and land; and, to that purpose, His Majesty has constantly allowed to each surgeon, *monies for physical remedies for sick and hurt persons;* and now, by the bill, they shall be restrained to use their profession in giving internal remedies.

"That surgeons are dayly employed in voyages at sea, and in the service of merchants, where there hath been used no physician; and if by this Bill, they be restrained from administering physick to the patients here, they will be no way able to perform the trust reposed in them at sea, whereby many of His Majesty's subjects must perish for want of experienced surgeons."

In this we learn that the surgeons rested their claims to general practice on their tried utility in the naval service, which must have told in their favour; but whether that Bill became the law of the land or not, the College still maintained its vantage ground on land; but when the question was reopened, it was by the surgeons seeking to relieve themselves from their disabilities.

In 1689, a Bill was read and committed, having been ordered to be introduced by Sir T. Heathcote, "To enable surgeons to administer inward medicines to wounded persons"; and in 1690, another Bill was presented "For surgeons to administer inward medicines in cases of surgery." These Bills were strongly supported by petitions from the dockyard towns and by the shipowners of London. In reviewing this intestine war among the professors of healing, waged with bitter acrimony by the College of Physicians for the retention of their privileges of the Middle Ages, it is evident, when viewed by modern light, that surgery was weakened and retarded by the pretensions of a powerful and influential body that stood at the head of the profession.

In a paper published at the time, entitled "A short statement of the Case between the Physicians relating to the Surgeons Bill now before Parliament," there is a summary of the claims of surgeons.

1. Liberty to give internal medicines in all chirurgical cases.
2. That they may be consulted with by physicians in all cases whatsoever.
3. That the examination and licensing of all surgeons to practise in the manner aforesaid may be of themselves as sole judges of the sufficiency, etc.

And the reasons on which they rely—

1. That they have formerly had like powers;
2. That these powers are of absolute necessity, to fit them for the king's service.
3. That the physicians have till of late consulted with them in cases where internal medicines were to be administered.

In all this there is the impress of the needs of the army and navy in bringing about a great change in the profession itself. As it has been already shown that, by the same agencies, medicine became gradually freed from the church, and its organisation established; so here its internal reform was ultimately brought about by slow changes.

By studying the history of our profession, together with the graphic statements of Gale and Clowes concerning the medical services of the army and navy in that age, it can be understood how it happened that the company of barber-surgeons acquired paramount influence over these services, although it is rendered clear that the resources of the company were inadequate to the wants of the services, which were compelled to accept the offices of unlicensed practitioners.

There is no evidence that any physician took service in the navy prior to the reign of Elizabeth. William Clowes, in relating (1596) a case of fractured rib followed by pleurisy, in which he excised the spicula of bone that had wounded the lung, writes that "it happened at that time when the Emperour's daughter passed the narrow seas to marry with Philip of Spain (A.D. 1570), I serving then in one of her Majestie's ships called the *Aide*,"......" there was not *at that time* any physitian in the navy to aide and assist me in this cure."

It has been shown that two years later (A.D. 1572) the College of Physicians began to raise the question against the practice of medicine by surgeons; and subsequently physicians afloat are referred to. Thus, in Cott. MSS., Otho, E ix, p. 235, among the expenses of an expedition that sailed from Plymouth under Sir Francis Drake and Sir John Norris (1589), we find an item "For sundry provisions for physick and surgery, with money imprested *to physicians and surgeons entertained*, £253 : 1 : 0." And in A.D. 1596, in the great expedition to Spain under Essex and Raleigh, Dr. Henry Atkins, Censor of the College, sailed as physician; but, suffering from sea-sickness, he returned from Plymouth, and Dr. Moundeford succeeded him. It is not clear, however, with which of the sister services they were connected; and the same reservation must be held with regard to the following list of Fellows of the College of Physicians employed in the Civil Wars; but it is almost beyond a doubt that in the reign of Charles I, Dr. William Harvey, Sir Thomas Caddyman, Sir John Hinton, Dr. Hamey, Dr. Goddard, Dr. Hawley, Dr. E. Dawson, and Dr. Charlton, appear to have served in the army; and under the Commonwealth and Protectorate, Dr. Paul Delaune, Dr. Nathaniel Chamberlaine, Dr. Sheaffe, and Dr. Coxe, in both services.

It may be asserted from the foregoing data, that at the end of Queen Elizabeth's reign there were physicians as well as surgeons employed in our armies and fleets. The pay of a physician was 5s. per day; that of a surgeon in the army was 1s. 6d., the same as trumpeters and guidons (heralds); a surgeon in the navy does not appear to have been paid more than the chaplain, or the same as seamen, *i.e.*, 10s. a month. As the same persons were employed—like Clowes, for instance—sometimes in the army and sometimes in the navy, there must have been some means of equalising the emoluments of the twin services. It may have been that in the navy the gratuity of 2d. a month being deducted from the seamen's pay was certain, while in the army it was a personal payment, and therefore less certain. Again, in the navy, there was a monetary margin at disposal of the captains of ships under the designation "dead pays," or additional wages charged for men not on board, as perquisites in augmentation of wages to others. Of this we learn, from the Report of the Navy Commission in 1628 Charles I, that there was a "dead pay" on each ship in commission for each of the principal officers of the Navy Board; that admirals in command had twelve "dead pays", and captains eight, being wages of so many fictitious seamen for the payment of their retinues. Now it seems possible that, when captains had the appointing of surgeons to their ships, they may have supplemented their daily pay out of the "dead pay" allowance. But, besides this, it is probable that each surgeon received, by rule or custom, a "dead pay," as the same report allows the surgeon of the ordinary at Chatham £13 : 6 : 8 *per annum*, about 9d. a day, for all allowances, explaining—"To Chirurgeon, etc., we add nothing but make their wages, rateable to that they have before. Onlie wee now showe their faces, which then were but shadowed in 'dead paies'."

On this ground, I consider that all chirurgeons *of the extraordinary*, or in commission, had at that time a perquisite on the "dead pay" list of the ship to which each belonged, which, together with the victuals, to which all on board ship were entitled *free*, made the emoluments of the navy-surgeon equal to those of the surgeon of the army. There would appear, according to that report of commission, to have been no changes in the pay of the navy between the days of Elizabeth and Charles I.

In the British Museum Collection, Add. MSS., there is an interesting document, No. 9301, fol. 6-7, from the principal officer of the navy to Captain John Pennington, concerning Peter Holloway, chirurgeon of the *Isaac* of Ipswich, who was unfit in regard of health for further service at sea, and the only son of a widow, who was dependent on him, and had solicited his discharge. "To which request, in regard she hath no more children to help and comfort her, wee are the rather willing to condescend, and therefore intreate you to cause the said P. H. to be discharged and to *press* another in his roome, and so wee bid you farewell. Your loving friends." (With five signatures). This letter typifies well the condition of medical officers in the navy within one month of the death of James I, when preparing an expedition under Buckingham against Spain, and surgeons were to be obtained by impressment only, which was carried out by the hand of the Barber-Surgeons' Company.

[*To be continued.*]

ON THE VARIOUS PREPARATIONS OF KOUMISS AND THEIR USE IN MEDICINE.

By V. A. JAGIELSKI, M.D. Berlin,
Late Physician in the Prussian Army, etc.

THOUGH authorities may differ on other points of the subject, they all unite in the opinion that chronic diseases, and especially those of a consumptive or emaciating nature, are developed by antihygienic influences. Logically, then, to combat these diseases, and to cure them, particularly in their early stages, they must be treated with means which will correct or arrest the morbific impulse. Primarily, the atmospheric conditions which surround the patient ought to be suitably chosen; and secondly, but no less urgently, the diet must be so regulated, if possible, as to act the part of both "physic and food". In this relation, the practice of medicine is becoming more and more distinguished, in both its "science and humanity", by the importance which it now gives to dietetic remedies in therapeutics. We have in them facilities for the physiological and chemical treatment of certain obstinate diseases that resist purely remedial agents, and they are real handmaids of the greatest service to the practitioner. Chief of these remedies, and indeed epitomising them, is the milk of animals, because in its composition it comprises all the nutritive requirements of the body. Yet, perfect as milk is in all the elements of a facile alimentation, disease has oftentimes so enfeebled the digestive powers, that even it cannot be assimilated in sufficient quantity to maintain healthy life. Fortunately, however, there is a chemical sensitiveness in milk, which predisposes it to such physical and internal changes as will enable it to accomplish the prompt and perfect nutrition of the organism by overcoming the pathological obstacles. We have an example of this in the koumiss of the Tartars, which is fermenting mare's milk. Its magic effects are manifested in the robust constitution and the complexions of the nomadic people of the Russian Asiatic steppes, who during the warmer season live exclusively upon it, to recruit the health and strength which they have lost through the privations and exposures of the previous winter.

That milk will undergo vinous fermentation, and yield a certain quantity of alcohol, is not generally known. Every educated person, however, has heard that the Tartars drink the milk of their mares in a state of fermentation, called koumiss. Samara and Orenburg were the first places which were chosen for a resort of cure in chronic chest-diseases. To Dr. Stahlberg belongs the great merit of inducing the Russian Government to assist him in opening the first koumiss institution in Moscow, and afterwards in Tsarskoe Silo near Petersburg, the milk of mares being used which were expressly imported from the Tartar steppes; and it is from Vienna that we have heard recently of the great success of koumiss, introduced again by Dr. Stahlberg.

The milk of all animals is convertible into koumiss by one and the same method; but, as the several milks differ among themselves in the quantitative relation of their components, so also will there be corresponding variations in the koumiss which is produced from them. Qualitatively, however, the koumiss from different kinds of milk may be considered uniform, as has been shown in my special work on koumiss published in 1870, and in my paper in the *Milk Journal*, April 1871. More immediately in connexion with this paper, however, I present the analytical results of Wanklyn, obtained from cow's milk *medium koumiss*. A quart bottle of this medium or B koumiss* (manufactured in London by E. Chapman and Co.), which holds about 12,000 grains of koumiss, contains as follows. (It was examined when twelve days old; specific gravity, at 62 deg. Fahr., 10.28.)

Water	10,662 grains
Alcohol	192 ,,
Caseine and Albumen	128 ,,
Lactose	582 ,,
Lactic Acid	130 ,,
Fat	36 ,,
Ash	90 ,,
Carbonic Acid	180 ,,
	12,000

The 90 grains of ash contain, approximately, 60 grains of phosphate of lime and 30 grains of mixed chlorides of sodium and potassium.

The three gradations of koumiss, designated as Nos. 1, 2, and 3, represent the irrepressible changes which it undergoes in time, while fermentation continues in the bottles. In the process of conversion of the milk into koumiss, the following changes take place. By the interaction which is promoted, caseine is set free in a highly attenuated molecular condition. The lactose is partially converted into alcohol, carbonic and lactic acids; and incidentally a bouquet of fragrant volatile products is generated (according to Morfit), which may perhaps be regarded as adjuvant in the remedial effect of the koumiss. The fermentation, once started, will continue, no matter how cold the temperature, or how closely the koumiss may be corked in bottles. Thus the products arise in time from the minimum in No. 1 to the maximum in No. 3. In passing through these gradations, the koumiss retains all its general properties, but changes some of its specific adaptations, as will be explained directly. In all cases, the koumiss is a milk-like fluid. In its fresh No. 1 state, it is a still liquor, and has an agreeable sweetly acidulous taste, recording sweet almonds. As it approaches the No. 2 gradation, it becomes more acidulous, assumes a sparkling character, and requires to be drawn from the bottle through a special tap. In No. 3, the sweet taste is replaced wholly by the acidulous, which also has sometimes a slight shade of bitterness; and the koumiss not only sparkles, but rushes through the tap in a rich creamy foam. These changes progress so rapidly in warm weather, that the bottles should be kept in a cold cellar, and treated with the same care as champagne wine. The distinctive character of koumiss is that of being the most assimilable of nutriments. Every quart bottle contains, approximately, 970 grains of solid respiratory and plastic food, according to Wanklyn; and each of its elements is in a state to promote digestion of the others by the feeblest stomach.

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* This analysis is not contained in J. A. Wanklyn's book on *Milk Analysis*, published by Trübner and Co., 1874, which gives only "Full" Koumiss tables.

The original koumiss of the Tartars is made from mare's milk; but, in my judgment, cow's milk is an equally good raw material, if not better; and there is no doubt that this koumiss gives highly successful results in proper cases, as shown here, in Odessa, Warsaw, Cracow, etc. It is not thin, like mare's milk; and, besides, it gives a koumiss free from every disagreeable odour and taste. Moreover, cow's milk, by its composition, affords facility for varying the composition and consistence of the koumiss-product according to the indications of particular cases. This is an important consideration, as through its means the chemist is enabled by his proper skill to make full koumiss, pure whey koumiss, medium koumiss, and extra kinds of special composition for special diseases, like diabetic koumiss, etc.

The physical and chemical characteristics of koumiss render it an aid upon which we can rely with great confidence for the treatment of extreme debility and all the phases of impending marasmus. A long and favourable experience justifies me in giving an emphatic assurance on this point. Koumiss not only contains a large proportion of lactic acid, which is a prime constituent of the gastric juice, but holds the caseine in that state of vitality which gives it the property of metamorphosing itself and the other constituents of the milk into healthy lymph and blood.

The physiological features of the several constituents of koumiss may shortly be specified as follows.

The *lactic acid* activates the digestive powers, diminishes the temperature and the frequency of the pulse, and regulates the mucous secretion. It has an additional specific action in certain diseases, as, for instance, in diabetes.

The *caseine*, *albumen*, and *fat*, restore the plastic and heat-giving materials of the body, and act as a chemical inspiration, so to speak, to promote assimilation of its associate constituents.

The *lactose* increases the weight of the body, and gives heat.

The *alcohol* produces sleep, diminishes heat, and forms fat.

The *carbonic acid* allays nausea, calms gastric irritation, augments diuresis, increases the energy of the heart's impulse, and diminishes the frequency of the heart's contractions.

As to the more minute acids and fragrant compounds, I prefer not to speak until my experience and observations in regard to them have become more mature.

It will thus be seen that the process of double fermentation in the artificial preparation of cow's koumiss has done nearly all the preliminary work which would fall otherwise on the digestive organs. There is no other derivative of milk or any other substance which can be substituted for it with corresponding advantages, for it may constitute a sole diet, as my own experience has proved, in many cases of chronic dyspepsia both simple and complicated. Dr. Braczinski of Berlin speaks, in his monograph, of koumiss from cow's milk as one of the most valuable aids in the medical practice of Warsaw; and Dr. Neugebauer of Warsaw makes a special mention of a case, in his private practice, of a young nobleman, presenting all the symptoms of tabes dorsalis, which was entirely cured in six weeks by treatment with cow's milk koumiss. This confirms my own experience with a mild case of a similar kind. Dr. Küttner, in Dresden, has also reported to me many gratifying results which he has obtained with koumiss in dyspepsia and debility. Dr. With of Brunerhaven writes in strong favour of fresh koumiss for all catarrhal diseases of the stomach, bowels, lungs, and in anæmia. In Dr. Kwasnicki's Polish translation of my treatise on koumiss (1870), there is a note which records Dr. Nowakowski's and Dr. Przystanski's confirmation of my own experience in the use of cow's koumiss. An appendix to the same translation gives the clinical experience of Professor Chalubinski at the University of Medicine in Warsaw, which prompts him to recommend earnestly the use of cow's koumiss in catarrhal disease of the mucous membranes, of the gastro-intestinal and respiratory tractus, and in debility from whatever cause. Dr. Edward Charlton, the late Surgeon-Major Ross, and Dr. R. Dawson, have also written to me in praise of koumiss as a valuable dietetic remedy; and Dr. Campbell Morfit, of the U.S.A., found, in his own case, that the British koumiss acts with the most decided benefit in catarrhal diseases and obstinate constipation, and increases weight rapidly. Mr. Ceely of Aylesbury, and many other brethren in this country, share the same opinion as those whose families I had the pleasure of advising. Neftel, Stahlberg, Schnepp, Marra, Weinberg, etc., have contributed largely to the medical literature of this subject, which has in the last few years increased considerably, as I presently count over thirty authors, who all agree on the main points of therapeutical success of koumiss, from whatever milk it may have been prepared. I will not prolong this paper by enumerating the cases reported in those works, as I shall arrange them in a proper order in the second edition of my treatise on koumiss; but so much I must say, that all these authors confirm the brilliant therapeutical results described so well by the father of koumiss literature, Dr. John Grieve of Edinburgh, late physician to the Russian army, when his paper, written with emphasis and with an undeniable noble feeling throughout, was read by Dr. Black, July 12th, 1784, in Edinburgh, regretting that koumiss should still remain unknown in the most enlightened parts of Europe, although a horde of Tartars, etc., had been using it for some ages past. I only do my duty in paying the greatest possible respect to the memory of Dr. Grieve, because even to-day his correct conceptions, his skilled judgment, his well defined indications, have not found a better and nobler expression on this subject after the lapse of almost a century, and I willingly endorse Virchow's words: "I have two faults over which I rejoice conscientiously; the one, that I consider the old physicians as 'brave' observers, and perhaps the still greater one of believing in their therapeutics."

Passing on to the indications of koumiss, I purposely omit to speak more specially of its physiological effects, which can only be understood by the full knowledge of its separate ingredients, and the operation of each; involving investigations that belong rather to a separate work, including the cumulative effects or sum total of the effects of koumiss.

Full Koumiss (A) is made from cow's milk, preserving the whole of the cheesy matter and as much of the butter or cream as is compatible with digestion and manufacture. It is adapted for cases of great emaciation with weakness of the digestive organs, when little liquid and no solid food can be taken; also for all complaints which are not of a febrile character, the bodily temperature especially not exceeding 100 deg. Fahr.; and for patients who have previously improved under the use of *Medium Koumiss* (B). This is the artificial representant, as nearly as possible, of the mare's milk koumiss, not obtainable in this country; and can be made by mixing ass's milk with cow's milk in the proper proportions, or by adjusting the natural components of cow's milk alone, so as to diminish the caseine and butter and augment the lactose and salts, thus making the koumiss more facile of digestion. It is suited to delicate or sensitive stomachs, which revolt against the buttermilk taste of the full or A koumiss, in which the cheesy matter proves too rich; and is also a more sensitive koumiss of more agreeable taste, so as even to satisfy a very capricious palate. Should there be in some exceptional cases a dislike even to the B koumiss, then I would prescribe, especially for children or ladies, whey or C *Koumiss*, No. 2 or 3, mixed with one-third part of fresh milk, warmed, if wanted, at the time of drinking, to be taken at first in small doses frequently during the day (one pint bottle *per diem*), increasing every two days *usque ad libitum* (three or four pints and more per day). Some persons, again, will prefer a little sugar dissolved in a tablespoonful of warm water put first into the tumbler, then the fresh milk, and on this let the koumiss out with all its force to mix thoroughly. A small quantity of champagne wine with it will augment the alcohol in a very pleasant way, if necessary.

The specific gravity of B koumiss varies between 1035 and 1070 in its fresh state, though, by the process of fermentation, it may sink below 1028 in consequence of the lactose breaking up into lactic and carbonic acids and alcohol. It may be used for diseases of the stomach and lungs instead of solid food, especially when the patient frequently asks for an acidulous drink, which in this case will not raise the temperature or irritate the stomach by a too sudden ingestion of solid matter. In this koumiss it is also found that, in the second stage of fermentation, the cheesy matter appears in separate layers, which, however, by shaking, can be easily reduced to a homogeneous milky fluid by combining with the serous layers, and the molecular condition is then so uniform that no flakes are noticeable, as in the genuine mare's milk koumiss. I may notice here that cheesy matter in the solid form, separated from the milk by means of rennet, curds, etc., is quite indigestible, even in small quantities, and can only be adopted for food when fermented in the shape of Stilton or Cheshire cheeses, etc., which are prepared, with or without the addition of cream, all over the globe; whereas, in a well fermented koumiss, the cheesy matter appears as a homogeneous, soft mass, which constantly developes bubbles as long as it is moist, and the flakes dissolve on the tongue like snow, with an acidulous and a pleasant sensation. No wonder, then, that it does not give the stomach the slightest trouble in digestion or absorption; and I can safely say that I have never found any other form of cheesy matter, by any course of preparation, that possessed similar properties, although I have made innumerable attempts to produce a soft cheese which would prove digestible in larger quantities, so as to replace loss of flesh in certain wasting diseases. In my experiments, I found that the dry residue of koumiss, after filtration or evaporation, affords a granular mass of acidulous taste, containing undecomposed lactose, albumen, and salts, which, when made into lozenges with the necessary additions, are so easy of digestion, that a few of my friends consumed nearly a pound of them after dinner—*pour la bonne bouche et digestion!* I would not seem, however, to recommend A koumiss after a hearty meal, though I shall never forget Plymouth, where, after reading my paper on koumiss, a very eminent gentleman contended in sober earnest that, having taken some of Chapman's Full Koumiss in the museum, for the supposed purpose of removing indigestion after a full breakfast that had disagreed with him, instead of feeling better he became worse, as if "a plenus venter digerat libenter" when it becomes still more extended.

I have been often called upon to answer most amusing questions with regard to koumiss, though I must confess I correct with the greatest pleasure the errors committed by others on the subject of milk-fermentation. Many look upon koumiss as a drug-medicine, and think that with one or two bottles, taking a tablespoonful every two hours, a decided effect ought to follow; just as some persons fancied that guano, when first introduced, would make plants grow *ad oculos demonstrandum* (before their own eyes!). I regret that the age of wonders has passed, although there is still a credulous portion of humanity to conjure up wonders in their own imagination. Koumiss is, however, undoubtedly entitled to be regarded as a medicine that "heals to nourish, and, in nourishing, gives strength and weight in the shortest possible time;" which is a truth daily confirmed in proper cases. In any case, this remedy is, at all events, harmless, occasioning no anxiety to the physician, and much more likely to produce the good effect he desires, especially in cases where drug-treatment is apt to fail. I ought to state that I never had the opportunity of procuring a sufficiently large quantity of mare's milk for koumiss, so as to make fair trial of it in practice; and my conclusions as to the comparative merits of mare's and cow's milk koumiss are strictly of a deductive nature, based on the analysis.

REMARKS ON ICHTHYOSIS LINGUÆ FOLLOWED BY EPITHELIOMA LINGUÆ: WITH NOTES OF THREE CASES.

By HENRY MORRIS, M.A., F.R.C.S.,
Lecturer on Anatomy at, and Senior Assistant-Surgeon to, the Middlesex Hospital.

In patients suffering from epithelioma of the tongue, it is not so rare a thing as is sometimes represented to find the mucous membrane of the tongue or cheeks, or both, covered by white leathery or cornified patches of thickened epithelium, with or without distinct naked-eye appearances of enlargement of the papillæ. This condition was called, first, I believe, by my colleague Mr. Hulke, ichthyosis glossæ; and, at the time when he communicated the report of a case to the Royal Medical and Chirurgical Society in 1864, Sir James Paget narrated an account of a case in his private practice, of a lady who, some years after the occurrence of ichthyosis, became the victim of epithelioma of the tongue. This case of Paget's was the first recorded notice of the association of ichthyosis and epithelioma; and Mr. Hulke's paper contained, so far as I know, the first description of the nature of the morbid change which he had so named. Several isolated cases of ichthyosis have been since reported; but there can be no doubt that in many instances this condition of the mucous membrane has preceded or coexisted with epithelioma, without having been ascertained from the history of the case, or paid attention to when seen. I am led to this opinion by the fact that, during a period of less than six months, three well marked cases of epithelioma supervening on ichthyosis linguæ have come under my notice in the cancer out-patient department of the Middlesex Hospital; because, too, I can bring to mind other cases in which I have seen such a change, and can refer to my notes for instances in which it is stated that there were "hard superficial patches on the dorsum", or that "the mucous membrane, from the lower surface of the tongue to the inner surface of the maxilla, is thickened and raised"; or, again, "the tongue is coated with a thick yellow fur".

No one who is familiar with Mr. Hulke's description of this abnormal state of the tongue in the second volume of the Clinical Society's *Transactions*, could fail to recognise the affection; but, though the condition is unmistakable, some objection has been raised to the term used by Mr. Hulke to express it. In a recent excellent monograph upon diseases of the tongue by Mr. Fairlie Clarke, exception is taken to the name ichthyosis, chiefly for the reason that in ichthyosis of the skin the sebaceous glands are concerned, whereas in the mucous membrane of the tongue there are no such glands. But that form of so-called ichthyosis of the skin in which the sebaceous glands are involved otherwise than by being simply occluded—just as, in very severe cases, the hair-follicles also are affected—is not true ichthyosis, but the seborrhœa sicca of Hebra. True ichthyosis is primarily and fundamentally a deviation from the natural state of the epithelial structure of the skin, although in severe cases it may be associated with a hypertrophy of the epithelial sheaths of the papillæ, and in still more severe cases with a hypertrophy of the cutis vera.

Another objection which has been raised to the name ichthyosis is, that this condition of the tongue is only a local one, and is not associated with a similar change in the mucous membrane of other parts or in the skin. But ichthyosis simplex or cornea may be local, and not general, as we sometimes see about the ankles, shins, and elbows; and, moreover, it is not correct to say that the mucous membrane of the tongue is in all cases the only part affected, for the mucous membrane of the cheeks and floor of the mouth are sometimes, though, so far as I have seen, to a less extent, affected also.

On the other hand, the reasons in favour of retaining the term ichthyosis for this state of the lingual and buccal mucous membrane are these. The morbid change is essentially a change in the epithelial layer of the mucous membrane, although sometimes attended with a hypertrophy of the sheaths of the papillæ, and sometimes with a hypertrophy of the basement-membrane, as in Mr. Hulke's case and in one of the cases described below. Again, in this condition of the tongue, as in ichthyosis of the skin, the surface is rough and leathery to the touch; the scales of epithelium are closely imbricated or matted together, and adhere firmly to the subjacent structures; the little furrows, which are more or less well marked, map out the scaly patches into little segments in a tessellated manner; and, though never disappearing altogether, the degree of change in the tongue, as in the skin, varies at different times. Further, the change in the tongue is due, no doubt, to an alteration in the nutrition of the part, and is not in any way dependent upon local irritation. In no one of the cases now reported was there the slightest ground for thinking that irritation had provoked the change. The positions upon which it occurred discountenanced such a hypothesis; whereas the fact mentioned in the report of Case II, that the patch varied in size and soreness with the state of health, favours the assumption that the condition is dependent, in some way, upon the processes of nutrition.

It is true that the tongue, from its situation, is continually exposed to considerable irritation; but this is all the more reason why we should require the cause and kind of irritation to be very definitely known before attributing a more or less general change in the structure of the lingual epithelium to such irritation.

It will be well to determine, for the sake of analogy, if the chemical constitution of the epithelial cells of the tongue affected with so-called ichthyosis is altered; and, if so, in what manner, and how far the changes correspond with those which have been proved to occur in ichthyosis of the skin. It would also be satisfactory to ascertain if, or to what extent, if at all, ichthyosis is hereditary. If it be found to be so in any marked degree, we shall have a further point of similarity between this change in the mucous membrane of the mouth and the ichthyosis of the skin.

With all the features of likeness above mentioned, there seems no more objection to apply a term used for this abnormality of the skin to the similar abnormality of the tongue, than there is to speak of the eruption of scarlatina or erysipelas as occurring in the throat.

The object, however, in view in publishing the subjoined cases, is not to employ them as a groundwork for the defence of a *name*; but, as there are only a very few cases recorded in detail, it is thought that, by adding these to others already published, further data are furnished for drawing general conclusions upon points of importance connected with this abnormality. If, for instance, it be found from a large number of cases that ichthyosis linguæ is always followed by epithelioma, it will become a question whether, when the ichthyosis is localised and of the more severe kind, the portion of the tongue so affected should not be removed—in fact, whether we should not regard this condition as seriously as we do epithelioma itself, and treat it as radically as we do cancer.

There is one striking feature brought out by microscopic examination of the abnormal tissues, which it is impossible to overlook when speaking of the sequence of ichthyosis and epithelioma: this is the occurrence side by side of epithelium merely hypertrophied—the ichthyotic structure—with the cancer-structure, without the one passing into the other. From this fact, the inference follows that, however great the tendency of epithelioma to occur in a tongue the seat of ichthyosis, and however frequent the sequence of the two conditions may be, still ichthyosis is itself a substantive change, and not simply a preliminary warty stage of epithelioma.

From a perusal of the following cases, it will be seen that—1. In each the ichthyosis existed from nine to eleven years before the epithelioma appeared; 2. All the patients were males, over or close upon fifty years of age; 3. Two of the patients positively denied ever having had syphilis, and in each the specific remedies had for some time been tried without producing any effect upon the disease; in one case, although the patient had had syphilis seventeen years before, he had never had any secondary affection of the tongue or throat; 4. In two of the cases, the cancerous disease is known to have commenced upon an ichthyotic surface, and in the third case it probably did so—a most important feature in the clinical history of the cases, because the origin of epithelioma in such a patch gives colour to the view that there is some causal relationship between ichthyosis and epithelioma; but this does not oppose the view that the one is not a mere preliminary of the other.

CASE I. *Ichthyosis Glossæ, followed by Epithelioma of the Tongue; Removal of a Portion of the Tongue by the Galvanic Ecraseur.*—Edwin T., aged 50, applied to me at the cancer out-patient department on December 27th, 1872. He stated that he had been married fifteen years, and had always enjoyed good health, with the exception of having had syphilis seventeen years ago. He was quite sure he never had any ulcer or fissure on the tongue or throat, but had a rash on the skin shortly after the chancre on his penis. For the last nine or ten years, the greater part of the dorsal surface of his tongue had been white and leathery from a "thick fur that had covered it". At the time of application at the hospital, the epithelium coating the tip and the lateral portions of the anterior half of the dorsum of the tongue was much thickened, of a pearly white colour, and horny to the touch. To the naked eye, the appearance was something like that of the cuticle after prolonged immersion in warm water, but to the finger much rougher. The portion of the dorsum intermediate between the two lateral patches, as well as the base, was covered with a whitish yellow but soft fur. Upon the dorsum to the left side near the tip of the tongue was a raised and irregular mass about the size of a small almond, quite hard, and fissured upon its surface. The tongue was freely movable, and could be protruded with ease. There was no difficulty in speaking or swallowing; but pain was felt sometimes when eating and smoking. There was no enlargement of the glands of the neck.

With the history of syphilis, and without actual ulceration, and knowing, too, that ichthyosis is sometimes a sequela of syphilis, I thought it right to employ antisyphilitic remedies. This was done for four or five weeks, but without any improvement occurring. Still the treatment was continued, in deference to the doubts expressed by others as to the epitheliomatous character of the disease.

On March 6th, my case-book contains the following note. "Tongue in about the same condition as when first seen, except that there is now a small superficial hard nodule on the right side of the tip of the tongue, about the size of a split pea. There is an enlarged gland below the angle of the left side of the jaw. A good deal of pain is now, and has been for some week or two, experienced in the front of the left ear and in the ear-hole; this is aggravated by pressing upon the elevated and fissured patch on the tongue."

April 3rd. A small slough had formed in the centre of the mass on the left side.

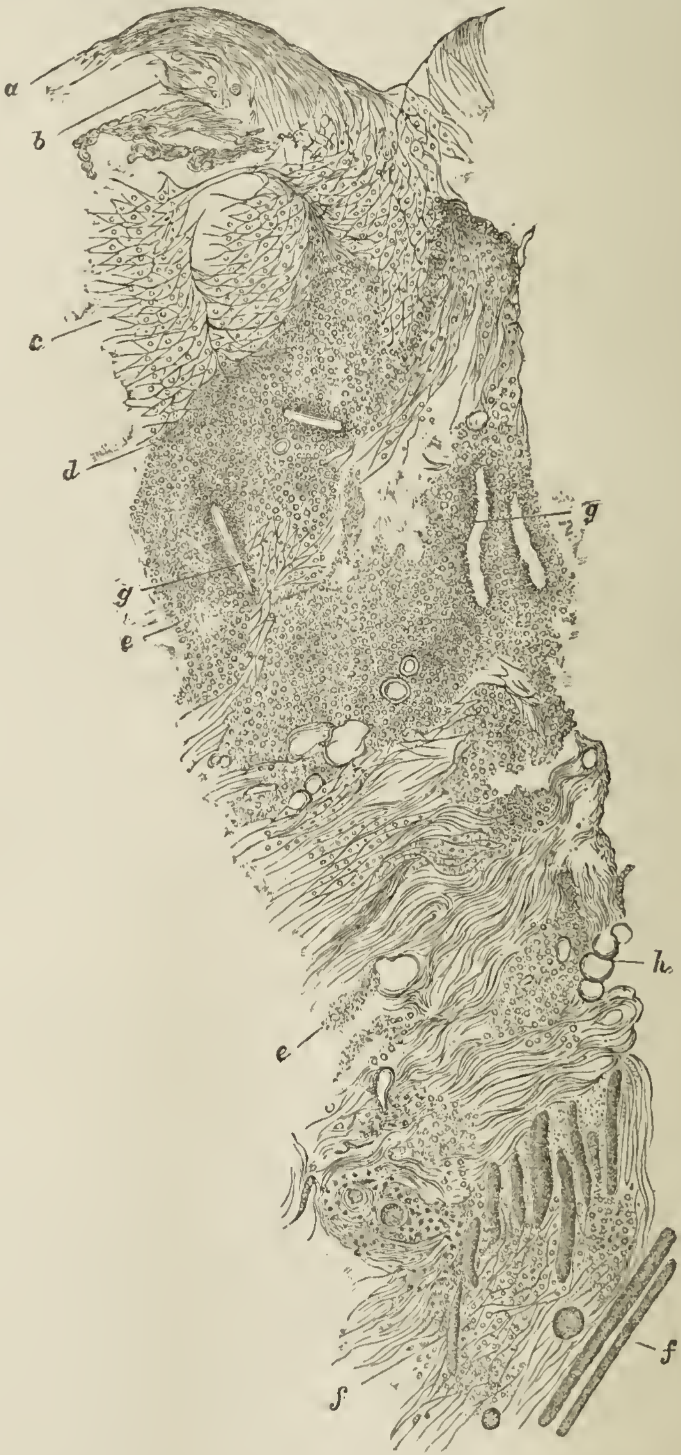
April 20th. The anterior half of the tongue was removed to-day by the galvanic *écraseur*. A microscopical examination of the diseased parts showed the existence of epithelioma and hypertrophy of the epithelium.

June 9th. He was discharged. He made an uninterrupted recovery; but there was a little spot in the centre of the divided surface which had not quite healed, though it was fast doing so.

On October 16th, he returned to the cancer out-patient department to show himself. The tongue was then quite sound; but the cicatrix had become coated with thick white flakes or scales, similar in appearance to others seen on the anterior lateral margins of the dorsum of the existing portion of tongue. The centre of the dorsal surface was marked by some elongated papillæ, covered with thick white epithelium. There was still some enlargement of the gland below the angle of the jaw.

Two very excellent coloured drawings of the tongue of this patient before the operation, executed by Mr. Burgess, can be seen in the Middlesex Hospital Museum. The following is Dr. Goodhart's description, with drawing, of the microscopical appearances of the parts removed.

"The pieces submitted to examination, after being hardened in spirit and subsequently in chromic acid, showed to the naked eye—1, a local warty excrescence, surrounded by an elevated ridge a *millimètre* in height or rather more; 2, an epithelial surface of variable thickness around it. A vertical section through the growth showed it to be made up of a number of vertically set papillæ of somewhat fusiform shape and ragged surface; the thickness of the whole amounting to two *millimètres*, set in the surrounding mucous membrane. This also was thick, though less so than the part from which the papillæ sprang; it was pretty uniform in its appearance, and, on comparing with the mucous membrane from healthy tongue, stood, as regards thickness, in the relation of 2 to 1. The muscular structure was very unequally



attacked; in some places, it was replaced by a whitish growth; in others, the muscle and fibre, though a little pale, were nearly of normal appearance. On microscopical examination, attention was directed to the papilliform growth, to the mucous coat around, and to the deeper seated structures. The mucous coat of all parts examined appeared to me thickened in two directions—first and chiefly in its epithelial layers, and secondly in the subepithelial fibrous tissue. The superficial *epithelial* coat further was not at all places alike; in some, it existed as a layer of even, though increased thickness, merely varied by the rete mucosum, which had slight undulations; in others, it dipped deeply into the subepithelial fibrous tissue, and was even surrounded by cancer-growth, though, as far as could be seen, unaffected by the contiguity. The papillæ (*c*) appeared to be no more than rearrangements of the epithelial cells proper to the part, with definite fusiform shapes, which then became welded or fused together (*a*, *b*), and so came to have somewhat of a horny texture; in truth, they would appear to have a similar relationship to the tongue as have horny growths to the skin. I could not see that they had any vascular supply. They were deeply set in the surrounding scaly epithelium; and, while their superficial layers were shed, they were replenished from below by the mucous layer. The deeper fibrous structures were very thick, and densely crowded with small rounded nuclei about one three-thousandth of an inch in diameter. In some places, even at some considerable depth in its substance, came tracts of scaly epithelium, which, though surrounded on all sides by the small cancer-nuclei, yet retained their normal appearance. Deeper still came the muscular fibres; they were in most cases quite healthy, though at places surrounded by tracts of nuclei (*f*, *f*)."

CASE II. *Ichthyosis Glossæ followed by Epithelioma of the Tongue; Removal of Disease; Recurrence; Ligation of Lingual Artery and Removal of Diseased Portion of Tongue.*—William C., aged 49, a married man, was admitted into Forbes ward, under Mr. De Morgan, in April 1873. He denied ever having had syphilis, and was not a great smoker. He stated that for ten or eleven years there had been a white horny patch upon the left side of the median line of the dorsum of the tongue. This was of an irregularly four-sided shape, and somewhat larger than the ulcer which now occupied its place. The horny plaque sometimes varied in its size, and occasionally soreness or pain was felt in it; these changes, however, always ceased after taking some aperient medicine, so that the patient considered them due to "heat of the body." No other inconvenience was ever suffered until nine months previously to his admission, when a raised red and moist granular-looking ulcer was noticed at the anterior and outer corner of the plaque. This gradually spread until it nearly covered the whole of the horny patch. It caused him no pain, but was in the way while moving his tongue. There were no enlarged glands in the neck. The mucous membrane of each cheek was white and scaly over a small irregular area; that on the left cheek was larger than that on the right.

On April 23rd, Mr. De Morgan removed the diseased patch, with some of the surrounding healthy tissue, by means of a pair of sharp-cutting scissors curved somewhat upon the flat of the blades. Only a small portion of the depth of the tongue was thus removed; there was some smart bleeding, which had to be checked with liquor ferri. The patient made a good recovery, and left the hospital on May 27th. During the months of June and July, he came once or twice to the out-patient department to show himself. He thought the disease was recurring, as there was a little hard nodule just behind the cicatrix, in which he sometimes suffered pain. On August 27th, he was admitted under my care, as this nodule was increasing in size and the pain in severity. A memorandum, made at the time of his admission, states that "on the right side of the tongue, behind the scar of the previous operation, there is a hard nodule, in size rather smaller than a French bean. He has a pricking pain in the part and a pain along the right jaw and in front of, and in, the meatus of the right ear." The presence of this hard nodule near the seat of the old scar pointed to a recurrence of the disease; and its increase in size and the persistence of pain in it indicated the propriety of removing it. The patient, too, was anxious to get rid of the cause of his pain. The question then arose as to what was best to be done. On the one hand, as the anterior extremity of the tongue was free of disease, the removal of the entire right half was not justifiable. Moreover, to safely and thoroughly do this, it would have been necessary to divide the jaw at the symphysis, or the cheek from the angle of the mouth; the same step would have been required for the excision of the diseased parts through the whole thickness of the tongue. On the other hand, to cut away with knife or scissors the hardened tissues would have exposed the patient to great risk of hæmorrhage, which with difficulty only could have been checked. I therefore, on September 3rd, first tied the lingual artery on the diseased side, and then freely removed with a knife all the diseased structures. In this way I hoped (1) to prevent loss of blood and (2) to retard the return of the cancer by diminishing the blood-supply of the part. The first end was completely obtained. The man was discharged well on September 23rd. In November, he came to show himself at the cancer out-patient department; there was then no sign of recurrence; he could protrude the tip of the tongue beyond the line of the teeth for half an inch. The tip, when thrust forward, was curved considerably to the right side, owing to the contraction following on the previous removal of parts. The buccal mucous membrane was in the same state as when first seen.

CASE III. *Ichthyosis Glossæ followed by Epithelioma of the Tongue.*—Samuel B., of Berwick Street, aged 56, a tailor, in bad health and poor circumstances, applied to the cancer out-patient department on May 1st, 1873. He positively denied ever having had syphilis. For ten years at least he knew he had had white tough patches, irregular in shape, on the dorsal surface of the tongue. These had varied in intensity and area at different times, but had never disappeared to any great extent. Eight months ago, a small elevated ulcer commenced on the left free margin a little way from the tip of the tongue; this had been cauterised several times, but continued to increase.

At the time of his application at the hospital, there was a ragged ulcer extending from the tip nearly to the base, and which involved nearly the whole left half of the tongue. The inner margin of the ulcer was thick, raised, and indurated; while the outer margin was irregular, and even deeply notched, from the pressure of the teeth upon the swollen organ. In the ulcer were two or three excavations, from which sloughs had separated or were separating. On the right half of the tongue, near the fore part of the dorsum, there was a patch covered by thick and leathery white scales of epithelium, rough and harsh to the touch. A similar, but less well marked condition, extended to the under surface of the tongue. The dorsum elsewhere was coated by a thick yellow adherent fur, except immediately behind the leathery patch, where there was an oval-shaped space free from epithelium. There was one enlarged gland beneath the angle of the left jaw. The tongue was freely movable, and speech and deglutition were fairly easy.

From the presence of some bronchitis and the general low state of his health, no operation was advisable at that time. The extensiveness of the ulcer rendered an operation at any time unfavourable; but, as the tongue was swollen, and was becoming still more so, the removal of the whole or a part of it seemed called for, if his general health improved, to prevent the long train of misery attendant upon the great enlargement of the tongue, which not unfrequently occurs when epithelioma of that organ is allowed to take its course uninterfered with. For some weeks, both while an out-patient under me, and an in-patient for bronchitis under Dr. Liveing, antisyphilitic remedies were tried, for the sake of testing the diagnosis as to which all who saw him were subsequently agreed. The patient convalesced from his bronchitis, but refused to undergo any operation, and left the hospital without permission. No improvement had occurred in the state of his tongue.

AMPUTATION AFTER RAILWAY ACCIDENTS.

By THOMAS INMAN, M.D.Lond., Clifton.

WHEN I was House-Surgeon to the Liverpool Infirmary, about thirty years ago, a man was brought in at ten o'clock at night. He had been brought in a car a distance of about eight miles, and had been lying on the ground four hours after the injury, on a cold night. On examining him, it was found that a railway-engine had taken off both his legs, one just below the knee, and the other just above it.

He was under the care of the late Mr. Bickersteth, who, without loss of time, removed all the smashed part of the leg whose knee was not injured, and secured the arteries. The popliteal artery was seen to be beating strongly, but not bleeding. The knee of the other limb was too much smashed to be saved, and amputation was resorted to in the lower third of the thigh. During the operation, the man was in a curiously somnolent condition, and only waked up when an artery was ligatured. He slept soundly on being put to bed, and recovered without a bad symptom, except that a few days revealed that more of the soft parts below the knee were injured than was at first supposed. These sloughed away. On my going to see the man on the morning after the accident, he told me that the engine had produced "a stun-like feeling," and that he had no sensation whatever in either limb from the time of the accident until he awoke next morning.

During my residence, we had another severe railway smash, this time of the elbow-joint. Every injured fragment which could be found was removed, and the man recovered perfectly and with a flexible joint.

One may therefore demur to Mr. Erichsen's sweeping assertion as to the hopelessness of operating in railway smashes.

THERAPEUTIC MEMORANDA.

COCA: ITS THERAPEUTIC USE.

MANY years ago my attention was drawn to the reputed restorative powers of "coca", by a pamphlet written by M. Mantegazza of Milan, of which I gave a short *résumé* in the *British and Foreign Medico-Chirurgical Review* for July, 1859. Although I have found it alluded to in works that dealt with the Indians of South America, I have never had the good fortune to meet with any medical man who had a personal acquaintance with it, nor till now have I succeeded in obtaining the substance itself. Through the kindness of Mr. Fernandos, a chest of coca leaves, as they are used by the Indians of Bolivia, has reached me, and I have placed it with Mr. Squire, her Majesty's chemist, from whom samples may be obtained. The leaves are derived from the *Erythroxylon coca*, a shrub that is indigenous in South America. They are chewed by the Indians, who are stated by Mantegazza, Moreno, Guibourt, and others, to go through laborious work for several days and nights in succession, without exhaustion, although they have little or no food, provided that they have a supply of about eight ounces of coca-leaves to chew during the day. An infusion of half a drachm to a cup of hot water is said to produce beneficial effects.

It remains to be seen whether coca-leaves exert a similar effect in England to that which they are stated to have in South America. If they do, we shall doubtless have no difficulty in obtaining further supplies from Peru. In the meantime it will be desirable that those gentlemen who employ it, either in infusion or extract (of which the dose is stated to be from five to ten grains), should publish the results it yields in their hands. As yet, I have only been able to try the coca-leaves by mastication, or by drinking some of the infusion, on my own person, but without any definite results.

Should the virtues of coca be as manifest in England as they are stated to be in Bolivia and adjoining countries, we shall have to thank South America for a very valuable addition to our restorative drugs.

E. H. SIEVEKING, M.D.

OBSTETRIC MEMORANDA.

TREATMENT OF *POST PARTUM* HÆMORRHAGE.

VI.

HAVING read with great interest the discussion in the JOURNAL upon the treatment of *post partum* hæmorrhage, especially with regard to the use of perchloride of iron, I write to give my humble testimony in favour of this plan of treatment, although my experience of it is limited to the three following cases. In using the injection, I carried out the instructions given by Dr. Barnes in his *Lectures on Obstetric Operations*, and I feel sure that no one who has once seen hæmorrhage controlled by this means will ever attend a case of labour without having at hand a syringe and a solution of the perchloride of iron.

CASE I.—Mrs. T. J. M., aged 26, a delicate woman, with aortic valvular disease, was delivered of her first child on January 15th, 1871. On the third day, secondary hæmorrhage came on, and continued until the fourth day. I examined the interior of the uterus, but failed to detect the presence of any coagula. The patient being weak, an injection of the perchloride of iron was used, after which all hæmorrhage ceased, and she made a good recovery.

CASE II.—On February 23rd, 1872, I was summoned to S. H., aged 35, multipara, whom I found in labour at the seventh month. It was a case of partial placenta prævia. Throughout the day, hæmorrhage had occurred at long intervals with each pain. At 10 P.M., the os uteri being undilated, I introduced my finger, separated the placenta as high as I could reach, ruptured the membranes, and soon afterwards was able to seize a foot. The os dilated very slowly, and delivery was not over until 1 A. M. on the 24th. The woman had lost a large amount of blood during the labour, and was faint and blanched from the loss. After the expulsion of the placenta, some hæmorrhage continued, and was not checked by compression of the uterus, cold applied to the vulvæ, etc. In the extremely weak condition of the patient, I thought it best not to delay the injection of the perchloride of iron, which at once arrested the oozing, and, I firmly believe, saved the woman's life. The recovery in this case was very tedious, owing to the extremely anæmic condition of the patient after the labour.

CASE III.—Mrs. H., aged 31, a pale, sickly looking woman, who had borne seven children in as many years, was delivered of her eighth child on February 1st, 1873. An hour after delivery, hæmorrhage came on, not violent, but a constant oozing, which the ordinary means failed to check. Being a long way from home, and the patient being weak, I did not like to leave her with any risk of further hæmorrhage, and therefore used the injection of iron with the usual effectual result.

EDWARD CLAPHAM, M.D., Devizes.

VII.

Mr. M. Foster of Huntingdon asks whether he is singular in his treatment of *post partum* hæmorrhage by means of tincture of opium. I beg to refer him to Murphy's *Lectures on Midwifery*, edit. 1852, p. 319, where the author says, "opium is, therefore, of the highest value in saving a patient from the consequences of extreme flooding"; and again to p. 366, where, after mentioning a case in which flooding came on ten days after delivery, he says, "I think opium in large doses saved her". I once had a case of *post partum* hæmorrhage in which the difficulties were much increased in consequence of the woman having been confined in her ordinary wearing apparel, including stays. This is a common and objectionable practice among the working classes; and I now, for more reasons than one, but especially for the one stated above, insist upon a proper change of clothing being made before delivery in every case.

R. T. MANSON, L.R.C.P.Ed., etc., Howden le Wear.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, FEBRUARY 13TH, 1874.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

PYÆMIA IN PRIVATE PRACTICE.

THE discussion on the President's paper, on Pyæmia occurring in Private Practice, was resumed.

DR. BASTIAN: When I moved the adjournment of this debate at the last meeting, it was because I thought it desirable that the principle should be recognised, that debates on important subjects should rather be deferred than be attempted to be strangled by prolonging the meeting for half-an-hour. I did not, at that time, recollect that taking a step of that kind would involve my opening the discussion this evening. Still, as I am now called upon, and as I have placed myself in this position, I shall be very glad to make a few remarks upon one part of the subject. The subject, of course, is a very wide one, and I shall confine my remarks to the question of the mode of origin of the disease. It seems to me, sir, that there are no facts more important in your address, than those in which you relate the occurrence of pyæmia in cases in which there was no open wound, or abrasion of any kind. There were six cases of this kind, in a total of twenty-three. This is a very large proportion for such cases; still, I think it must be within the experience of very many members of this Society, that cases of this kind do occur from time to time—cases in which pyæmia occurs, and acute necrosis of a long bone, without any external wound. I would also call attention to the fact that, in Dr. Murchison's work on Fever, he states that pyæmia has been known to occur, not at all unfrequently, in cases of epidemics of typhus fever; and also in cases in which there have been no bed-sores, and no external wounds of any kind. Here, therefore, the pyæmia would appear to occur, as it did in your own cases, where there was no wound or abrasion. It seems to me that cases of this kind are capable of throwing a great deal of light upon the mode of origin of the disease, even in those other cases in which an external wound does exist; because, even if we take the cases in which pyæmia occurs with an open wound whether it be in private practice or in the wards of a crowded hospital, the question presents itself, how the morbid condition is initiated. We hear a good deal about septic influences, and septic agencies, which are engendered under certain conditions; but we still have to learn whether these agencies, whatever they may be, act principally upon the wound itself, or upon the general constitution of the patient, and so lead to an impaired or vitiated condition of the secretions of the wound. Now, I believe that, generally, the first view would be the more popular one, that it is through some direct action upon the wound. Still, I think there are very many reasons which would lead us to suppose that the other mode of origin, or mode of action, as it were, is very frequently the real one. Since the last meeting, I have made a few observations on the condition of wounds, and the condition of the fluids in wounds; that is to say, wounds which are treated in the ordinary manner in hospitals, in which no special precautions have been taken to exclude contamination from any bodies which might exist in the air. I have examined these fluids mostly twenty-four hours after the dressings have been applied—that is, just before the new dressings were put on the wounds. In some cases, I have found that the pus was crowded with bacteria of different kinds—the ordinary rod-shaped form, and also the dumb-bell form—and in other cases no traces of bacteria were to be found. I found, also, that these discrepancies seemed to be easily explicable; that, wherever one had to do with a thoroughly healthy subject, and where the temperature was low, no bacteria, or other organisms, were to be found in the wound; but where the temperature of the patient was as high as 101 deg., or upwards, then in every case I have found bacteria existing, in more or less abundance, in the fluids bathing the wound itself. Of course, if bacteria are there—acknowledged by all to be the most potent of septic agents—if they are actually in the wound itself, we should have no reason to go to aërial contamination of such a wound as that, to excite putrefaction in it. I believe that, in this condition of system, where a febrile temperature exists, and where the patient is in a somewhat unhealthy condition, the bacteria are actually bred in those fluids themselves. In proof of this, I may mention a case which occurred, under my care, in University College Hospital, a very short time ago. It was a case of acute pemphigus. The patient came into the hospital with very large blebs all over the body. The temperature of the patient was raised to a very high point; at one time to 104.5 deg. Many of these blebs remained perfectly intact for six or seven days. At different periods, I examined the contents of the blebs, and I found that they were all crowded with organic forms. They contained bacteria, and they contained leptothrix in great abundance. The blood of the patient showed no signs whatever of any organisms. I may say that this patient also recovered, notwithstanding the fact that very large surfaces of the body were completely bathed with organisms of this kind. Here organisms were produced in the fluids of a febrile patient, under conditions which excluded the possibility of aërial contamination. And so, I believe, in cases of open wounds, the bacteria which occur in them are very often produced independently of aërial contamination. Hence, if wounds can lapse into a condition of this kind, it seems of very little use to resort to the belief that the wounds themselves have been contaminated by any mere organic matter, or even by bacterial germs dropping into them; and it seems to me rather to support the notion that in these cases, even where a wound exists, the first stage of the process may be not at all dissimilar from that which occurs in cases where no external abrasion exists. That is to say, you have a febrile condition, you have modifications of the febrile process, and the wound itself, as a consequence of that, becoming unhealthy, and symptoms of pyæmia at last develope themselves. It therefore seems to me, that this is a point of view which is well worthy of being kept in mind, even in connection with those cases in which an open wound does exist, and that the others are really capable of throwing a good deal of light upon them.

Mr. HULKE: I do not rise to take any part in the discussion, but it seems to me that it would be extremely useful if the Secretaries, who, I presume, have some *précis* of the debate which occurred at the last meeting, would shortly give it to us, in order that we might pick up the thread then broken. Then I would suggest the desirability of having a clear understanding as to the subject of discussion. It appears to me, for instance, that Dr. Bastian's remarks are most pertinent on the question of septicæmia, but I do not see their direct bearing on the subject of pyæmia.

Dr. SOUTHEY gave a brief *resumé* of the debate at the previous meeting, and suggested that the discussion should be strictly limited to the question of pyæmia.

Dr. BRAXTON HICKS: It seems to me that, if the discussion be restricted to cases only where secondary deposits occurred, only a small portion of the question will receive attention, and our views as to the causation of the ill-doing of injuries will be very limited; because any one, who has watched the invasion of erysipelas or diphtheria in a previously healthy ward, will see that others, besides those who had secondary deposits, were influenced in different ways, but all with conditions recognised as the result of blood-poisoning. In an invasion of diphtheria in a ward, I have seen a woman who was delivered, and had so-called puerperal fever; another, who had undergone a slight operation, had secondary deposits; another had diphtheria, and others various forms of blood-poisoning. In an attack of erysipelas, one, who was tapped for ovarian dropsy, had septic peritonitis; another, tapped at same time, erythema and severe toxæmia; and all the plastic operations did badly for some time afterwards.

Mr. HENRY LEE: I think, with Dr. Hicks, that it would be exceedingly difficult to limit the discussion of this subject to pyæmia, strictly so called. I think, also, that it would be very difficult to limit the discussion to atmospheric influence independently of contagion—the contact of other things besides anything that may be contained in the atmosphere. It was my lot, many years ago, to be the house-surgeon of the lying-in hospital in York Road; and there, unfortunately, we had blood-poisoning to a very great extent. I shall never forget the impression that the cases I then saw made upon my mind. The skin became very hot, the pulse exceedingly weak, from 130 to 140 in a minute, and the poor patients almost invariably died, sometimes from erysipelas apparently, sometimes from mortification of the skin, sometimes from the effusion of serum into the peritoneal cavity, sometimes from the effusion of ill-organised lymph; and occasionally, when they lived long enough, and only when they lived long enough, they had a purulent deposit. I cannot doubt that the whole of these cases originated in the same poison; therefore, it would be exceedingly difficult to limit this discussion to any disease which produced deposits of pus only. There was a time, which possibly you may recollect, when this disease was supposed to be confined to one hospital in London. A little more observation taught us that it occurred in other hospitals perhaps quite as frequently. Now you, sir, have told us that it occurs in private practice as frequently as in hospitals. If we extend our observations a little further, the same disease which was once supposed to produce purulent deposits only, we shall, I think, find, will produce a great many other secondary forms of inflammation quite unconnected with the production of pus. Again, with regard to the question of contagion, I think anybody who has fairly given the carbolic acid treatment a trial, will see that the wounds under its influence behave very differently from those that are not so treated. It has been said that the carbolic acid prevents the entrance of germs into the wound, but I think we must consider that the same carbolic acid treatment, and the same dressings that we applied to them, will prevent the contact of many other things—will prevent the contact of dirty fingers or of a dirty sponge, and many other dressings. In connection with that, I would again refer to my experience in York Road Lying-in Hospital. When we had the fever so exceedingly rife there, there was scarcely any puerperal fever out of the hospital, and the only two cases that occurred out of the hospital I had attended from the hospital, and I cannot doubt myself that I had been in some measure the means of conveying some poison or other to those patients. A case in point occurred last summer at Queen Charlotte's Lying-in Hospital. I see one of the physicians of that hospital present, and he will set me right if I do not state the facts correctly. There, there were several cases of puerperal fever, and it was proposed to shut the hospital up. Being at the Board one day, I suggested that every nurse, every matron, and everybody about the hospital, should be told to wash their hands in carbolic acid before they touched a patient in any way. The result was that there was no more puerperal fever till the time came when the hospital was naturally shut up, which it is in September. A very important fact, which, perhaps, may not be know to many members of the Society, but which we have upon very good authority indeed, is that, if we put a basin of carbolic acid and a basin of yeast together, the carbolic acid will prevent the yeast from rising. It prevents the development of what we call the ferment in the yeast. No doubt the influence is conveyed through the air, but the ferment itself is in the yeast, not in in the air, and I have no doubt the ferment may go on quite independently of any atmospheric influence. A very remarkable case was mentioned to me by Dr. Druitt sometime ago, where a body had to be exhumed after having been buried for several days. A *post mortem* examination was made. He found there was no opening in the chest, but the pleura was covered by a number of small fungi, or something like fungi, a kind of mildew. There, of course, no atmospheric influence had entered, but there was the ferment in the body. The principal point to which I wish to refer is this. I believe in atmospheric influence; I do not much believe in it as far as the production of this disease is concerned, but anything that will prevent the communication of diseased secretions or dirt from one patient to another, has a material effect in preventing these morbid septic influences; but I cannot myself distinguish the septicæmia from the pyæmia. I know, of course, as to the results, that we can see that one effect is produced in one case, and in another, another; but in any given case, if it live long enough, you can never say that the secondary deposit will not take place. I think, sir, perhaps the Society may be a little misled by your paper, which I have read with great interest. I think anybody in ordinary practice will meet with exactly the same cases as you have there related. Any physician in London, who commands a large practice, does not practise within his own sphere only. He has patients sent to him from different parts of the country, even from parts out of the country. The area of his practice is very much larger than an ordinary physician's would be. Therefore, for him to bring the cases that occur to him personally as a fair standard of those that would occur to other practitioners, may possibly mislead the Society a little. In my own case, I must say almost all the cases that have gone badly have been those where some portion of the cancellous structure of the bone has been injured, or some vein has been wounded. It was asked at the last meeting, whether cases of pyæmia did occur after bleeding. Now, we do not see many cases of bleeding; therefore, perhaps, many gentlemen would not be able to answer the question; but one of the first and best marked cases of pyæmia I ever saw was a case sent from Harrow, where a patient had been bled in both arms. He was in great pain; he constantly moved his arms about; and, a few days after his arrival in the hospital, symptoms of pyæmia set in, and I saw there was as well marked secondary deposits as any that I ever saw, preceded by inflammation of the vein. The vein did not close. Something entered it as I suppose, but the inflammation ran up the vein, and was succeeded by secondary deposits. Another case, which made a great impression upon my mind, was one where the old operation for hæmorrhoidal tumours was performed. Most gentlemen will recollect that a needle, armed with a double ligature, was passed through, and the ligature tied upon both sides. Now, if it should so happen that the needle goes through a vein, the vein is necessarily held open and is bathed in the secretions of the part. In the case to which I refer, there were secondary deposits exceedingly well marked; not in the general system, but in the liver, showing that the poison, whatever it was, had gone through the superior hæmorrhoidal vein. I think I have made the few observations I had to offer. I was quite unwilling that this discussion should languish, and I hope the gentlemen who will yet speak will inform us whether they think that the different forms of septic influence, as we in our ignorance call them for want of some more definite expression, are separate, or whether they are distinct.

Mr. ERICHSEN: I cordially agree with a great deal that has fallen from Mr. Lee; but, without going into the general subject that he has propounded, it appears to me the distinct issue to which the Society has been challenged by your address, relates to the frequency of pyæmia in private practice, perhaps in relation also to its comparative frequency in hospital practice. Before saying anything upon the subject, I think it would clear the ground very materially if we were to have some distinct understanding as to what is meant by the term pyæmia in the present discussion, because it appears to me that the word is used in the most elastic manner, as referring to every possible kind of blood-poisoning, and not only so, but also including abscesses of various kinds, that appear to me to be entirely of a local character, and to have no reference whatever to blood-poisoning or to any constitutional origin. I regret that I had not the advantage of being present when you delivered the very admirable address, but I have studied it as it appeared in the journals, and I presume I may take the reports there as being correct. In reading the address, which, I take it, was intended to prove the frequency of pyæmia in private practice, I was struck first of all by this circumstance, that a great number of the cases that you related as cases of pyæmia, I should not have considered cases of pyæmia. There is the essential primary difference of opinion between us, as to the very nature of many of these cases. In speaking of pyæmia, and in any remarks that I shall make upon it, I shall consider it as a disease which is now recognised by pathologists as having its essential origin in a venous thrombosis, giving rise to embolism and to metastatic abscesses, in the lungs chiefly and elsewhere, as the results of those embolic deposits. If I look to the cases that you have related, and go through them, I see two or three that appear to me not to be pyæmic abscesses at all, but to be cases of simple abscesses of a lymphatic character, or arising from a direct continuance of irritation along the absorbents or the tissues of a limb. There is the case of an old gentleman, eighty years of age, who had a warty tumour removed from the heel, and who died from a large abscess that formed in the same thigh. Now, that appears to me to be an abscess such as one might have in the axilla after a puncture of the finger, or any other injury about the hand. There is a case also of a young gentleman who ran a splinter into the ball of his great toe, and had an abscess in his calf. It seems to me that that case also is not a case of pyæmia, but simply a case of localised abscess depending upon local irritation. There is also a case of a young lady who, after confinement, had a large intrapelvic abscess. Then there was the case of the young gentleman who had gonorrhœal rheumatism, and who got mischief in connection with it. Now, with regard to the subject of gonorrhœal rheumatism, no doubt the case is extremely interesting, because it seems to be one of those cases that bear very much upon a question that has not yet been very clearly elucidated, that is, the connection between urethral inflammations of any kind and blood-poisoning. There is some connection in some way that we can only recognise by the effects of the cause, of which we are entirely ignorant, that brings many of these urethral irritations very much into the category of true pyæmic conditions. We find, for instance, that there is no condition in surgery in which a more severe rigor takes place, occasionally followed by sweatings, than after the passage of an instrument down the urethra. We find also in these cases of urethritis, whether gonorrhœal or not, that blood-poisoning is very apt to ensue; not pyæmia, but blood-poisoning of some kind or another, somewhat allied, in fact too closely allied, to pyæmic conditions. It seems to me that that case is one of these remarkable instances of blood-poisoning. Then there are the cases of the two ladies who died after the removal of the breast. They had erysipelas, and it is said that pyæmia set in. I have fortunately never seen a patient die of pyæmia after the removal of the breast. I have seen women die of erysipelas occasionally. I have known ladies, in private practice, to have erysipelas after removal of the breast, but I have never known a case of pyæmia. If I appear to criticise your cases a little freely, I am sure you, sir, and the Society, will feel that I do so with the utmost respect for your position in the profession, and for the interest of your paper; and it is from the very interest of the paper, and the importance of your position in the profession as the author of the paper, that I am led to speak perhaps a little freely about it, because the whole matter is an extremely important one. Well, in one of the cases of those two ladies who died, it is said that pyæmic symptoms set in, but we are not told what those symptoms were. In the other case it is said that pyæmia set in. I confess I look upon erysipelas as a totally distinct disease from pyæmia. I think it is as distinct from pyæmia as scarlet fever is from small-pox, and that there is no connection whatever between the two, except a remote one in cause. Just in the same way as we find, from a stinking drain, one person will get scarlatina and another typhoid fever, so, from the same condition, one person may get erysipelas and another pyæmia. I do not think that the two conditions are interchangeable, or that they are at all allied, except remotely in their cause. No doubt, in some cases of erysipelas, where there is a putrescent slough and filthy pus accumulated under the skin, you may get blood-poisoning; but in ordinary erysipelas, and where every attention is paid, as doubtless it was in those cases, I confess I should rather look upon the case as one of death from erysipelas than as a case of death from pyæmia. I cannot but think that there is one suspicious circumstance in connection with these two cases; that is, that they occurred within a month of one another, as if there were some medium of infectious intercommunication between the two patients, giving rise to what is undoubtedly an infectious disease, erysipelas, although it is very doubtful indeed, and there is no proof whatever that pyæmia is an infectious disease. These cases would also lead me to remark upon, if I may use the expression, the somewhat unsatisfactory nature of private cases, as cases on which to found anything like clinical or pathological observations, because we have no *post mortem* examination, if I recollect right, given in the address you have delivered to the Society; and I take it that it is extremely difficult in many cases to diagnose, during life, pyæmia from some of those other varied morbid poisons, and that it is only a *post mortem* examination that will ultimately and definitely reveal the true nature of the disease. Then there is another point that struck me as very remarkable in the address. It is that you and I can look back to somewhat more than a quarter of a century's practice in London, approaching to a third, and yet, in a paper professing to show the frequency of pyæmia in private practice, there were only six cases during the very long period following operations, and out of those six, two were, in my opinion, certainly doubtful cases, appearing to me to be rather cases of erysipelas than of pyæmia. Now, if I wanted any fact to prove how comparatively rare true pyæmia is in private practice, to what it is in hospital practice, I could scarcely get a better illustration than that afforded in this very paper that you have read before the Society. I have never seen a case of true pyæmia during the whole of my private practice in London. I know such cases occur; they do necessarily, for I have heard of them. I know that there is such a thing as self-infection in these cases; that you get putrescent sores, as Mr. Lee just now described so admirably. In a badly tied pile you may get an open vein into which pus may infiltrate itself, and in that way you may get pyæmia. Necessarily, you may get the pyæmia out of hospital as well as in it. I can only say, so far as I am concerned, in my own private practice, I have never met with a case of true pyæmia, I mean pyæmia that is recognised by pathologists as such; pyæmia that is described by Virchow, depending on venous thrombosis giving rise to embolism, and leading to metastatic abscesses in the internal organs. That condition of things is, undoubtedly, extremely frequent; and not only extremely frequent, but extremely fatal, in the London hospitals. Whether it is the result of air, or whether air is the great vehicle, as I believe it is, of contamination, I do not believe there is such a thing as an aërial influence that contaminates people. The air is the mere vehicle of contamination, whether it be brought into the wound, or, as Dr. Bastian has said, into the lungs or skin of the patient. At all events, that is a matter for others than surgeons, perhaps, to decide; but that is the way in which I regard it—that the air is the vehicle, or conduit, for the infecting germ. So far as my experience of pyæmia in hospitals is concerned, I may say that I have found it to be, as every one else, I believe, has, most common after injuries and operations, by which the medullary canal of a bone is opened, especially in the case of bones of the lower extremity. There is an immense difference in the frequency of pyæmia after operations on bones of the lower extremity, and after operations on bones of the upper extremity. It is comparatively rare after operations upon the humerus, or the bones of the forearm, or after amputations of these. I do not say anything more than comparatively rare, and I am speaking on my own experience solely; but after operations on bones in the lower extremity, and after amputations in which the medullary canal is opened, it is by no means uncommon. I believe position has something to do with it. In the upper extremity, the operated-on bone is frequently somewhat dependent, and the pus gets more ready exit from the wound, and does not enter the medullary canal. In the lower extremity the stump is often raised, the thigh-stump often cocks up of itself, or the limb is raised, and there is a percolation of pus backwards into the medullary canal, into which open venous sinuses, and in that way infectious matter may get into the system. However it occurs, the fact is, that operations upon bones of the lower extremity are infinitely more liable to be followed by pyæmia, than operations on the bones of the upper extremity. So in operations on the face, and in injuries to the head. I have no intention of entering into the general question of frequency of pyæmia in hospitals, or its cause there, because I have lately, quite unconnected with any discussion taking place here—as a mere coincidence of time—entered into that pretty fully elsewhere, and I should only be repeating what I have there said. My only object, in making these comments, was to endeavour to bring the discussion to the point that, it seems to me, is at issue, as to the frequency of pyæmia in private practice; and as to how far—I say it with all deference to you—the cases you have related are true cases of pyæmia, or whether many of them are not cases of abscess of other kinds than pyæmic abscess.

The PRESIDENT: Before proceeding further, I may as well take up the subject in reference to what Mr. Erichsen has just now very ably stated, that is, as to whether the cases I have related are what are generally considered to be purely cases of pyæmia. I must confess that Mr. Erichsen has thrown some doubt upon cases as to which I have no doubt whatever myself. The first case he mentioned was that of an elderly gentleman who had a small wart removed from the heel. Now, if Mr. Erichsen had read the case very attentively, he would have seen that I was very particular in stating most assuredly and most positively that there was no ground for the supposition that there was any continuation whatsoever in the cellular tissue, or that inflammation had run up along the cellular tissue, as in the example which Mr. Erichsen gave of abscess in the axilla. In that case, it is specially mentioned that the small wart removed was from the heel, that it was a superficial wart. It is also specially mentioned that the abscess in the thigh was a deep one, and in connection with the thigh-bone, and I do not know what continuation there could have been between the two. The abscess was followed by a rigor, and it came on three weeks or a month after the removal of the small wart. The gentleman had been on two different occasions walking about, and he was going to resume his avocations when the rigor supervened, and then came this large deep-seated abscess in the thigh in connection with the thigh-bone—an abscess extending from the knee-joint as high up as the hip. I cannot look upon this case as similar to the one Mr. Erichsen just now mentioned as a case of injury about the hand, and subsequently an abscess in the axilla. To my mind, the case I have related is certainly a case of pyæmia. Then, there are those two cases of the removal of the breast, with regard to which Mr. Erichsen very properly, and with very great stress, says that the patients may have died of erysipelas,—the facts are these. I may mention, before referring to the cases, that I found my paper was becoimng over long. I did not wish my communication to exceed half an hour, and I, therefore, could not give all the details that might be desired, and I simply wrote down that symptoms of pyæmia did supervene. But in these cases, it is specially mentioned that the erysipelas was very slight indeed, and that the erysipelas never spread. It was never sufficient to kill the patient. The reason of my putting down that symptoms of pyæmia supervened was this. There was rigor, there was sweating, there was erysipelas. The erysipelas was very slight round about the wound, and it never spread more than, perhaps, to the size of the palm of one's hand. Some little time afterwards, there came some other rigors, yet the erysipelas did not spread. To my mind, the symptoms were simply those of pyæmia. There was great difficulty of breathing, for instance. It is quite true that there was no *post mortem* examination. Unfortunately, one cannot get *post mortem* examinations in private practice; and there, I must confess, lies the fault of the paper, but that is no fault of mine. I think, upon the whole, the cases are quite sufficient to warrant me in saying that they were cases of pyæmia. There was great difficulty of breathing. The patients died finally with difficulty of breathing after these constant rigors and great sweatings; yet, the erysipelas did not spread, and no thickening took place about the wound. Then, there is the case of the gentleman who had an abscess in the calf after a splinter in the foot. There was no continuation of anything like inflammation from the great toe to the sole of the foot, or from the sole of the foot to the calf of the leg. The abscess that occurred in that young gentleman's leg was a deep-seated abscess among the muscles of the leg, and there was no continuation of inflammation of any kind. They were not superficial abscesses along the cellular tissue. That young gentleman had rigors and sweatings; and when he left the bed, at the end of four or five months, he was reduced to a mere skeleton. I have never known that state of things produced by erysipelas, or by inflammation spreading from one part to another; therefore, I put that down as a case of pyæmia. The other case to which Mr. Erichsen alluded, and upon which he laid great stress, was the case of the young lady who, after confinement, had an abscess underneath the shoulder. That, to me, was certainly a case of pyæmia. What else could it be? In three weeks or a month after the confinement, this abscess occurred, and the patient had rigors. What else could it be but a case of pyæmic abscess? I think, with regard to those four cases that Mr. Erichsen has mentioned, I am warranted in looking upon them as cases of pyæmia. I think we are also warranted in looking upon the case of gonorrhœa as a case of pyæmia, for the case occurred thus. About a fortnight after the patient had gonorrhœa, there came on symptoms of gonorrhœal rheumatism. These symptoms subsided. Then, in about a week or ten days afterwards, there came severe rigors and severe sweatings, and there came that peculiar earthy appearance of the skin that one so constantly observes in pyæmia, and that is so characteristic of it. After that, there came a very large abscess in the sterno-clavicular articulation; and then, after that, a large abscess in the hip-joint and round about the hip-joint. If this is not a case of pyæmia, I do not know what pyæmia is. There was pus about the body, pus in the urethra, and subsequently there was pus about the sterno-clavicular articulation, and pus about the hip-joint. In addition to that, there were all the symptoms of pyæmia, and especially that earthy look that we see so commonly about the skin. Those are the cases to which Mr. Erichsen has alluded. No gentleman could have done it more courteously, and I am sure the Society and I are very much obliged to him for raising the point as to whether those were cases of pyæmia or not. We are much obliged to him for coming to criticise the cases, and for the manner in which he has done it. Still, I must adhere to my opinion that these are cases of pyæmia.

Dr. HICKS: May I be permitted to say a few words in continuation of what I previously said? The only point that has been brought forward is this. Do cases of pyæmia occur in private practice as well as in hospitals? Now, unless we take in the whole circumstances attending the ill-doing of our patients, we can never clearly understand the causation of the results. The first point to bring forward is—Can irritating matter, or, as I would say, pyæmia, arise from injury without any wound? I think we all agree that there are cases in which that occurs. Our systems are differently constituted. Some have less tendency to recovery than others. The next point is, whether open wounds themselves can produce irritating matter which shall be absorbed into the general system and cause those results with which we are acquainted. Of course, that is well understood. Then the question comes—What is that irritating matter? What is that poison? How does it act? Then, we have to come to another question—What tends to produce those ill results? Your paper, sir, touches upon the same ground as one which I published some time ago in the *Obstetrical Transactions*. I took as many private cases as I could—not hospital cases, all simple cases of delivery—and I collected eighty-nine. They were cases of puerperal disease, commonly called puerperal fever. I analysed them as to their causation. I took the trouble to inquire, together with some gentlemen who assisted me, as to the surroundings of every one of those patients. I omitted every case as to which I had not made strict inquiry. I find, quoting from the paper, that, out of the eighty-nine cases, sixty-eight had been exposed to animal poisons. Upon further analysis, I find that thirty-seven of those had been exposed to scarlet fever—manifestly, distinctly, without any doubt; six to crysipelas, seven to diphtheria, and two to typhus. Nine had decomposition of the uterine contents. There were a few other cases arising from various causes, but all of them connected with animal poisons. There were twenty-one out of the eighty-nine as to which we could find no history of that kind; some other influence, no doubt, deteriorated the general system, and so producing conditions of puerperal fever. If that be the case in puerperal fever, may it not be the case in private practice, and in operations in general wards? If you have attacks of diphtheria running through a ward, you cannot separate the one from the other as to causation, though you may have different symptoms.

Mr. HULKE: The course of the debate seems to me to have amply justified the suggestion I threw out, that we should have a clear and distinct understanding as to what we mean by the term "pyæmia." For it appears to me that almost all the speakers hitherto have used interchangeably the terms septicæmia and pyæmia; or, at all events, have made those two so thoroughly overlap and intertwine that it is hard to know what they mean. In particular, I would instance Mr. Lee and Mr. Erichsen. Both in his recent public writings, and also this evening, Mr. Erichsen seems to me to use these terms in a convertible manner. I could have wished that some one much more skilled than myself in the matter should have attempted to lay down some sharp line of definition between these two conditions. It may be exceedingly difficult to do so in practice at the bedside, because these two conditions may coexist in the same patient; but it seems to me, from experiments in the lower animals, we can imitate both pyæmia and septicæmia. Having their trains of symptoms so separate and distinct, there can be no doubt whatever of the perfect distinctness of the two affections. If, for example, you take perfectly fresh pus—not putrid in the least degree, pus that contains no flocculi, perfectly limpid and pure pus—and inject it into the venous system of a dog, you will get a great rise of temperature. We get shivering and *malaise*, and, after a certain time, the dog's recovery. You may inject a considerable quantity of pus, and you may repeat the experiment again and again, and the dog may recover. That I take to be simply pyæmia. If, on the other hand, you take pus which is no longer perfectly limpid, but a little flocculent—it need not be putrescent—which contains particles of such a size that they may stick in the vessels; and, if you inject that pus, then you get the same train of symptoms, you get abscesses, you get purulent deposits in different parts of the body, the internal viscera, and so on. In fact, you may imitate simple pyæmia and the multiple pyæmia which we get in a human subject. On the other hand, if you take putrid matter—whether vegetable or animal—for instance, if you take cabbage leaves and let them rot thoroughly in a solution, and then get this foul stinking cabbage water, if you clear away all the solid particles as far as you can, you will by these means get a train of symptoms which may be free from metastatic abscesses. You get a high temperature; you get shivering—not always, but very frequently—you get vomiting, purging, collapse, and the rapid death of the dog. In the human subject, there is something of the same kind, though most instances of septicæmia which come before us run a less rapid course, and the symptoms are less violently prominent. There is no doubt whatever, as Mr. Erichsen said, and as Mr. Lee, Mr. Hutchinson, and others have said, that in the case of multiple abscesses we find embolism. Conceding that—and I suppose everyone will agree to it—then comes the question which we must push a little farther. It is not every embolon that will give rise to one of these abscesses. Every physician must have seen many instances of embolism where some little piece of fibrin has been washed off some valve of the heart, for instance. We are all familiar with these instances, but we do not get pyæmic deposits in those spots. We have an admirable example in the embolism of the central artery of the retina, where you may watch the whole process during life; but you do not get pyæmic abscess. It is not a mere fibrinous clot *plus* red and white corpuscles, but there is something in the clot which determines that there must be something infective. The question is—What is that infective matter? We can produce, in the lower animals, by the introduction of pus, all the symptoms of pyæmia. It seems probable—though we cannot speak with absolute certainty—that this embolon must carry pus with it. You cannot get pyæmia without pus. The question may be—How does the pus get into the embolon? That is a question concerning which I feel considerable difficulty; nor do I at all clearly see, if the views of recent pathologists be correct, that pus is nothing more than strayed white blood, gone astray out of the vessels, why, when it gets back into the vessels, it should be so exceedingly naughty and set up all these disagreeable symptoms. That is a matter of great difficulty. Granted that metastatic abscesses depend upon embolism, are there any conditions which may predispose to the formation of blood-clots, of which these embola consist. Here we come to some remarks bearing on this point made in the earlier part of the debate. It seems to me there can be no doubt whatever that conditions which greatly depress the patient must conduce—indeed, we know that they do conduce, in point of fact—to the formation of clots of blood in the veins. Everyone will concede that everything which depresses the heart's action leads to a great loss of blood, and we know that pyæmia is more frequent, if you take a large series of cases, in the case of patients who have lost great quantities of blood, or are debilitated from other causes, as in the case of persons greatly morally depressed. We have an admirable example of this in any large wars. We saw it in the Crimea, and we saw it again in the French campaign. Although pyæmia was abundant on the German side, it was more abundant on the French side, where the French soldiers were thoroughly depressed. Any morally, as well as any physically, depressing cause is quite sufficient to co-operate in that way. There was a remark, which struck me very forcibly, made by Mr. Hutchinson, that, in his judgment (if I understood him rightly), foul air was in no sense a condition of pyæmia. I think he alluded to his experience in the Metropolitan Free Hospital, and spoke of the hospital as being badly constructed, and the wards ill ventilated, and the atmosphere not what atmospheres of hospitals ought to be; yet, curiously enough, they were not much cursed with pyæmia, while in another hospital, better circumstanced, the London Hospital, he had a large amount of it. He said, I think—unless I misjudge him—that foul air had nothing to do with it. Here, again, I would refer more particularly to military experience. We must have seen—those of us who at any time in our lives have had such experience—that where large numbers of men have been crowded together and a thoroughly foul atmosphere had been produced, that has acted in a very depressing way. It may not be through the actual infection of putrid material directly into the wound and so on, but by breathing foul air, and in those indirect ways you get the patient thoroughly depressed if you surround him with putrefactive material, though the putrefactive material may not be in itself the essential agent of pyæmia. It seems to me that in that direction we may find an explanation why pyæmia is sometimes much more frequent in newly opened hospitals and in new wards. That is a thing which must have struck everyone. I think Mr. Holmes made the remark that in the Convalescent Hospital he had seen cases of pyæmia as frequently as at St. George's old hospital. I think also it was remarked by one of the other speakers that the same thing had happened in St. Thomas's Hospital. No one can have been in an hospital or in a building where whitewashing or plastering has been going on, without being nauseated almost with the stench that comes from the putrefying size and other animal matter in the mortar, particularly the size in the whitewash, which is horribly offensive. Long after the smell has gone, so that you cannot detect it with the nose, still, if you are exposed a night or two to that kind of atmosphere, it may have a very depressing effect upon you. A comparison was drawn in the last debate by Mr. Hawkins between old and new hospitals in towns. Mr. Holmes shortly afterwards remarked on the necessity of drawing no comparisons except between hospitals which were tolerably similarly circumstanced. Mr. Charles Hawkins's remarks referred to the old and new King's College Hospitals; and it seems to me that you can make no comparison between the two buildings whatsoever. Old King's College Hospital, in the memory of some of us, was a parish workhouse converted into a hospital under considerable difficulties; and, to a very great extent, all these measures which we should consider essential to the well-doing of an hospital were probably ignorantly disregarded. For instance, under the main accident-ward were large cellars piled from floor to roof with bones taken out of the neighbouring churchyard. The operating theatre was for many years the *post mortem* theatre, and was separated only by a few yards from the main accident-ward, so that the conditions were essentially those which would induce infections of all kinds. In the new King's College Hospital, there are no circumstances of the kind; so that it seems to me the conditions are so different that you cannot very well compare one with the other.

Mr. SAVORY: When, sir, the effects of this disease were first of all studied, attention was directed wholly to the investigation of internal causes, and the result was the theory embodied in the term pyæmia; and then, as if in recoil from this error, observation has turned entirely to the search after external causes, and the result of that has been the views embodied in the term hospitalism; and now it would appear the last error is almost worse than the first. Are we in a position, at the present time, to give any sort of answer to the question, "What is the cause of pyæmia?" May we go so far as to say it is due to the action of poison in the blood; that that poison is of a septic nature, and produced by or associated with putrefaction, decomposition, and change? I dare not, and need not now trespass upon the attention of this Society in proof, at length, of that matter; but it may suffice to say that, experimentally, we can take a decomposing fluid, inject it into the blood, and produce all those effects which are generally recognised as the effects of pyæmia. But now, confining attention entirely to the clinical aspect of the case, under what conditions is such a poison formed, when does it exist, and under what circumstances does it enter into the blood? It is formed during the decomposition of animal fluids, animal fluids in connection with the living human body. Now, animal fluids may decompose under varying circumstances; any dead or dying, or unhealthy animal fluid may decompose, and the difficulty is not to recognise the fact that it may decompose, but to prevent such decomposition from occurring. But that decomposition is hastened unquestionably by exposure. In what way that exposure may act is altogether another question within this one, but unquestionably free exposure to air favours the decomposition of animal fluids. But, most of all, the introduction of other matter in a state of active decomposition increases vastly the rate of decomposition in the original fluid. We know very well it is an established law that, when a substance in a state of change is brought into contact with another body of unstable equlibrium, the change of the first is communicated to the second. I am anxious now to avoid all guesses how this may occur, confining one's self only to the facts which lie visible before us; and, if we may recognise these facts as I have stated them, surely there is no difficulty in understanding, first of all, how pyæmia may occur anywhere, attack anyone, even under the most perfect hygienic conditions; that, nevertheless, it would be especially prone to occur where persons are concentrated together, and, most of all, where persons are concentrated together having open wounds, as in hospital-wards; and, which is most important, if we are able thus to recognise the cause, we may have good hope that, by having our eyes thus opened, we may be hereafter able to prevent the operation of these causes, and to reduce even our hospital-wards to places as healthy as any private apartment. But there is another question which seems to me, in the present day, to be altogether overlooked. We constantly see decomposing fluids in contact with raw surfaces. We constantly see wounds bathed in putrid fluids, nay, we constantly see putrid fluids shut up in cavities, pent up under heavy pressure, as, for example, where we get a foul stinking abscess by the side of the rectum: how is it that these patients escape, as they constantly do? How is it that, in these cases, it is the rule, and not the exception, for people to escape blood-poisoning? Observe that this very fluid, which lies in contact with these raw surfaces, which is bathing wounds, which is thus pent up in cavities in the body, can be taken into a syringe, can be introduced at once into the blood of an animal, and produce the most terrible forms of blood-poisoning. How is it? Surely, there is another cause in operation, and, I venture to think, we shall find hereafter the solution of the cause in what may be termed the dialysing property of animal membranes, and, I venture to think, the best work done in late years in this direction are those experiments which Billroth and others have performed, showing that, where granulations are healthy, when they exist in their integrity, they offer a decided obstacle to the passage of the material from without to within; but, when these granulations become destroyed, either mechanically or by other means, whereby they are brought into an unhealthy state, these fluids pass with fatal facility through them, and so gain entrance into the blood. Whether that view shall hereafter turn out to be correct, or not, the fact remains strong enough that we may have fluids, which fluids can be shown by experiment to be potent enough to produce the worst forms of blood-poisoning in contact for hours, days, or weeks with living animal surfaces, and yet the persons so carrying them about are wholly free from any symptoms of blood-poisoning. Can we go further than this? I daresay many present will say we cannot go as far; but can we go farther?—what has pus to do with pyæmia, for instance? As we have been already told, the not unhealthy pus, normal pus, may be injected into the circulation, and you do not get, as a necessary result, by any means, pyæmia. But pus is an animal fluid, which, of all fluids, is most likely to be found in contact with wounds, and, obeying the law of exposed animal fluids, is exceedingly likely to undergo decomposition, and then pus, undergoing decomposition, will produce pyæmia as any other fluid will produce pyæmia which is in a state of decomposition. But I take it that there is no special relation between the production of pus and pyæmia, as cause and effect, beyond this, that pus is the most frequent of animal fluids formed, and being, like other animal fluids, prone to decomposition, is most likely, under these circumstances, to be the means or agency through which the poison is introduced into the blood. And what has phlebitis to do with pyæmia? Have not we a larger error here than the view which regards pus as the cause of pyæmia? How does phlebitis produce pyæmia? The view which gave rise to the notion that phlebitis was a necessary link in the chain of causation was that, under the influence of inflammation, the lining membrane of veins forms pus. But does the lining membrane of a vein form pus? Can we produce pus by inflaming a vein? Will not the lining membrane of a vein prove most obstinate under all circumstances of torture, and resist steadily the formation of pus? In point of fact, you do not get pus in the interior of a vein; you get a puriform, but not a purulent fluid; but this puriform fluid may be potent to produce pyæmia; if decomposed, it may produce pyæmia as any other decomposing substance may; and, if it be formed in the interior of a vein, and pass onward into the blood, then it may be one among the many causes of pyæmia, but not standing to pyæmia in the relation of a special cause. But, then, supposing that phlebitis is not necessarily associated with pyæmia as cause to effect, how about thrombosis? We have been moved a step further back in this direction, and we have Virchow's great theory, that the disintegrated fibrine which was heretofore mistaken for pus, the puriform fluid in the interior of the vein, passing into the circulation, produces pyæmia. As Mr. Hulke has stated to-night, we are perfectly sure of the fact that you may macerate fibrine, disintegrate it, inject it into the circulation over and over again; you get embolism, you get the effect of embolism, but you do not get abscess as a consequence; most assuredly, you do not get pyæmia as a consequence. You may produce, up to a certain extent, the local effects of pyæmia by the injection of disintegrated fibrine, but you cannot produce that disease, which is characterised less, perhaps, by local than by constitutional symptoms. How is it, then, if you may have, as undoubtedly you may, as every one knows perfectly well, pus daily, hourly, without pyæmia, phlebitis without pyæmia, thrombosis without pyæmia, pyæmia without pus, pyæmia without thrombosis, pyæmia without phlebitis? And, if I say you may have thrombosis and phlebitis without pyæmia, on the one hand, and pyæmia without thrombosis or phlebitis, on the other hand, are we justified any longer in connecting these two together as holding a special relation to each other? How is it that, undoubtedly, in many cases of pyæmia, after death, we do find that secondary abscesses are deposited in various parts of the body; we undoubtedly do find affections of the veins which are characterised by terms such as phlebitis and thrombosis? Because, no doubt, these are the local and pyæmia is the general effect of the introduction of the poison into the blood, and, as Mr. Callender has very well pointed out in his article on the subject, the veins act in this manner as channels to conduct the poison upwards, on the outside as well as on the inside. I really wish those who are continually asserting the constant relationship between phlebitis and pyæmia would tell us how it is, supposing even the veins remained open, as they are said to do, but which I do not think they do, in the case of bone which is operated upon—how, supposing those veins remain open, they minister to the introduction of a fluid, that they remain vacant spaces? Are they hollow? If not, by what are they filled? And, if they be filled with blood, does the blood remain fluid? Will not the blood coagulate in them? Has not that been a point upon which Dr. Wilks has insisted? and, if so, are they not, to all intents and purposes, occluded, and do not they, in this way, form as difficult an obstruction to the passage of any morbid substances into the blood as any other of the surrounding tissues would do? Therefore, I submit that, while we constantly get these conditions associated together, we yet lack the evidence to establish the relation between them as cause and effect. There is just one other point which I would throw out, by way of suggestion, in relation to this very important subject. If anyone will experimentally macerate fibrine, he will find it will take a very considerable time; it is a question of days to reduce it to such a state of disintegration as it may be found in the interior of veins in the case of pyæmia. When we make *post mortem* examinations in cases of pyæmia, we often find this disintegrated fibrine in the veins; but the pyæmia has arisen within a space of time after an operation, which, so far as we can judge by experiment—I would not rely too much upon this—but as far as we can judge by experiment, or use any knowledge within our reach, would be before the time that these clots would possibly disintegrate. They disintegrate in the progress of the disease; but I venture to think that there is great difficulty in this objection, that, in the large number of cases where disintegrated clot is found after death in case of pyæmia, the rigor and rise of temperature which marks the access of pyæmia has set in before we can conceive that the time has come for the disintegration of the clot, and then, if we can throw off these shackles of phlebitis and thrombosis as necessary links in the chain of causation of pyæmia, may we not rise to a broader and a fuller view of the subject, and ought we not to regard pyæmia simply as one form, or phase, or degree of blood-poisoning? Mr. Hulke has asked, with great point, for a definition of pyæmia; and we know very well (and, because I differ from him in this respect, I hold my opinion with great diffidence) that he regards septicæmia and pyæmia as essentially distinct; but I cannot find in what the distinction lies. He asks for a sharp line of distinction between the two. I wish very much he would give us one. Why I regard these two diseases or forms of disease as simply different degrees of one and the same disease is because, as Mr. Lee has remarked, you over and over again find instances in which the one passes into the other. Take pus—you do not want to go to decomposing vegetable or other animal fluids ; you may do it with them—but take pus, and with it I could make a case of pyæmia or septicæmia, according to order, by the length of time which I kept the pus before I injected it ; and I know very well, in experimenting upon this subject, you may produce all degrees of the disease, and you may say that the chance of getting secondary abscesses are in direct ratio to the length of time an animal lives after it has become inoculated with the poison. When the poison is thoroughly septic, when you have that terrible substance which Dr. Burdon Sanderson has shown us how to get in the peritoneal cavity of an animal, the blood becomes so poisoned and spoilt, that it kills outright, and there is no time for the secondary effects to supervene ; but it is in the more gradual cases, where there is time for the secondary effects to supervene, and where the patient passes through this most terrible crisis, that these secondary deposits form. Avoiding, if I can, being tedious on this matter, and, therefore, passing over other arguments which, I think, could be adduced to show that these two diseases are but different degrees of effect of one and the same cause, I would say boldly, and, I think, there, sir, I should have you with me, that erysipelas is but a form of blood-poisoning. I think the evidence is conclusive against its being a local disease, at least conclusive to my mind. I am afraid I must be defective there, because I am against Mr. Hutchinson. I think the evidence is conclusive, as Mr. Hutchinson would say with me, against its being a form of zymotic disease, and then, if it be to be separated from the exanthemata, on the one hand, and from local affections, on the other hand, where are we to place it ? I think we must find a place for it amongst the effects of septic poisons. There are just three grounds on which I would place erysipelas amongst the blood-poisons. You constantly see erysipelas as the effect of the introduction of a poison, as of a poisoned finger. How often do we see a form of erysipelas spreading from that, a form which Mr. Baker has recently described under the name of erythema circens ? How often do we find erysipelas alternating with pyæmia ? So constantly do we see this, that, when, after operation, a patient has rigor or rise of temperature, I hail the advent of erysipelas as a favourable omen. I am glad to get out of it in that way, and I feel, if the effect of the poison be expended on the skin, the internal organs are more likely to escape. But most of all turn to our authors who describe *post mortem* appearances of erysipelas, and who have no theory of this sort to support. Look at the description of the appearances found after death in erysipelas, in the article, either in the *System of Medicine* or the *System of Surgery*, and there you will find a description of the *post mortem* appearances coinciding exactly with the *post mortem* appearances of pyæmia. I say, therefore, for the same reason that I should class septicæmia and pyæmia together as but different degrees of effect of the same poison, on the one hand, so I would class pyæmia and erysipelas together as different degrees of the poison, on the other hand ; and, through these, we should run down with a series of still milder cases, such as we constantly see exhibited in gonorrhœal rheumatism. Therefore, I venture to say, in future, we should direct our research especially to these matters, to examine again the grounds upon which phlebitis and thrombosis are associated with pyæmia as cause and effect, to see whether we can find any ground of distinction which will justify us in separating septicæmia, pyæmia, and erysipelas into diseases of different classes, and then, lastly, though not least, that, in the future investigation, we should direct our attention to the operation of internal as well as external causes. Your paper, sir, which we owe to a courage which nothing, I think, but very eminent success in the practice of your art would have given you, is sure to have great influence for good ; and, if it be the means, as I hope and trust it may, of directing attention with renewed energy to the study of this subject, the greatest, I venture to think, of all subjects of surgery, it will not be hereafter reckoned amongst the least of the many benefits you have conferred upon our profession.

The debate, on the motion of Mr. CALLENDER, was then adjourned to the next meeting of the Society.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JANUARY 7TH, 1874.

E. J. TILT, M.D., President, in the Chair.

Hypertrophy of the Clitoris.—Dr. AVELING exhibited a clitoris symmetrically hypertrophied, which he removed from a patient, aged 27, in the Chelsea Hospital for Women. It measured $2\frac{1}{8}$ inches in length, and the circumference of the glans was $1\frac{3}{4}$ inch. So much irritation was caused even by the dress of the patient touching it, that her life was rendered miserable.—Dr. WILTSHIRE inquired if there was any history of syphilis. He had removed the organ in a case of great hypertrophy from that disease; it weighed a pound and a quarter. The surface presented a tuberculated aspect, like elephantiasis.—Dr. SAVAGE thought that such cases should be called elephantiasis.

Congestion of Neck in a Fœtus.—Dr. CLEVELAND exhibited a five months' fœtus, that presented intense congestion amounting to dark blueness of the head and neck. The mother was a multipara with large pelvis, and there was no evidence of pressure. There was no mark of decomposition, and she thought she had felt movement only a few hours before expulsion. On removing the scalp, there was found general diffused ecchymosis on the cranial surface, but no effusion or abnormal appearance of the brain.

Effect of Intrauterine Pressure on a Twin Fœtus.—Dr. HEYWOOD SMITH showed a fœtus and double placenta presenting the following characteristics. The fœtus was of about three months' growth, flattened, and curved laterally. The convex side had been pressed against the concave walls of the uterus, and the concavity was formed by pressure from the growth of another fœtus, which grew to maturity. The lower extremities were flexed upon the abdomen, and produced absorption of its contents. The placenta, that of ordinary twin-pregnancy, presented the following features. One part was fully developed; the line of demarcation was plain; and the other portion, about a fifth or sixth of the whole mass, was atrophied, consolidated, and flattened, thinned out towards its free margin, and curved to accommodate it to the pressure of the living child. The mother had had thirteen previous pregnancies, of which four had been abortions. She passed the flattened fœtus about 8 A.M. one morning, and continued to be about her room, and at 12.50 P.M. on the same day was delivered of a living male child.

Use of Intrauterine Stems.—Dr. EDIS read a paper on the necessity for caution in the employment of intrauterine stems. He brought forward some cases at Dr. Routh's suggestion; the object being, not to advocate the entire disuse of such means, but rather to impress forcibly the desirability of extreme caution in their use; and, further, to prolong discussion on what some looked upon as a necessary method of treatment. Dr. Edis urged preliminary treatment and supervision of patients wearing stems. Dilatation by means of graduated bougies he found to answer the purpose in the majority of cases. Notes of several cases were given, illustrating the danger of intrauterine stems.—Dr. SAVAGE said that, if any precautions could ensure against the evils often following the employment of intrauterine stems, those insisted on in Dr. Routh's paper ought to prove effective; but would the clinical history of cases so treated warrant this conclusion ? The art of bringing the uterus into a condition ensuring immunity when subjected to treatment of this sort, he feared, had yet to be acquired. Until prolonged experience had tested Dr. Routh's position, no pains should be spared to impress on the minds of those proposing to enter on this line of treatment, the uncertainty of morbid uterine reactions. A patient wearing an intrauterine stem, pessary, or tent, should never be long out of view. Remarkable variations in regard of uterine tolerance were exhibited by cases wherein no apparent special dissimilarity could account for them. Dr. Savage mentioned illustrative instances. Seven fatal cases had been brought under his notice. He thought the experience of others would furnish similar results. When these machines could be tolerated, there was no denying that they afforded much comfort; but they might be tolerated for a long or short time, and then suddenly severe pelvic mischief might supervene. In such cases, under a mistaken impression, stems of different kinds had been substituted, only to aggravate the symptoms and add new troubles. Dr. Edis's cases went far to justify his observations. Certain anomalies of conformation defied all kinds of stem or other treatment. Stems, of whatever kind, should never be used without frequent watching, as they were always attended with risk.—Dr. ROUTH admitted that he had seen evil results from the use of sea-tangle before he prepared such stems in disinfectants.—Mr. SCOTT considered that one of the dangers incidental to the use of intrauterine stems was, that in some cases they were worn with impunity for several weeks, when suddenly, from some cause, frequently so slight as to have escaped observation, metro-peritonitis or cellulitis set in.—Dr. BANTOCK regretted he had not heard Dr. Routh's paper, and had only heard the concluding sentences of Dr. Edis's paper. He gathered that Dr. Edis objected to the use of stems without preparatory treatment. To a certain extent, he agreed with this, and would not employ a stem in acute congestion of the uterus. He gave the particulars of a case in which he had used the stem with benefit. He objected to the use of a stem immediately after division of the cervix, He was in the habit of passing his stem in the out-patient department of the Samaritan Hospital ; but in no case as yet had he seen untoward results.—Dr. HEYWOOD SMITH wished again to urge strongly the advisability of local depletion of the uterus before proceeding to the introduction of any intrauterine stem. With regard to dilatation of the cervical canal, it was easy to dilate the cervix with graduated sounds; but after a time the cervix returned like India-rubber to its abnormal state. He considered it essential to permanent relief, that, whether by incision through the whole length of the canal, or by possible dilatation, or by both, the lining membrane should be torn through, and maintained afterwards in an extended condition to prevent its closing again. In answer to a question by Dr. Savage, he said he had seen benefit follow the use of Dr. Greenhalgh's spring stem.—Dr. ROUTH made a few remarks, and Dr. EDIS briefly replied.

The Annual Meeting for the election of officers and other business then commenced. Dr. Charles Carter and Dr. Godson, the scrutineers of the ballot, declared that the gentlemen whose names had been submitted to the Fellows in the printed list were unanimously elected. The report of the Treasurer, Dr. Murray, was read and cordially adopted. It showed that the finances of the Society were in a very satisfactory condition. The report of the Honorary Librarian, Dr. Wiltshire, was also cordially adopted. Dr. Wiltshire mentioned that Dr. Day, a member of the Council, had presented the Society with a very handsome microscope for the library. On the motion of the PRESIDENT, a warm vote of thanks was accorded to Dr. Day for his handsome gift.—Dr. CLEVELAND, in supporting the vote of thanks to the Honorary Librarian, asked whether a volume of reference, as an index to the *Transactions*, could not be issued.—The PRESIDENT then delivered an address.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, JANUARY 14TH, 1874.

Inspector-General ROBT. LAWSON, Esq., Vice-President, in the Chair.

Review of Dr. Cuningham's Report on the Cholera Epidemic of 1872 *in Northern India.* By JOHN MURRAY, M.D., Inspector-General.—This paper has been published at p. 71 of the JOURNAL for Jan. 17th. Dr. GAVIN MILROY said that the fact of contagion being admitted, would not wholly explain the spread of the disease over India. The prevalence of cholera in different parts of that country demonstrably depended much on season, while intercommunication went on continuously; and that was enough to show that human intercourse was not the predominating element in its causation. Whatever might occur in some of the large hospitals of Paris and Vienna, greater care in hospital construction and management diminished the risk; otherwise, there would be more evidence of its spread in the great hospitals of Calcutta and other Indian cities. Yet, not only this report of Dr. Cuningham, but all its predecessors from that of Jameson, agreed in the absence of evidence of contagion in those hospitals. Dr. Murray had not brought forward a clear instance of cholera being kept out by quarantine; he begged the question of contagion, and then concluded that quarantine must be preventive.—Mr. J. NETTEN RADCLIFFE remarked on the absence of evidence of importation of cholera in the different outbreaks investigated by Dr. Cuningham. Contagion need not be assumed in examining into this question. However difficult it might be to find out the first case and obtain positive proof of importation, the difficulty of excluding its possibility was still greater, and did not seem to him sufficiently estimated in the conclusions set forth in the report. He illustrated this point, and, at the same time, the valuelessness of much negative evidence, by the incident of the introduction of cholera into Southampton by the Peninsular and Oriental steamship *Poonah* in 1866. At the time, it was believed that no cholera had existed at Alexandria when the *Poonah* left that place, or at any of the places at which she had touched on her way homewards. Mr. Radcliffe was now able to state, seven years after the event, on undoubted evidence, that cholera was present in Alexandria and elsewhere in the Delta of the Nile when the *Poonah* left that port.—Dr. CUNINGHAM's reply to Dr. Murray's paper has been printed at p. 137 of the JOURNAL for January 31st. He further remarked, in reference to Mr. Radcliffe's objection, that, if no evidence of importation were to be found in the report, it was because none was forthcoming; it was not for him to suggest or furnish his informants with evidence. They were generally disposed to attribute every outbreak to importation, and too ready to accept proofs that failed under investigation. In not one of the places to which the children from the school at Agra were distributed, was cholera disseminated; though it was to be admitted that the first appearance of cholera in the school followed the admission of visitors from without. There would be ground for believing in contagion if cholera attacked those who came into contact with diseased persons in greater numbers than those who do not.—Dr. BURDON SANDERSON, in proposing a vote of thanks to Dr. Murray and Dr. Cuningham, said that, if the latter appeared before them as a sceptic, all must recognise the spirit of truth pervading his doubts.

Quarantine.—The following propositions on Quarantine were brought forward by Dr. GAVIN MILROY for discussion at the Society's next meeting, February 11th, 1874:—1. As quarantine is a practical question, its value, or otherwise, can only be determined by the results of experience, independently of theoretical considerations. In respect of cholera, there has already been ample experience acquired in this and in other countries, during the successive European epidemics since 1831, to test its value both by sea and land. 2. In 1865, the Council of this Society declared their opinion to the then President of the Privy Council, that quarantine, as enforced in many Continental countries and in our own Colonies, afforded no trustworthy protection against the invasion of cholera, while it served to create false expectations of defence, and to foster neglect of internal sanitary precautions. 3. In 1866, an International Conference was held at Constantinople. The conclusions of the Conference in relation to quarantine, adopted by a majority of the members, have never been accepted by the most experienced men in this country. They are quite at variance with the opinions expressed by the Council of this Society in the previous year. 4. A detailed history of the outbreak of the disease in 1866 in a single one of the West India islands, viz., in the French island Guadaloupe, and of the circumstances which preceded the outbreak, and of the different conjectures respecting the supposed importation of the disease by a vessel from France, shows how inexact and misleading is the evidence that is too often accepted concerning the origin of epidemic occurrences. 5. The existing state of quarantine legislation and quarantine practice in our own West India islands is extremely faulty, and urgently demands revision. It well deserves consideration by the Council of this Society, whether the attention of the Secretary of State for the Colonies should not be directed to this important subject of State Medicine. 6. The quarantine order of our own Government, issued last summer, in respect of the precautionary measures to be adopted towards infected or suspected arrivals in our ports, might form the basis of sound legislative enactments on the subject in all our Colonies. The order in question will be regarded by Continental upholders of quarantine as a virtual condemnation of the system approved of by them. 7. The more thoroughly that the subject of quarantine in relation to cholera is investigated, the more exact and instructive will be the information we acquire touching various points in the natural history of that pestilence which are still obscure and uncertain. In conclusion, it was suggested that it would be extremely useful to have the question—"Is cholera communicable or transmissible by *fomites?* and, if so, by what articles or substances?"—brought before the Society during the present session by some member, in a paper that examined and sifted all the trustworthy evidence on the subject.

MEDICAL SOCIETY OF LONDON.

JANUARY 26TH, 1874.

S. O. HABERSHON, M.D., F.R.C.P., President, in the Chair.

Neuro-Paralytic Keratitis.—Mr. W. SPENCER WATSON read the report of a case of neuro-paralytic keratitis, and exhibited the patient, a delicate scrofulous woman, married. After a fit with insensibility, she had facial paralysis and deafness of the same side, with paresis of the fifth pair of nerves. Shortly afterwards, exposure to cold was followed by inflammation and ulceration of the cornea. Mr. Watson treated her with tonics, and kept the eyelids closed by sticking-plaister. The cornea healed and some amount of vision was retained.

Disorder of Optic Disc with Retention of good Vision.—Dr. HUGHLINGS JACKSON showed a large coloured drawing by Mr. Ambrose Kibbler, Resident Medical Officer of the London Hospital, of the optic disc of the right eye of a patient, who was the subject of an ophthalmic demonstration by Mr. Carter a few nights previously. It showed much swelling of the disc, many small hæmorrhages, and yet the patient could at the time the sketch was made (November) read the smallest test types, as he could now.

Syphilitic Necrosis of the Facial Nerves.—Mr. JONATHAN HUTCHINSON brought forward a case of syphilitic necrosis and ulceration, showing the patient and the artificial restoration of the lost parts. The disease had resulted in the destruction of the superior maxilla (save a small part in the region of the antrum), the vomer, most of the ethmoid, all the spongy bones, and also of the soft parts, including the nose, some of the cheek, the upper lip, and nearly all the soft palate. Rhinoplastic operation being deemed impracticable, the case was treated mechanically. To supply the lost parts internally, an apparatus was constructed of vulcanite, bearing mineral teeth which articulated with those of the lower jaw, and this was held in position by the vulcanite being adapted to the whole of the inner surface of the nasal fossæ, thus affording a hold by means of suction. For the sake of lightness, the whole of the apparatus was hollow; the outer surface was coated with soft gutta percha, and rested successively on the following parts—on each side, the nasal wall of the antrum, and the lacrymal bones; above, on the horizontal plate of the ethmoid; behind, on the basilar process of the sphenoid and the posterior wall of the pharynx; the floor of the artificial piece formed the roof of the mouth. Mr. Hutchinson had also made an artificial nose of vulcanite. This was fixed to the man's face by an elastic band which passed round the head. The junction was partially hidden by means of a moustache fixed to the upper lip, which was also artificial. Mr. Hutchinson commented on the fact that the man's occupation (he was a mason) and his position in life compelled him to treat the case in the simplest manner possible. The patient's residence in a remote part of Wales precluded any but the most practical treatment, and that least likely to get out of order. The sense of smell was present while the artificial nose was worn, but was entirely absent when it was not applied to the face.—Mr. **SEWELL** described a mechanical contrivance for the relief of cleft palate.

Polypi of the Ear.—Mr. **PENNEFATHER** showed some specimens of aural polypi, and a new instrument for removing them. He also showed a very ingenious instrument for introducing an artificial tympanum.

Deformed Fœtus.—A report by Dr. Port and Mr. Henry de Méric on an anencephalous fœtus sent by Dr. Diver was read. The cranium and the spinal canal were fissured in their whole extent. Of the spinal cord, nothing at all could be distinguished; of the brain, only rudiments which adhered to the torn sac formed by the meninges. All the cranial and spinal nerves were well formed. No other malformation could be found, except those dependent on the abnormal accumulation of cerebro-spinal serum. The flat bones of the skull hardly existed; the basis of the cranium was very much shortened, and there was a strong flexion between the pterygoid bone and the os occiput. It seemed as if the upper part of the cranium had been sawn off; at the same time the base was not concave, but rather plane and even slightly convex. Of the frontal bone, the nasal portion was well developed; of the frontal part, there was only a small margin to be seen. The reporters could not detect anything of the parietal bones. The pterygoid bone was extremely small; the petrosal bones were comparatively large. The only existing part of the occipital bone was its basilar portion. The spinal canal was freely exposed, there being no posterior arch. In the spine, the cervical part was much turned forwards, the upper dorsal backwards. The cervical vertebræ seemed to have been arrested in their growth. The reporters remarked that, among the malformations brought about during the fœtal life by abnormal accumulation of the cerebro-spinal fluid, there were three species to be distinguished. In the first, there was an abnormal quantity of serum, but the brain, spinal cord, and its bones remained closed (hydrocephalus, hydrorhachis). Secondly, there was a permanent accumulation of serum at certain parts, and then the canal was fissured, and the brain or cord collapsed (hydrocephalocele, hydromyocele). Thirdly, the original accumulation of serum was so great, that the consequence was a permanent fissure of the whole cerebro-spinal canal, with more or less destruction of the brain and spinal marrow (cranioschisis, rachischisis). The present case belonged to the last.

Disease of the Aortic Valve.—The **PRESIDENT** showed a heart with aortic disease, one of these valves being thickened and everted. The patient a butcher, aged 19, had suffered from acute dropsy, pericarditis, and double pleuritic effusion, and on July 15, the dyspnœa was so urgent that paracentesis was performed in the sixth left intercostal space, and about three pints of serum removed. There was gradual improvement up to August 12, and, on the 19th, the patient went to a convalescent hospital. On leaving, he went back to his work, and continued better in health till three weeks ago, when he had sore throat. He continued at his work for another fortnight, when pain in the region of the heart and on the right side of the chest, and also in the left arm, came on, accompanied with great dyspnœa. On admission, he had a pale and anxious expression, and there was urgent dyspnœa. The abdomen was full and tense, and the hepatic dulness was increased. There was continual cough, especially at night; the sputum was thin and frothy. The breath-sounds were normal; the cardiac dulness was from the fourth to the sixth ribs. A distinct double bruit was audible over the aortic valves and in the course of the aorta, but at the apex of the heart and to the left of the nipple, it was difficult to distinguish the precise time of the cardiac murmur. A soft systolic murmur was synchronous with the cardiac impulse, and was followed by a louder bruit. The latter sound was thought by some to be synchronous with the pulsation of the carotid. The pulse was regular, 116; respiration, 60; urine, 34 ounces; specific gravity, 1016; free from albumen and sugar. Infusion of digitalis with carbonate of ammonia mixture, and a small quantity of brandy, were given. On January 1, he did not sleep, on account of the flatulent distention of the abdomen, but there was less cough and less pain; pulse, 116; respiration, 56; temperature, 99.6 degs. Ether, with spirit of chloroform, and camphor were given. On the 6th, he had not improved: respiration, 64; pulse, 28. He was ordered tincture of digitalis and senega mixture. On the evening of the 9th, he was better than usual; he had played at draughts, and went to sleep comfortably, but awoke about 10 P.M., in great distress; respiration, 100 per minute. He died the following morning. At the necropsy, on the 10th, there was found to be one or two pints of effusion in both pleural cavities. The lower lobes of the lungs were red, fleshy, and compressed. The pericardium was adherent; one aortic valve was thickened and everted; the double crescents were much thickened. The ventricle was dilated, and hypertrophied. The mitral valve was not enlarged, it had some small vegetations on the auricular side. The weight of the heart was sixteen ounces; the liver was congested and fatty, weighing sixty-three ounces; and the spleen was firm. The kidneys were congested.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, DECEMBER 10TH, 1873.

Sir DOMINIC J. CORRIGAN, Bart., M.P., M.D., in the Chair.

Recent Therapeutical Remedies.—Dr. **WALTER G. SMITH** exhibited and described a number of therapeutical remedies, which had been recently introduced. He first treated of Alkaloids and Active Principles. From guarana was obtained guaranin, merely an impure caffein. Methyl-strychnia possessed a physiological action, the converse of that of strychnia. Emetin and apomorphia were the only two bodies which, at present, could be used as emetics by subcutaneous injection. One-thirtieth of a grain of the former, in acidulated water, acted most satisfactorily. Apomorphia, which was morphia, less an atom of water ($C^{17}H^{19}NO^{3} - H^{2}O = C^{17}H^{17}NO^{2}$), never acted as a local irritant, and was a speedy, safe, and pleasant emetic. The dose, hypodermically, was from .046 to .169 of a grain. Ergotin was sold as—1. A snuff-brown powder, insoluble in water (Wiggers, 1831); 2. A concentrated aqueous extract (Bonjean, 1840); and 3. The preparation known as "Wenzell's" (1864). Among hydrocarbides and their derivatives were xylol, bromoform, and iodoform. Under alcoholic compounds, first came nitrite of amyl, the varying strength of which should be borne in mind when it was used by inhalation in angina. Bromal did not promise to be of much use in therapeutics. Chloral, however, had already established its reputation; while the third of the series, croton-chloral, was still on its trial. Propylamine (so-called), which was merely an aqueous solution of trimethylamine. With this, true propylamine, discovered in 1817, was isomeric; but the characters of the two bodies were distinct; for example, the boiling-point of trimethylia was 41 deg. Fahr., whereas that of propylamine was 122 deg. Fahr. Dr. Smith showed a very satisfactory solution of morphia, for hypodermic use. Eight grains of the acetate were dissolved in 240 minims of a carefully prepared saturated solution of camphor. The salt should be pure, and the distilled water employed should be above suspicion. Five minims of this solution contained one-sixth of a grain of acetate of morphia.

Therapeutical Uses of Conium.—Dr. **H. KENNEDY** made some remarks, supplementary to a paper read at the Surgical Society last session. Hemlock enjoyed great popularity in the middle of the eighteenth century, but soon fell from its position. In several cases under his observation, this drug had lately been employed with success. A lady, aged 21, had long suffered from hoarseness and loss of voice. Succus conii was administered, and in a month these symptoms disappeared. Another lady, aged 22, had inflammation of the left ovary, with persistent pain. Extract of hemlock was used, and a rapid recovery followed. A compositor, aged 23, had recurrent attacks of severe abdominal pain. His bowels were regular, and his appetite remained good. There was no trace of lead-poisoning. Shooting pains across the abdomen, and into the testes, were complained of; and a tumour existed between the liver and the cæcum. Pressure on this tumour caused pain, but its exact nature was doubtful. He was much better after ten days' treatment by hemlock. In general bronchitis in a girl, aged 12, the drug was of the greatest use, rapidly causing certain hectic symptoms to disappear. Dr. Kennedy had used hemlock with success in painful affections, such as rheumatism and neuralgia, in phthisis and hectic, and in some forms of dysuria. Its effects appeared to be tonic and anodyne. No benefit followed its employment in some cases. The succus conii was the most useful preparation, but it contained too much spirit for children. To them he gave a mixture of the extract in simple syrup. He believed that the drug fell into disuse, because the officinal doses were small and inert. He was in the habit of giving to an adult two drachms of the succus, or twenty grains of the extract, three times a day.—Dr. AQUILLA SMITH agreed with Dr. Kennedy as to the smallness of the officinal doses: the preparations were too weak. The tincture of the seeds was very useful, but also very weak. In Germany the leaves were ordered to be dried in the sun, and this might make some difference in their strength.—Dr. HAWTREY BENSON mentioned the case of a scrofulous boy, aged 12, whom he had treated with eight-grain doses of extract of conium thrice daily. Glandular enlargement in the patient yielded to the remedy, although they had resisted iron and iodine previously. In two other cases, the results were not so decided.—Dr. KENNEDY had employed hemlock also in strumous ophthalmia, as well as in scrofulous abscesses. It commonly allayed pain, and changed an unhealthy discharge into one of laudable pus.

BRITISH MEDICAL JOURNAL.

SATURDAY, FEBRUARY 21ST, 1874.

ST. JOHN'S HOUSE AND SISTERHOOD, AND ITS RELATIONS WITH KING'S COLLEGE HOSPITAL.

THE following statement has been officially forwarded to us on this subject, to which we last week referred. It will, we believe, be read with interest.

St. John's House was founded in the year 1848, under the title of "The Training Institution for Nurses for Hospitals, Families, and the Poor," its object being to supply efficient nurses for the sick in private families, for the poor, and for hospitals; and it sought to attain this object by hospital training, and by leading all persons engaged in nursing to look upon their employment as a religious work.

The Institution was first established and set on foot at a public meeting held in London on July 13, 1848, under the presidency of H.R.H. the late Duke of Cambridge, supported by the then Bishop of London (Bishop Blomfield); and amongst other promoters of the movement were the then Archbishop of York, the Bishops of Chichester, Gloucester and Bristol, Lichfield, Llandaff, Manchester, Norwich, Oxford, Ripon, and Salisbury, Lords Harrowby and Nelson, Canons Wordsworth (now Bishop of Lincoln), and Jelf (then Principal of King's College), the late Dr. Todd, J. W. Cunningham (then and now Secretary of King's College), and others.

Very soon afterwards, St. John's House commenced active operations, and it is now carried on by ladies thoroughly experienced in the duties of nursing, under a Lady Superior selected from themselves, and a body of more than one hundred nurses trained to the work. These ladies devote, without any vows, the whole or a chief portion of their lives to the work of nursing as a free labour of love, with entire loyalty to the Church of England, in its sound moderation of views and practice, which is insured within the institution by the fundamental rules.

The Bishop of London is the president and visitor, and the Rev. Dr. Vaughan (Master of the Temple) is the chaplain, and the whole work of the house is conducted under the control and with the sanction of the council, at present composed as above. Bishops Blomfield, Tait, and Jackson have each in turn taken a warm personal share in developing and guiding the institution, and have habitually presided at the meetings of the council.

In 1856, St. John's House first became connected with King's College Hospital, which had been instituted by the Council of King's College in 1839, under the immediate patronage of Her Majesty, for the relief of poor sick and infirm persons, and in order that "the Students in Medicine and Surgery of the College might for ever have access" to its wards for the purposes of professional training. This hospital was, therefore, specially suited, by its origin and objects, to aid in the further congenial purpose of training nurses in connection with St. John's House. The Crimean war had lately stirred the heart of the nation on this subject. St. John's House had supplied many trained sisters and nurses for the East, even some of that small band that first accompanied Miss Nightingale to Scutari; and the several institutions of King's College, King's College Hospital, and St. John's House, had so much in common in their aims in relation to hospitals and hospital workwork, that St. John's House was removed from Westminster to Norfolk Street, Strand, in order to be near its new field in the hospital.

It was understood by those who framed the agreement of 1856, that St. John's House brought with it into the hospital its own internal government and its control over its nurses, with which the Hospital Committee was not to interfere so long as the work of nursing should be well done. But in order to bring the terms of the agreement into technical conformity with the already existing bye-laws of the hospital, it was provided that the Lady Superior of St. John's House should be appointed to the office of "Matron" at the hospital by the committee, and that all persons employed by St. John's House in the hospital should "obey the instructions of the Hospital Committee."

And so this great work has gone on and prospered for seventeen years, not only to the mutual advantage of two kindred institutions, but to the great benefit of the important work of nursing in general, and to the advantage of an incalculable number of the sick and suffering of every class in various parts of the world. During many years, the Sisters of St. John's House received the warm support and confidence of the most active members of the Hospital Committee, and though, of course, occasional difficulties presented themselves, owing to the unavoidable frequent change of officials in each institution, these were, without difficulty, adjusted whenever they arose; and the practical result of these seventeen years' conjoint action has been one of great mutual advantage, while the hospital authorities have again and again acknowledged their indebtedness to the sisters and nurses, and even appealed to the public on that ground, among others, for a more liberal support. The great majority of the professional staff of the hospital have also expressed themselves in the most unequivocal terms to a like effect, stating that "any change which should remove the nursing from the care of the Sisters of St. John's House, is greatly to be deprecated, and would be calamitous to the hospital, and to the interests of the patients."

The agreement of 1856 having become in many respects obsolete, and the hospital having been greatly enlarged, a new agreement was drawn up in 1872, including fresh provisions. Not many months after these new arrangements, fresh difficulties were presented by the hospital, and the final result is that the Hospital Committee have given to the Council of St. John's House, six months' notice of their intention to determine the existing agreement, and, consequently, on August 1 next, the connection of St. John's House with the hospital is to come to an end.

The Hospital Committee offer, indeed, to the council to negotiate for a new contract; but they attach to their offer conditions which they peremptorily refuse to modify in any degree, and yet which it would be impossible for St. John's House, or any similar institution, to accede to, inasmuch as, under such conditions, the work must fail.

In 1856, all the female domestics within the hospital had been placed under the Lady Superior of St. John's House; but recently, the female domestics waiting on the resident officers, and those serving the hospital kitchen, and having the charge of the linen (except in the wards), have been withdrawn from her charge, and placed under the secretary, or, in his absence (since his partial non-residence), under his subordinate, the steward. The committee has likewise instituted a laundry within the basement of the hospital, and have placed the housekeeper and laundry women also under the same authority. As a natural consequence, the sister in charge has been compelled to complain again and again of neglect of duty in relation to the wards on the part of these domestic officers and servants, almost entirely without remedy; her complaints, and those of the sisters, having been too often simply negatived, and therefore dismissed as undeserving of attention. A spirit of resistance and opposition has been presented in those countless details of administration, which, though individually trivial, have in the aggregate a most important bearing upon the nursing of a hospital, which so largely depends upon exact and careful attention to orders given; and thus the performance of the duties of the sisters and nurses has become not only irksome, but extremely difficult.

The new requirements and propositions of the Hospital Committee are in direct opposition to the very spirit of the working of St. John's House, which has been so effective and free from objection for upwards of seventeen years. These propositions would, if acceded to, entirely alter the principles on which that institution conducts its work, not only in King's College Hospital, but elsewhere, and the Council have, therefore, had no alternative but to decline them. They could not consent to place the ladies and nurses who conduct the work in a position to be displaced by a resolution of the Hospital Committee, without blame alleged or cause assigned, which is one of the conditions above alluded to. To do so would, in the opinion of those most conversant with the state of things at the hospital, be to make the sisters and nurses individually the servants of the committee—in other words, of the secretary—and thus to strike at the root of all internal discipline, and render the work of St. John's House impossible.

The Council of St. John's House have, however, suggested to the Committee of Management that the whole case should be laid before the Council of King's College, of which the King's College Hospital is a branch, in the hope "that they may be able so to accommodate the misunderstandings which have lately existed as to prevent a severance between the two institutions;" but this proposal has not been acceded to by the Hospital Committee, who have announced to the Council their intention to "proceed to make other arrangements for nursing the hospital to succeed those provided by St. John's House, on the termination of the present agreement."

To this the medical staff append the following statement.

"When we first knew that differences existed between the Committee of Management and the ladies, who, for seventeen years, have nursed our hospital so much to our satisfaction, we, as members of the in-patient medical staff of King's College Hospital, felt it to be our duty to address the Committee of Management, and to assure them that, in our opinion, 'any change which would remove the nursing from the care of the sisters of St. John's House, is greatly to be deprecated, and would be calamitous to the hospital and to the interests of the patients'. Unfortunately, our remonstrance has proved ineffectual, and we understand, to our great regret, that the Committee has given the sisters of St. John's House six months' notice to quit.

"The success of the work we perform in your hospital, and the welfare of our patients, are so intimately connected with the efficiency of the nursing, that we look forward with much apprehension to the proposed substitution of a new and untried system, for one that we know, from daily experience, to be thoroughly good.

"We earnestly trust, therefore, that it will be your pleasure to submit the whole question to impartial arbitration. If this were done, we should hope that some arrangement might be arrived at by which we and our patients would not be deprived of the valuable services of the members of St. John's House; or, if that be found to be impossible, we would then at least have the assurance, which we certainly do not now feel, that substantial justice has been done."

This is signed by George Johnson, A. B. Garrod, John Wood, Alfred Baynard Duffin, W. S. Playfair, and Lionel S. Beale.

THE DISCUSSION ON PYÆMIA AND HOSPITAL MORTALITY.

We publish this week a further *verbatim* report of the highly interesting debate at the Clinical Society on pyæmia in its bearing on the results of hospital and private practice. This important debate springs pretty directly out of our comments on Mr. Erichsen's address at University College, and Mr. Callender's lectures, published in these pages. Mr. Erichsen responded to the challenge which we threw out, by the lectures which we recently published; and Mr. Prescott Hewett's address at the Clinical Society showed the converse of the picture on which the adherents of the doctrine of hospitalism have ably and usefully dwelt. We have expressed the opinion that the statistics and opinions of Simpson, adopted by Erichsen, were far from carrying conviction; and the course of this discussion, in which all the leading surgeons of the metropolis seem likely to take part, supports that view. We should be glad to see some worthy contributions to the discussion from those who are peculiarly well able to bring a special experience to bear on the subject—country practitioners of large experience in and out of hospitals. How far can they find any difference between the results achieved in their practice in and out of hospitals? Is pyæmia in their records a purely hospital disease? Reading their cases in the light of Mr. Prescott Hewett's and Mr. Holmes's statements, do their case-books support the view that "hospitalism" is an actual and inherent condition of hospitals, or an incident of private as well as of public practice, and due, as Mr. Callender's results seem to indicate, to preventable causes?

CARDIAC ACTION AND BLOOD-SUPPLY.

It is not often that the audiences on a Friday evening at the Royal Institution are addressed upon a subject so purely physiological as that upon which Mr. A. H. Garrod recently lectured. He chose for his topic the Heart and the Sphygmograph—a branch of science to which he has lately devoted considerable attention. His mode of illustrating the subjects was novel, striking, and entertaining, and for the most part easily comprehensible to all, so that even the ladies present must have been able to carry away from the lecture-room a goodly store of information respecting pulse-tracings. Slowly but surely in all directions scientific knowledge appears to be on the increase, and to be growing to be more highly prized by the general public; and such lectures as Mr. Garrod's cannot fail to augment the popular taste for exact scientific acquirements.

The lecturer commenced by pointing out to his hearers that, as our knowledge respecting the chemical constitution of the sun and the physical changes occurring therein is gleaned through the spectroscope, so by the sphygmograph, placed upon the radial artery, various important phenomena taking place in the heart may be studied with a facility otherwise unattainable. The older faulty sphygmographs of Herisson, Ludwig, and Vierordt, led observers to consider the pulse as composed simply of an up-and-down movement; but the more delicately constructed sphygmograph of Marey, in which springs are substituted for weights, has revealed the fact that the pulse-wave forms a complex curve. Traces of the curve recorded upon a moving slip of paper give indications respecting the action of the valves of the heart, and of the muscular walls of its ventricles. Leaving the question of the action of the valves, for the study of which physiologists had chiefly used the sphygmograph, Mr. Garrod addressed himself to the subject of the action of the ventricular walls.

The heart, he said, is a pump; and the sphygmograph teaches us that its construction is peculiar in this respect, that, whereas in ordinary pumps the force which keeps the machine in motion is constant, and does not vary with the amount of work which it is expected to perform, the force of the heart does vary automatically to meet varying amounts of work. To make his meaning clearer, the lecturer exhibited a working model of a steam-engine, the boiler of which was warmed by ignited coal-gas supplied through an elastic bag to a Bunsen's burner. The reservoir of gas communicated with, and was controlled by, the engine, in such manner that the size of the Bunsen's burner, and therefore the pressure of steam generated—that is, the efficiency of the engine—varied with the amount of work required of the engine. And it was possible—theoretically, at any rate—to construct an engine in which, within certain bounds, the velocity of the fly-wheel would not vary with the work to be done. On such a principle does the heart act, the pumping power of the organ varying directly as the blood-pressure; and the sphygmograph supplies the means of proof.

As the result of many observations, Mr. Garrod has assured himself "that the relative lengths of the systolic and diastolic portions of the pulse-trace do not vary for any given pulse-rate"; the systolic period extending from the commencement of the primary rise to that of the dicrotic rise; the period of repose or diastole occupying the remainder of the sphygmographic trace until the beginning of the next primary rise. Now, as the blood-pressure in the arteries is quite independent of the pulse-rate, it follows that the heart may be doing quite different amounts of work with the same length of systole. Evidently, therefore, "the force of the cardiac muscular contraction varies directly as the blood-pressure."

But, further, we learn from pulse-tracings that, though the length of the systole does not vary for any given pulse-rate, yet it does change much with different rapidities of pulse; and Mr. Garrod thinks he can lay it down as a law that "the length of the systole varies as the cube root of the whole beat, being found from the equation $xy=47\sqrt[3]{x}$, when $x=$ the pulse-rate, and $y=$ the ratio borne by the systole to the whole beat." It may, therefore be inferred that the length of the diastolic period, or period of repose, during which fresh blood is being circulated through the muscular walls of the ventricles, modifies the contractile power of the cardiac muscle. And by the cardiograph it may, approximately, if not accurately, be demonstrated that "the nutrition of the heart's walls must vary as the square root of the length of the diastolic period." We shall look to other energetic sphygmographers to confirm or assail the positions which Mr. Garrod has taken in this matter.

DR. A. L. GALABIN, M.A., Fellow of Trinity College, Cambridge, has been appointed Assistant Obstetric Physician to Guy's Hospital, in the place of the late Dr. J. J. Phillips.

WE believe that the vacant Assistant-Physicianship at the Middlesex Hospital will probably be filled by the appointment of Dr. Creighton, a highly accomplished young physician, at present filling the office of Medical Registrar at St. Thomas's Hospital.

IT is stated in American medical journals that so signal was the failure of carbolic acid as a preventive of yellow fever in New Orleans and Mobile, that suspicion was awakened that its effect was positively injurious, and that it helped to spread the disease.

THE prize of 500 *lire* (£20), offered by the directors of *Lo Sperimentale* for the best paper published in that journal during the year 1873, has been awarded by the Medico-Physical Society of Florence to Professor Filippo Pacini, for his essay on "The Phenomena of Osmosis and the Functions of Absorption in the Animal Organism".

MR. W. MAC CORMAC is gazetted as Staff-Surgeon of the new London Corps of the Royal Naval Artillery Volunteers, Mr. F. S. Daldy as Surgeon, and Messrs. P. T. Scott and Harry Leach as additional Surgeons. We understand that Mr. Le Gros Clark will be shortly gazetted as Honorary Surgeon to the force throughout the kingdom.

THE next meeting of the Society of Medical Officers of Health will be held on Saturday, February 21st, at 7.30 P.M. Dr. T. O. Dudfield will move the following resolution: "That it be referred to the Council to consider as to the desirability of the statistical returns in the annual reports of the metropolitan medical officers of health being based upon an uniform system; and to frame suggestions for carrying out such a system, if found to be desirable." Dr. J. W. Tripe will read a paper on "The Density of Population, and other causes which affect the rate of Mortality in the Metropolis."

MR. H. F. BRION, 231, Albany Road, London, S.E., has brought under our notice a carefully modelled relievo map of Africa, which he has just published, showing mountains, tablelands, valleys, water-partings, and the geological formation of the earth's surface, according to the recent discoveries by Livingstone, Baker, Speke, Grant, Schweinfurth, and Burton. It is a map of very great merit, and, in special relation to the "doctors' war" now being carried on, it will, we believe, prove interesting to many of our readers. More can be learned from these relievo maps in an hour than from an ordinary map in a week.

THE Colonial Office appears to find some difficulty in obtaining surgeons for the West India islands. The very meagre rate of pay offered, according to the letter of a correspondent, which we publish in our small-type columns, will explain some of the reluctance of young men to expatriate themselves to a climate of doubtful healthiness. The pittance offered is unworthy of attention.

HEALTH-OFFICERS AND "HIGHJINNICKS."

PRESIDENT WHITE, of Cornell University, has, we read, made an exposure of the ignorance of New York health-officers. One of the latter having been brought up for examination before the chief to refute this general charge, was asked whether a family suffering from small-pox had had any care. He replied, "Yes, sir; they had highjinnicks (hygienics); they doctored themselves." With the remaining officers, "highjinnicks" was used as the test of their ignorance. Each one was asked whether there were any "highjinnicks" in his district, and not a single one detected the absurdity of the question. One was asked if he knew the meaning of the word, after he had said that a portion of his district was afflicted with it, and he replied, "Yes, sir, I do; it means a bad smell arising from dirty water." President White ascribes this ignorance of men appointed to guard the public health of New York to a general lack of knowledge of the importance of the subject of health preservation and disease prevention.

ST. JOHN'S HOUSE AND KING'S COLLEGE HOSPITAL.

THE opinions which we, last week, expressed as to the propriety of an arbitration in the matters in dispute between the authorities of St. John's House and those of King's College Hospital have been strengthened by all that has since occurred. It seems to be generally admitted that the nurses of St. John's House do their work efficiently, and the medical staff generally is well satisfied, although it will be noted that Sir William Fergusson's name is absent from the letter to that effect which we to-day publish. There are, moreover, one or two matters which may probably be readjusted with advantage. It is observable that the nursing staff at King's College Hospital is relatively larger and more costly than the staff at Charing Cross Hospital, which is also nursed, and efficiently nursed, by the ladies of St. John's House. In the course of some minute inquiries which we have instituted during the last week into the nursing arrangements of the metropolitan hospitals, as at present conducted, of which we shall shortly publish details, we find reason for thinking that the ladies of St. John's House might advantageously modify some of their arrangements. But, on the whole, it is clear that they do their work well, and in such a manner as to benefit the patients and earn the approval of the medical and surgical staff. They are not equally fortunate always with the hospital secretary, who is apt to influence the Council adversely; but this, although an important, is not an overwhelming consideration, and the difficulties at King's are undoubtedly such as may be overcome by a suitable arbitration.

ALUM CASES.

PUBLIC analysts are unfortunate in their charges against bakers. Two more cases under the Adulteration Act have lately come before the Edgware Petty Sessions. Two bakers had been charged, on a certificate of Dr. Redwood's, with selling adulterated bread; and the cases had been adjourned to have the bread analysed by an independent chemist. The adjourned cases came on on Wednesday. For the prosecution, Dr. Redwood's report certified that about forty grains of alum had been found in the 4 lb. loaf; the details of the analysis being that Dr. Redwood had burnt up 1000 grains of bread and extracted nearly 0.2 grains of a white precipitate from the incombustible portion or ash. From these data, the conclusion was drawn that the 4 lb. loaf contained about forty grains of alum. On the other side, it was pointed out that the 0.2 grains of white precipitate was not alumina, but phosphate of alumina, and therefore equivalent to only 22 grains of alum, and not 40 grains, in the 4 lb. loaf. Dr. Redwood had also performed an evaporation to dryness and a boiling with caustic potash in a vessel of porcelain, and thereby risked dissolving silica and alumina off the vessels.

Mr. Fryer, the solicitor employed for the defence, produced an analysis of the same bread by Mr. Wanklyn. This analysis, in which all the boilings and evaporations were performed in platinum vessels, showed not a trace of alum in the bread. The cases were accordingly dismissed, costs not being allowed.

OBSTETRICAL SOCIETY OF LONDON.

THE next ordinary general meeting of the Society, to be held at 8 P.M. on Wednesday, March 4th, 1874, will be made special to consider the following resolution proposed at the last meeting of the Council: "That, it appearing that the bye-laws and regulations framed on the foundation of the Society did not contemplate the admission of women as Fellows, the Council is of opinion that the question ought to be submitted to a general meeting, to decide what shall be the proper interpretation of the actual bye-laws and regulations, or so to alter the bye-laws and regulations as to express clearly the intention of the Society as to the admission of women."

THE STATE MEDICINE QUALIFICATION.

THE State Medicine Qualification Committee of the British Medical Association has, after numerous meetings and much discussion carried on by correspondence with the most eminent authorities throughout the kingdom, prepared a report of great interest and importance, which will be shortly submitted.

THE AMENDMENT OF THE SANITARY LAWS.

THE request which we last made to medical officers of health concerned in carrying out the Public Health Act, for a careful consideration of Dr. Syson's practical suggestions for its amendment, and for their own further suggestions and statement of their difficulties, has produced some very interesting and valuable communications, to which we in turn call attention, in the belief that these suggestions and statements of experience cannot fail to enlighten and assist all who desire to promote the improvement of our sanitary legislation and the amelioration of the public health. Some of the suggestions which we have received will be published in the columns devoted to Public Health. We are much gratified to find this recently instituted department of the JOURNAL so highly appreciated as it is by valued correspondents; and, with the assistance of medical officers of health throughout the country, in forwarding their reports and the accounts of the proceedings of their authorities, we shall not hesitate to foster its further development. The great task of promoting the public health now directly occupies many hundreds of our associates, in the specific and important capacity of health-officers, and indirectly concerns us all. The Public Health Service is destined to become one of the most important departments of the civil service of the State and most valuable channels of medical activity.

A GERMAN HANDBOOK OF SPECIAL PATHOLOGY AND THERAPEUTICS.

UNDER the title of *Handbuch der Speciellen Pathologie und Therapie*, is announced an encyclopædic work in fifteen volumes, which is about to appear under the editorship of Professor von Ziemssen of Erlangen. It will be illustrated with numerous wood-engravings. Each volume will contain from thirty to forty octavo sheets, and will cost three or four thalers (about 9 to 12 shillings). There is a numerous staff of contributors, among whom the work in the several volumes is thus distributed. 1. General Hygiene—Professor Geigel; Diseases of Trades—Dr. Hirt and Dr. Merkel. 2. Acute Infectious Diseases—Professors Liebermeister, Lebert, Heubner, Thomas, and Hertz, and Drs. Haenisch, Oertel, Curschmann, and Bettelheim. 3. Chronic Infectious Diseases—Professors Bäumler, Heller, and Bollinger. 4 and 5. Diseases of the Respiratory Apparatus—Professors Weber, von Ziemssen, Steiner, Jürgensen, Hertz, Rühle, and Rindfleisch, and Drs. Fraenkel, Schrötter, Steffen, and Riegel. 6. Diseases of the Circulatory Apparatus—Professors Rosenstein, Lebert, and Quincke. 7 and 8. Diseases of the Chylopoietic Apparatus—Professors Vogel, Wagner, Wendt, Zenker, von Ziemssen, Leube, Heller, Thierfelder, Ponfick, Freidreich, Mosler, and Duchek, Drs. Leichtenstein and Merkel. 9. Diseases of the Urinary Apparatus—Professors Bartels, Lebert, and Seitz, and Dr. Ebstein. 10. Diseases of the Female Sexual Organs—Professor Schröder. 11 and 12. Diseases of the Nervous System—Professors Erb, Nothnagel, Wyss, Obernier, Heubner, Kussmaul, and Drs. Hitzig and Eulenburg. 13. Diseases of the Motor Apparatus—Dr. Senator; and General Anomalies of Nutrition—Professor Immermann and Dr. Senator. 14. Diseases of the Skin—Professors Rindfleisch and von Ziemssen. 15. Poisons—Professors Naunyn, Böhn, and Schmieddberg.

AGASSIZ' BRAIN.

PROFESSOR AGASSIZ left directions that a careful examination of his brain should be made *post mortem*. The result has been published in detail. The weight of the entire brain was 53.4 avoirdupois ounces (1,495 *grammes*); allowing a diminution in the weight of the brain from the age of 35 to 40 years at the rate of one ounce avoirdupois for each ten years elapsed, the greatest weight of the brain may be estimated at 56.5 avoirdupois ounces. Weight of right anterior lobe (separated with the fissure of Rolando for a guide), 234 *grammes;* weight of left anterior lobe, 233 *grammes*.

EDINBURGH UNIVERSITY CLUB.

THE tenth annual general meeting of the club was held at St. James's Hall, on Wednesday, February 11, 1874, at six P.M., Mr. Chisholm Batten presided, and about twenty members were present. The annual report of the Council was read, announcing the continued prosperity of the Club. The following elections were unanimously agreed to:—1. His grace the Archbishop of Canterbury, as an honorary member; 2. Professor George Allman, as one of the vice-presidents; 3. Dr. Robert Cross, Dr. Macaulay, and Dr. Sieveking, as councillors; 4. Professor Muirhead, as an ordinary member; 5. Mr. G. Anderson, W. Trowers Smith, Esq., and Mr. Balfour Browne, as members. Sir Henry Holland, Dr. Livingstone, Dr. Gould, Dr. Haviland, Dr. John Murray, Dr. Hamilton Roe, and Dr. F. C. Webb, had died during the past year. Five guineas were voted from the funds towards the University Endowment Association. The dinner followed the general meeting, and was attended by twenty-six members. The right honourable the Postmaster-General was in the chair. No guests were admitted on this occasion.

NEW MATERIAL FOR DENTAL PLATES.

WE read that among the novelties exhibited lately at the American Institute Fair is a new base for artificial teeth, the invention of a New York dentist. It consists mainly of fish-scales, which, dissolved and combined with certain fibrous and adhesive substances, form a compound that is said to be well adapted for use as dental plates. Greater strength, durability, and lightness, and freedom from all taste, are the advantages claimed for it over the materials in common use. It is capable of receiving a fine polish, and may also be readily coloured to any desired tint, qualities which adapt it to a great variety of purposes outside of dentistry. It is also said to be an excellent material for waterproofing cloth.

LIVERPOOL ROYAL INFIRMARY.

THE election of surgeon to this institution took place on the 17th instant, and resulted, as we last week intimated it would do, in the appointment of Mr. Reginald Harrison, who polled 239 votes against 29 recorded by the homœopaths in favour of their candidate, Dr. Hayward. This majority of 210 is tolerably significant; especially when it is known that the most strenuous exertions were made by the opposing party. A shrewdly devised lithographed circular, signed by the candidate, was sent to each voter of known homœopathic sympathies, urging that every possible assistance and support were necessary, and offering to send his carriage to take any favourable voter to the poll. The result is highly satisfactory, but can scarcely be called a triumph, as it was impossible to anticipate any other issue. We can afford to congratulate the losing candidate on his escape from a dilemma; for his success, if it had been possible, would probably have been as disastrous to himself as to the hospital. The only grievance is, that the trustees and the only rightful claimant to the post should have been put to much trouble and annoyance for no possible benefit to any one. It is a real grievance that surgeons of acknowledged reputation and merit, who have spent years in working specially for hospital appointments, should be exposed to the annoyance of fighting for their rights against opponents who have not the faintest shadow of a chance of success, and whose qualifications and claims to the position of operating surgeons may be comprised, as in the present case, in the testimony of the proposer of Dr. Hayward, who declared that "he knew him to be an excellent surgeon, for he had seen him once set a broken leg."

THE RECRUITING QUESTION AT THE ROYAL UNITED SERVICE INSTITUTION.

THE adjourned debate on Dr. Leith Adams' paper took place on Monday evening, and Sir William Codrington, Colonel Aikman, V.C., and other distinguished officers treated the question of recruiting from various points of view. Colonel Ewart, R.E., ably held the Government brief, and did battle valiantly for Mr. Cardwell's regulations, but the sense of the meeting undoubtedly was that no really efficient supply of good material can be expected at the present terms. All the experienced officers with whom we have talked the matter over, are agreed on this, that pensions ought at once to be restored; for, although on abstract principles of political economy, a man may be expected to provide out of present income for future needs, a very short military experience is sufficient to show that the British soldier will always spend his income to the last penny. If the rumour be correct, however, which assigns to the Duke of Richmond the portfolio of War Minister in the coming administration, we may feel secure that the questions will be taken up and handled in a practical spirit. We must not forget that to this able nobleman we owe the damaging exposure of War Office recruiting statistics, which took place during last session in the House of Lords.

THE DENTAL HOSPITAL AND THE ODONTOLOGICAL SOCIETY.

AN inaugural dinner, to celebrate the entry of the Dental Hospital of London, the Odontological Society of Great Britain, and the London School of Dental Surgery, into the new building in Leicester Square, will take place at Willis's Rooms, St. James's, on Thursday, March 12th, at 7 P.M. The Odontological Society will, it is expected, take possession of their new premises on Monday, March 2nd. After the formal business of the Society has been transacted, a *conversazione* will be held, and all the rooms thrown open to visitors. The invitations will be issued, we believe, in the joint names of the Council of the Odontological Society and the Committee of Management of the London Dental Hospital.

A MIDWIVES' HANDBOOK.

IN 1872, the Hungarian Government instituted two schools for midwives, one at Presburg and the other at Grosswardein, and ordered that the instruction should be given in the languages spoken in the different parts of the kingdom—German, Hungarian, Slavonian, and Roumanian. A midwives' manual in the Slavonian language has just been published by Dr. Ambro, professor in the school at Presburg. The anatomy of the parturient process, and the subjects of etiology of disease, diet, and prophylaxis so far as it depends on hygiene, are fully dealt with. The author describes the sphere of the midwives' duty, having regard to the present sanitary organisation of Hungary, and the relatively small proportion of obstetric practitioners and their irregular distribution; as well as to the circumstance that a new sanitary organisation is in contemplation, and that only intelligent women who can read and write will be allowed to practise midwifery. The limits to which the midwife may go in any case of abnormal labour are defined the kind and degree of irregularity in the labour at which aid should be called for are described, and the dangers of delay are pointed out The measures that may be employed by midwives are fully discussed and attention is directed to their misuse and its results, and to the evil customs prevalent among the country people; and the attempt is made to encourage sentiments of honour and duty, and of professional responsibility, and to restrain presumption and indiscretion. Special stress is laid on the regular keeping of a daily register, as the most useful means of instruction and study. The etiology and prophylaxis of puerperal fever are treated of at length.

CLINICAL INSTRUCTION.

MANY of our readers will have seen the report of the committee appointed to draw up regulations for the Conjoint Examining Board of England. Excellent as this report is, we must hold the note to paragraph 23, section ii (page 5), a very serious lapsus—to be corrected, we hope, on reconsideration of its bearing. The paragraph provides, very rightly, that every candidate shall give proof of having discharged the duties of clinical clerk and surgical dresser for six months—a wise and excellent regulation, which would go far towards removing the stigma which attaches to some of our present hospital training, as compared with the older personal apprenticeships. But what says the "note"? It provides a convenient loophole for entirely evading this admirable rule. Thus, "These duties may be discharged at a recognised hospital or union infirmary, or in such other similar manner as shall afford sufficient opportunity for the acquirement of practical knowledge," so that men will still be able to shirk the due and careful training implied in a good clerkship or dressership, and have their schedules signed by any practitioner whom they have been "assisting" (save the mark!), when they ought to have been at their elementary studies. Such, and similar men, are the opprobrium of all schools, notably, perhaps, of provincial schools, and we sincerely hope for their own good, the honour of the schools, and of the profession, that the pressure implied in the paragraph will be brought to bear upon them, and not virtually relaxed and contradicted by the "note M." We understand that the medical board of the Queen's Hospital, Birmingham, have, through their chairman, Dr. Heslop, memorialised the committee in the sense of the above remarks. We cannot but think that it would be well, if others, who have reason to think similarly, would follow a like course.

THE TRANSMISSION OF DISEASE.

MR. GEORGE DARWIN does not hesitate to push to their most rigorous conclusions the facts and laws observed by physicians as to the hereditary transmission of disease. He is of opinion that, simultaneously with the diffusion of the belief in the truth of the doctrine of heredity, will come the recognition that it is as much a duty to transmit to the rising generation vigorous minds and bodies, as to hand down to them a firmly constituted society and government, to which latter point attention has hitherto been almost exclusively directed. Applying these views to the subject of marriage, in a recent article published in the *Contemporary Review*, he considers that we can only make a really successful attack by compelling the production, before marriage, of a clean bill of health in the party, and ultimately in his parents and ancestors. Syphilis would have to be included, in case, as is only too likely, medical science and other preventive legislation should fail in depriving it of its hereditary character, or in confining its ravages to small limits. The ultimate restrictions to liberty of marriage would be: 1. Divorce on the appearance of certain diseases; 2. The passing of a medical examination for this same class of diseases; and 3. The production of an untainted pedigree. The medical examination might in some respects be modeled on that in force in Germany for military service, where a man is not ultimately rejected until he has been refused in three successive years. Could such legislation come into force, coupled with some such scheme as that proposed by Mr. Galton, not only might "a cubit be added to our stature", but the capacity for happiness in the world might be largely augmented, by the destruction of that most potent cause of unhappiness, ill health; several years might be added to human life, our ability for work and mental power immensely increased, and the coming race might end by becoming as much superior to ourselves in mind and body as the racehorse is superior in form to a shaggy pony. The editor of the *Philadelphia Medical and Surgical Reporter*, by way of enforcing these opinions, observes that "there are good reasons why the wife should be given greater scope of selection than she now enjoys, if in any way it can be accomplished. What a fearful picture is that drawn by M. Voison in one of his latest studies on the effect of drunkenness on conception! As the result of seventeen cases which were fully examined, it would appear that wine, brandy, and absinthe, exercise an almost identical influence upon the products of conception. Epilepsy, convulsions in childhood, and chronic myelitis, are the possible consequences of conception during drunkenness, whatever the intoxicating agent may be. In eighteen cases of conception during chronic alcoholism, without drunkenness, observed, there were born eight idiots and ten epileptics. Of the eight idiots, four were the issue of fathers who indulged in wine, two of brandy-drinkers, and two had mothers who drank brandy. Of the ten epileptic children, five had fathers who drank brandy and wine, three who consumed only wine, and two who intoxicated themselves by absinthe. With such an array of results before us, the most urgent step towards natural selection just now is, either for men to check increasing drunkenness, or else to protect wives in their control over their own bodies."

IRELAND.

SCHOOL OF PHYSIC IN IRELAND.

THE election to the professorship of Institutes of Medicine in the School of Physic in Ireland, and physiciancy to Sir Patrick Dun's Hospital, took place on the 13th instant. Only two candidates presented themselves, Drs. Prosser and Green. The former was unanimously elected. The election was carried out according to the ancient form, the Provost of Trinity College attending at the King and Queen's College of Physicians to administer an oath to each of the Fellows of the College that he, without fear, favour, etc., should vote for the best person to fill the professorship. Dr. Prosser had virtually a walk over. We congratulate the College on having elected, and the School of Physic in Ireland in having obtained, such a worthy successor to Professor Law. Professor Prosser is a distinguished graduate of Dublin University. He early devoted himself to the study of histology. He has for several years been an extremely successful lecturer on physiology at the Carmichael School of Medicine. As physician to the City of Dublin Hospital, he has displayed great ability as a clinical physician. His contributions to the *Transactions* of the Royal Irish Academy, and his various papers and lectures published in the *Dublin Medical Journal* and *Irish Hospital Gazette* have established his character as an investigator, writer, and teacher. Dr. Prosser's election to this professorship will cause two vacancies—one the chair of physiology in the Carmichael School of Medicine, the other in the physiciancy to the City of Dublin Hospital.

SANITARY MATTERS IN DUBLIN.

AT an inquest held in Dublin on February 9th, inquiry was made as to the cause of death of two children. It appears that the children died of diarrhœa; they lived in a room under which manure had been stored for the purpose of growing mushrooms. The manure was placed in the house by order of the landlord, Mr. Kennedy. The jury found the remarkable verdict "That the death of both the children was accelerated by the impure air arising from the manure beneath, but that they did not attach any blame to Mr. Kennedy" (*Dublin Morning Mail*). Does a Dublin coroner's jury think that no blame is attachable to a person who stores manure in a tenement-house and under inhabited rooms? If so, we pity the mental state of the jurors. Mr. Kennedy is a rejected candidate for Irish Parliamentary honours; and we hear that a local newspaper, of politics opposed to Mr. Kennedy, made an useful political handle of the candidate's mushroom-beds in Dublin.

THE ASHANTEE EXPEDITION.

[FROM OUR OWN CORRESPONDENT.]

Gold Coast, January 17th, 1874.

YOU are probably already aware that the Ashantee war is virtually over—at least such is the general opinion. The envoys who arrived on the 2nd at Prahsu were followed by a German missionary, sent down by the king to carry on the negotiations with the general. He has confirmed a report, which found its way to the Castle some time since, that there was at Coomassie a war and a peace party, the latter preponderating. The king is said not to have more than a thousand men at his command; the vast army which had committed such ravages in the Protectorate having, like all feudal gatherings, dispersed to their several homes, probably disgusted and disheartened with their many defeats, and their severe losses from disease. Amenquartier has been heavily fined and sent into seclusion; and it was reported that a chief of high rank was coming to confer with Sir Garnet Wolseley. The king is said to have conceded all our demands except the march to Coomassie: this last will, of course, be insisted upon. The transport difficulty is to some extent being got over by reducing the numbers about to march across the Prah, and collecting coolies from various villages along the coast line. The *Druid* left on the 10th instant for this latter purpose. Shortly before, the *Argus* had arrived from Axim with 139 native carriers; these were at once forwarded on to the front. One hundred Kroomen volunteers from the fleet left in medical charge of Assistant-Surgeon M'Carthy of the Royal Navy on the 14th for Prahsu, to perform similar duties. By these means, and the performing of all transport duties at Cape Coast with the women of the place, a scratch carrier corps has been organised, as yet scarcely adequate for the purposes required. One hundred and twenty men of the 42nd, who volunteered to act as carriers when the natives were deserting in great numbers, were obliged almost at once to give in.

The *Sprite*, hired transport, arrived on the 13th, having on board ten medical officers and Surgeon-Major Mackinnon from St. Vincent. This last officer, finding his efforts to form a sanitarium at Madeira futile, owing to the obstinacy of the Portuguese authorities, came on at once to Cape Coast. He has already assumed the duties of principal medical officer, and left for Prahsu with the commodore this morning. He will have much work to perform, as the administrative arrangements made by his predecessor will have to be considerably modified, owing to the want of carriers, without which they could not be worked out. As Dr. Mackinnon is said to be given to the practical in these matters, no difficulty is likely to arise; indeed, in these bush wars the less elaboration there is the better, as our best laid schemes are ever and constantly liable to be overturned by causes over which we have no control.

On the way up, the troops marched every morning at 3.30, reaching their several destinations by 8 A.M., before the sun had become too warm. The arrangements made along the route are highly spoken of by officers and men as perfect, and conducive in every way to health and comfort. The cold at night and damp of the upper country is all that is complained of—one of the characteristics of this moist and trying climate. The coffee-shops started between Sutah and Yancoomassie, a march of fourteen or fifteen miles, was found most useful, as affording means for a kind of *petit déjeûner*. Fortunately, no rain fell during the several marches, and thus the men were preserved from one of the most fertile causes of disease in this country—a wetting. When mentioning the transport arrangements, I might have told you that our West Indian troops now perform that duty for themselves. At first, the idea was to make them general carriers; but this being unpalatable to the men, it was finally arranged that they were to carry their own supplies from station to station, which they now do, somewhat after the fashion of the Houssa corps.

On the road up, filtered water has been supplied to the troops, with alternate rations of fresh and preserved meat, biscuit, and bread; while tea is the staple drink. Cocoa has been provided for the early morning meal; and medical comforts, in the shape of brandy, essence of beef, and preserved milk, are available at each station; these last, and rum, being only issued upon the recommendation of the medical officers. It is quite a mistake to believe that, in such an enervating climate as that of Western Africa, a tea-diet would suffice to preserve health when active exertion is required. In practice, such is found not to be the case. With a plentiful supply of fresh animal and vegetable food, it might possibly suffice; but, the former two being the exception on the West Coast, an occasional stimulant has been found absolutely necessary. "Live well" is the motto for the European in Africa, as in all malarious countries. Certainly those who live best are the most healthy out here, provided always dissipation and late hours are avoided, and healthy exercise is taken when the sun's rays are not at their maximum. Quinine is of questionable utility as a preventive of fever. Experienced officers are inclined to think it loses its efficacy as a remedy when taken for the former purpose. Flannel or serge clothing, and cholera-belts or broad sashes for the protection of the abdominal walls from sudden chills, are the other *sine quâ nons* for the preservation of health in the most trying of all tropical climates to the European constitution—for this the Coast of Africa is now acknowledged to be. Even theorists, who formerly pooh-poohed this idea, the result of experience and time, have at last arrived at a similar conclusion, after having experienced in their own persons its noxious effects.

Up to the present, the troops have remained healthy, not because the climate is better in the interior, but because everything that sanitary science told us was necessary for the preservation of health has been done for the men. Those who have recently arrived here can have no idea of the wilderness of forest and morass which had to be worked through and in parts made habitable. They must be, indeed, astonished when they behold what perseverance and energy alone sufficed to perform—sites cleared, huts and magazines erected, roads made, marshes fascined, and streams and rivers bridged over, for a distance of eighty miles, through a dense jungle hitherto believed to be impassable for the march of European troops. These things have been, however, accomplished, and, if feasible once, can of course be ever afterwards carried out. On the banks of the Prah, a large space has been cleared, and hut and bell-tents erected for the temporary reception of officers and men. The staff-huts are situated along the edge of the banks, which are very steep. The bottom of the river is sandy, and only some six feet of water intervene between it and the permanent wooden bridge erected by Major Home, R.E.

Hot days, cold nights, and damp chilly mornings, are the chief characteristics of the climate in the immediate vicinity. The river measures sixty-five yards from bank to bank. By felling a tree at each side, and filling up the vacant space with another, the Ashantee army managed to get across with tolerable expedition. Several deceased chiefs, whom they were unable to carry, were found suspended in baskets from the branches of trees; and a number of dead bodies, chiefly slaves, were found lying about in all directions. One unfortunate managed to crawl to the centre of their tree-bridge, but only to die; his body was found lying across it—only one of the many horrible sights seen during the continuance of this savage war. Let us hope it may be the last.

If the few cases of disease which are now dropping in from the various out-stations indicate in any way what may have to be received into hospital hereafter, we may surmise that fever, chiefly in the form of ague, debility, diarrhœa, dysentery, effects of insolatio, bronchitis, and ulcers, chiefly scorbutic, will be the affections which we must be prepared for. Unless the fighting be resumed—a very unlikely contingency—wounds and injuries received in action will, of course, be conspicuous by their absence. Already Dr. Blackley is having work cut out for him on board the *Victor Emmanuel*, the hospitals on shore being cleared as rapidly as possible, and the hospital ship relieved of her sick by the steamer which communicates with the *Simoom* at St. Vincent. The *Dromedary* takes to St. Vincent the first batch of invalids from on board the hospital ship—six officers and six men; only one of the latter, a man of the Army Hospital Corps, had contracted his disease on shore. Surgeon Maturin, Army Medical Department, is in medical charge. Upon arrival at the Cape de Verdes, the invalids will be discharged to the *Simoom*, to await the Cape mail, to which they will be transferred, a number of cabins being retained for this purpose by the Government in each steamer. On reaching Southampton, the men will be sent on to the Royal Victoria Hospital at Netley. The *Thames* will follow on the 24th. The *Dromedary* carries important despatches and latest telegrams for the Government; and, should she miss the Brazilian mail, these last will be transferred to the *Vigilant* at Madeira, reach Lisbon in forty-eight hours, and be there telegraphed to London. Such is an outline of the course to be adopted from time to time. Unfortunately for those on board, strict quarantine is enforced upon the *Simoom* and her occupants.

A number of the 2nd West India Regiment have been suffering from intractable ulcers of the lower extremities. This corps has seen a good deal of hard service during the various military operations recently carried on in the Protectorate; and the result is now being felt by the men in the shape of fevers, dysentery, debility, and diarrhœa, in addition to the local affections. In round numbers, a third of the original force of six hundred men is practically ineffective for field-service. These ulcers of the extremities are most troublesome to treat out here, and in the European rarely get well without an entire change of climate. They remain indolent and sloughy, healing at one place, breaking out at another; become inflamed, painful, and serpiginous, until the surgeon and patient, having exhausted every means of cure, have at last to give up in disgust. Like all irritable ulcers, each change of the constitution reacts upon the sore; and it is only when the latter loses the impress of malaria, that any attempt at reparation shows itself. Some cases appear to be associated with a form of land-scurvy resulting from defective diet and overwork. Every form of local treatment has its advocates; but rest in the recumbent position, occasional poulticing, followed by zinc, opiate, or spirit-lotion, and careful bandaging, have proved the most efficacious remedies. A free application of lunar caustic becomes necessary when the surface is sloughy, or the granulations flabby and watery. This treatment is, at the best, only palliative, especially when a constitutional taint is evident. In such a case, an entire change of climate and food is necessary. These ulcers are also common amongst the lower order of natives, but heal more readily in them, probably owing to their more simple vegetable diet. The same may be said of wounds and injuries when affecting black subjects.

During the present, or, as it may now be possibly called, the late war, many wounds and injuries have been received by the officers and men engaged. With some few exceptions, these have been caused by a variety of missiles smaller than the usual Enfield bullet; not that the Ashantees do not use these last, but because they prefer smaller ones, as the fire with these is thought more effective in the close bush when the antagonists meet in hostile array within a few paces of each other. During the late engagements, every form of missile has been called into requisition. As they came down the country, all the hinges, locks, and bolts were removed from the Fantee huts, and converted by their blacksmiths (several of whose forges were found in their camps at Abracrampa, complete, with bellows and all necessary appurtenances) into ugly angular slugs. Similar shaped pieces of lead, portions of iron rods, metallic stone, and even shells and beads towards the close of the operations, were used by our enemy. The first described slugs were considerably larger than ordinary buckshot, approaching more the size of a revolver bullet. Now and then, the peculiar *ping* of the latter might be heard by the inhabitants. Owing to their jagged edges, these Ashantee slugs caused nasty wounds and gashes, bleeding profusely at the time, and, after a few hours, becoming surrounded by considerable swelling and redness, with much accompanying pain, discomfort, and stiffness. As a rule, the orifice of entrance was small and irregular; and the bullet or slug, when it penetrated to any considerable distance, was not detectable by the probe, and, when felt, with much difficulty extracted, owing to its irregular and pointed edges and corners. This was generally done by means of long pointed forceps, or by pushing the slug towards the surface and cutting down upon it—a proceeding much objected to by our native allies, who far preferred to leave them as they were, and allow them to come away subsequently, when inflammation and suppuration had rendered the operation more easy. The degree of injury inflicted varied entirely with the distance; beyond fifty yards, they were, as a rule, harmless, or caused contusions resulting in slight discoloration of the cuticle, passing away in a few days; a little closer, the contusion was accompanied with slight abrasion of the surface, a circular swelling, and much discoloration. Contusions of this last kind were very painful, and their effect did not disappear for several days. If, in such cases, the health were much deteriorated, an erysipelatous blush was not an unfrequent accompaniment. The day after the injury had been received, the hitherto red discoloration became blacker, gradually changing into the purple and yellow of an ordinary bruise.

Where the slugs penetrated, the effects varied with the part hit by the missile. If it were the parietes of the chest, they rarely did more than cause an extensive gash, or, impinging against one of the ribs, ran along for two, three, or four inches, and there lodged. In such situations, they could be easily felt by the finger. Numbers passed through the muscles of the thigh and arm; a few lodged in the carpus; and others passed between the metacarpal bones. The wounds of the face always presented a nasty appearance, from the profuse bleeding and subsequent swelling; the slug, as a rule, either became flattened against the bone, or fell out again after impinging against the periosteum. At Abracrampa, a sailor lost the sight of one eye by one penetrating the cornea and lodging beyond. Penetrating abdominal wounds were, as a rule, fatal. I know only of one instance where this was not the case—a soldier of the 2nd West India Regiment, wounded at Fassowa: the bullet, entering immediately above the pubes, appeared to have passed down anteriorly to the reflection of the peritoneum, and then entered the bladder. This is worth remembering in savage warfare; for, under such circumstances, a large cumberbund worn round the waist would be found a sufficient protection. Wounds inflicted in the neighbourhood of joints, or immediately over them, became almost at once stiff and painful; and, when lodged in fleshy muscles, were with difficulty extracted. If in the vicinity of a nerve, the occasional twitching was anything but agreeable. After these wounds healed, they left a small purplish-red cicatrix. Water or carbolic dressing, with or without oil-silk in addition, generally sufficed for a cure, short or prolonged, according to the extent of the injury received and condition of the constitution at the time when the wound was inflicted. The febrile disturbance was, as a rule, slight. In no case that I have heard of was there any bone broken or more than injured superficially, except in one where the slug penetrated and lodged in the frontal sinus. The wounds were severe when inflicted within a short distance, dangerous to life only when impinging upon some unprotected region, as the abdomen or in the vicinity of the great vessels of the neck, and were chiefly characterised by the profuse bleeding on the receipt of injury, and subsequent swelling and disfigurement. When tendons, nerves, or smaller vessels were severed, contractions and loss of sensation was the usual result; but the mere severing the vessel itself was unimportant, as no difficulty was found in taking up the artery, and in no instance was secondary hæmorrhage observed to follow. The most annoying circumstance with these slug-wounds is where the slug itself, or portions of it, remains embedded among the muscles. In such a case, much suffering may be subsequently undergone. In some instances, slight bruises, scarcely noticed at the moment, have subsequently, where the health has become deteriorated, opened out into intractable and painful ulcers. With regard to the effect of change upon the health of invalids, it has been observed here that when officers and men, who had previously suffered from ague and debility, proceed on a cruise to the windward as far as Ascension and St. Helena, they improve rapidly, but as rapidly deteriorate when they again come within the influence of the coast. Once a sufferer from the effects of climate, an European is of little practical use for active duties until his constitution has become thoroughly renovated by a sojourn in a colder and more bracing climate, where, among other things, food of some nutritive value is obtainable. Shortly after the *Barracouta* left for a cruise, more than sixty of her ship's company were down with fever, contracted on the coast. At one time we believed her to be lost, but at last she turned up, much to the astonishment of all, who thought she had fallen short of coals and been obliged to take a slant to Rio. The idea is being at present mooted of sending the "Europes," as they are called, to a mild climate, or keeping them within the tropics or in warmer latitudes, until the weather is finer and milder at home. Should the cessation of hostilities be permanent, and their presence be no longer required, a far wiser plan would be to send on board the *Victor Emmanuel* the least robust, and allow the others to proceed to their homes in England, some mild and sheltered quarter being selected for the head-quarters of each regiment. With warm clothing, there can be no danger to the men from returning to England, a far preferable proceeding than remaining in a crowded transport in the tropics. Men yearn for home, and nothing can compensate for the bracing climate and good wholesome food of our temperate zone.

It is to be hoped that when we retire from here after the conclusion of peace, the authorities will keep open the fine road made to the Prah, and not allow it to become again a mere bush-track, which it inevitably will if not looked to. With such a road, and halting places such as those now constructed, the Prah can easily be reached in four days with relays of hammock-bearers, halting at Dunquah, Mansu, Assin, Yancoomassie, and Prahsu. An impulse has also been given to sanitary improvement by the exertions of the committee instituted shortly after General Wolseley's arrival; the president and members of which, in the face of most serious obstacles, worked with a will and disinterestedness well worth copying by those who may follow them hereafter. A corps of fifty sanitary police and scavengers were procured and set to work under the sanitary inspector to clear the roads and open spaces, collect and burn the heaps of filth which overspread the outskirts of the town, much of which was also buried. A sum of money was applied for and obtained from the Government for the purpose of constructing earth latrines in various quarters of the town, twelve of which, each thirty-six feet long, were dug out under the superintendence of Captain Crewe, Acting Colonel-Surveyor. The principal wells were cleansed, and others, mere receptacles of filth, filled in; and the rivulet running through the centre was cleared, cleansed, and the outlet at the sea opened up, and a quantity of stagnant water allowed to flow away. An abattoir was erected near the salt-pond, and house-to-house-visitations made by the inspector, for the purpose of warning the inhabitants that the throwing of refuse and filth into the streets would be no longer allowed. By these means and others something was done for this wretched place; but time alone and perseverance in such efforts will suffice to make the capital of our possessions upon the Gold Coast either healthy for its inhabitants or less noxious to Europeans.

Recently we have been favoured with the Harmattan from the north-west—a damp, clammy, cold land wind, rendering the wearing of flannel absolutely necessary. Colds in the head, accompanied with sneezing and the other inseparables from this not very agreeable ailment, are becoming in consequence more frequent. At present it is an alternative of Harmattans, sea-breezes, and calm stewy days, oppressive and very warm. The following little table of observations taken within the last few days may be interesting, as giving a general idea of the climatic alternations of the period.

9 P.M. *in Shade in Air.*

	Dry Bulb.	Wet Bulb.	Wind.	Force.	Cloud.	Remarks.
6th	75	70	W.	1	1	Cool morning.
7th	74	71	N.E.	1	1	Cool hazy morning.
8th	75	72	N.W.	1	0	Close, fine, hazy.
9th	74	71	N.W.	1	0	Close, calm, hazy.
10th	77	75	N.W.	1	2	Warm, faint haze.
11th	77	75	N.W.	1	3	Fine, cool.
12th	77	75	0	0	9	Close, damp, and oppressive.
13th	77	75	W.	1	0	Fine, but damp; slight haze.
14th	77	75	N.W.	2	5	Chilly, damp; rained during night.
15th	78	77	N.W.	1	3	Chilly, damp, hazy.
16th	78	77	N.W.	2	3	Chilly, damp, hazy.

Average temperature of air deduced from eleven observations, 76.3; of evaporation, 73.9; difference, 2.4 degrees: very close, indeed, upon complete saturation.

3 P.M. *in Shade in Air.*

	Dry Bulb.	Wet Bulb.	Wind.	Force.	Cloud.	Remarks.
6th	82	75	W.	1	Hazy	Warm, close.
7th	80	78	S.W.	1	1	Hazy; close afternoon
8th	80	76	W.	1	1	Close; sea-breeze.
9th	80	77	W.	2	2	Hazy; close sea-brze.
10th	81	78	W.	1	2	Close, oppressive.
11th	81	78	W.	2	2	Haze; fine, cool.
12th	81	77	W.	0	2	Warm, close, hazy.
13th	81	77	W.	1	8	Close, cloudy.
14th	81	77	S.	1	1	Chilly, damp.
15th	82	78	0	0	6	Close, still, damp.
16th	82	78	0	0	4	Close, damp, and oppressive.

Average temperature of the air deduced from eleven observations, 81.0; of evaporation, 77.2; difference, 3.8 degrees.

The foregoing "mems" give a better idea of the dampness of our climate than any verbal description. Occasionally, the haze of the Harmattan renders distinct objects indistinct, and the sun appears in the heavens as an orb of fire. The oppressive calm puts one in mind of those fine lines of Coleridge's, in his *Ancient Mariner.*

> "Down dropt the breeze, the sails dropt down,
> 'Twas sad as sad could be;
> And we did speak only to break
> The silence of the sea!
> All in a hot and copper sky,
> The bloody sun, at noon,
> Right up above the mast did stand
> No bigger than the moon.
> Day after day, day after day,
> We stuck, nor breath nor motion,
> As idle as a painted ship
> Upon a painted ocean."

THE JACKMAN FUND.

The following further donations have been received by the Editor of the British Medical Journal.

	£	s.	d.
James Gardner, Esq., Box	0	10	0
The Medical Benevolent Fund	15	0	0
T. T. Griffith, Esq., Wrexham	1	0	0
J. T. Powell, Esq., London	1	1	0
Dr. William Hickman, London	1	1	0
Henry Barclay, Esq., Woodford	3	3	0
M. B., London	2	2	0
Dr. W. Thorn, London	1	1	0
Robert Smith, Esq., Sandown	0	10	0
E. J. Adams, Esq.	1	10	0
N. Davies-Colley, Esq., London	0	10	6
H. W. Harvey, Esq., London	0	10	6
Dr. H. L. Harper, Addison Road	3	3	0
Dr. J. F. Churchill, London	5	0	0
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F. Bromley, Esq., Oldham	1	1	0
Dr. T. H. Lowry, Maidstone	1	1	0
Dr. T. Chambers, London	2	2	0
Richard Ley, Esq., South Molton	1	1	0
Anonymous	3	0	0

Dr. J. Bell, Edinburgh	1	1	0
H. Stear, Esq., Saffron Walden	3	5	0
H. Lowndes, Esq., Liverpool	0	10	0

In the list published last week, at p. 214, col. 2, line 7 from bottom, the two guineas from Dr. James Ford should have been described as one guinea each from Dr. Ford and Mr. S. Michell.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

New Medical Journals.—Dr. Lorain's Introductory Lecture on the History of Medicine.—Dr. De Pietra Santa on the Climatology of France.—Society for the Protection of Infants.

"It never rains but it pours" is a saying that may be, just now, applied to the number of new medical journals which have lately made their appearance in Paris. Within the last month, no fewer than four have been started. These are, *Journal de Thérapeutique*, by Professor Gubler; *Annales de Gynécologie*, published under the direction of Professors Pajot and Courty and Dr. Gallard; *Archives de Tocologie*, by Professor Depaul; *L'Ecole de Médecine*, a journal for the publication of clinical lectures, and those delivered at the School of Medicine. The first is a bi-monthly publication, the second and third monthly, and the fourth weekly. I cannot, in a single letter, undertake to review them all; I may, however, say that, notwithstanding the great number of medical periodicals published in Paris, the thirst for knowledge is so intense, that those under notice, and their immediate predecessors, seem to have received a hearty welcome. But the peculiar feature of these new journals is, they are edited by professors of the Faculty, who, whatever be their motives, are evidently in good earnest, and we can only wish them every success.

The *Archives* of Professor Depaul are intended not only to treat of all that concerns the puerperal condition, but of diseases peculiar to women and new-born infants. He is seconded in the work by Dr. De Soyre, his *chef de clinique*, or assistant, and by a staff of *collaborateurs*, whose names are sufficient to guarantee the success of the undertaking. From Dr. Depaul's position as clinical professor of obstetrical medicine and surgery, and his immense experience, these *Archives* cannot fail to be highly interesting. In his introductory article, the Professor upholds specialties; on the condition, however, of having previously, perfected one's self in the study of all the other branches of the art of cure. The first number of the *Archives* contains a good summary, by Dr. De Soyre, of the articles that have lately appeared in the BRITISH MEDICAL JOURNAL on the treatment and prevention of *post partum* hæmorrhage; but the subject has not been completed.

The introductory article in the *Annales de Gynécologie* is signed by Professor Pajot; and the number under notice contains an able critical review by Dr. Gallard, on puerperal affections, and the causes of the mortality among lying-in women. Both of the articles may be read with interest and profit. The same may be said of Professor Gubler's introduction in his *Journal de Thérapeutique*.

Dr. Lorain, the recently appointed Professor of the History of Medicine and Surgery at the Faculty of Medicine in Paris, was prevented by indisposition from beginning his course at the opening of the session. He delivered his introductory lecture to a full audience on the 27th ultimo, but, I must confess, many were disappointed with it, as it certainly did not come up to their expectations. After paying a graceful tribute to the memory of the founder of the chair, which is semi-official, and to his predecessor, the late Dr. Daremberg, he endeavoured to point out the great interest that is attached to the history of the medical sciences, and dwelt upon the utility of a knowledge of the terms used in medicine, and the biography of those who have connected their names with certain discoveries in medicine and surgery. Dr. Lorain then passed in review the changes that have taken place, from time to time, in the practice of the healing art, the causes of these changes, and the influence of fashion on the minds of medical men in all ages. Thus, in speaking from his own experience, he remembered that, about twenty years ago, it was the fashion to bleed in almost every case of disease, and even those who had nothing the matter with them, such as pregnant women and plethoric men; whereas, nowadays, venesection is so rarely practised, that the present generation of students scarcely know how to hold a lancet. The same may be said of issues, blisters, and cauteries, with which weakly and scrofulous children used to be martyrised. The great changes that have been effected by the recent researches in morbid anatomy, by the discovery of auscultation and percussion, and by the influence exercised by physiology, were then referred to. He adverted, in laudatory terms, to the "School of Observation" founded by Louis, and to the important works of his pupils, who, in their turn, became masters in their profession. The introduction of the microscope met with great opposition, and one of its greatest opponents was Velpeau, who considered it the height of presumption to endeavour to form a diagnosis by any other means than clinical observation. But, now that the "fusion" between surgery and histology is effected, no physician or surgeon will attempt to question the service rendered by the microscope. The sphygmograph is another invention which will immortalise the name of Marey, from the service rendered by this instrument in the diagnosis of cardiac affections and those of the vascular system. The lecturer next pointed out the advantages of laboratories and pathological museums, which, in France, are notoriously deficient to meet the requirements of scientific researches. Paris was far behind London in this respect, and the only pathological museum that Paris could boast of was that founded by the illustrious Dupuytren, which bore his name, but which could bear no comparison with the Hunterian museum in London. The Professor then announced that, in his present course, he will deliver a series of lectures on the "history of fever and of the temperature of the human body in acute disease," from the earliest times to the present day. With reference to the above, modern discoveries, he said, have not taught us much; for already Andral, in 1839, and De Haen at the commencement of the eighteenth century, had made some important researches in this direction; and, when Andral declared that the temperature of the human body during a rigor was not only not less, as was generally supposed, but actually higher than the normal standard, he somewhat startled the profession; the clinical thermometer, however, had decided the question.

At this time of the year, popular lectures are delivered on medical and other scientific subjects in Paris; and, last week, Dr. De Pietra Santa, a well known hygienist, entertained a large audience of both sexes on the climatology of France, and the influence of climate on disease. France, said the orator, possessed five very distinct climatorial regions, which he designated thus: the Vosgian, or north-east; the Sequanian, or north-west; the Girondin, or south-west; the Rhodanian, or south-east, and the Mediterranean, or Provençal. Each of these regions presents a different zone, according as it is near or at a distance from the sea, or according as one descends the valleys or ascends to the mean heights. The maritime atmosphere is more uniform than that of heights; the barometrical pressure is constantly strong; the air is purer, and is renewed by the sea and land breezes; in equal volume, the sea-air contains more oxygen, is impregnated with sea-salt and a peculiar odour which it acquires from marine plants. Such an atmosphere would tend to develope the strength of the different organs, increase the power of the muscles, modify and harmonise the central and peripheric circulations; and, finally, would exalt the activity of the intellectual faculties. The air of hills and mountains, Dr. De Pietra Santa continued, at a height of 700 *mètres*, or about 2,300 feet above the level of the sea, presents the following characters. It is naturally lighter, and contains, in equal volume, a small proportion of oxygen; it is impregnated with a more considerable quantity of watery vapour, and it contains a good deal of ozone. The influence of such a climate is particularly sedative and soothing, whereas a maritime one is tonic and stimulant. The practical application of this would be, that patients, and others requiring change of air, ought not to adopt one or other climate without previously taking the advice of a medical man, as it is evident that what would suit one will not suit another. Dr. De Pietra Santa concluded by recommending the climate of the South of France, as the best in Europe for nervous affections and chronic diseases of the respiratory organs.

The annual meeting of the Society for the Protection of Infants took lately, and was presided over by Dr. Boudet. In the president's address, the appalling statement was made, regarding the mortality among new-born infants in France, that, limited to 5 and 10 per cent., for those under one year, placed in a favourable condition, the mortality rose to 40 per cent. and more, for those sent out to nursing; and, in some departments, it amounted to 70, 80, and 90 per cent. for foundlings. Dr. Boudet is justly alarmed at this state of things, and sees in it a fertile source of the rapid depopulation of France.

ASSOCIATION INTELLIGENCE.

NORTH WALES BRANCH.

The next intermediate general meeting of this Branch will be held on Tuesday, the 24th instant, at 11.30 A.M., at Cambrian Hotel, Pensarn, Abergele, under the Presidency of R. Davies, Esq., Llanfairtalhairn.

The dinner will take place at 2.30 P.M. Tickets, 6s. 6d. each, exclusive of wine.

Gentlemen having papers or cases to communicate, and who purpose dining, will be good enough to send early intimation to the Honorary Secretary. D. KENT JONES, *Hon. Sec.*

Beaumaris, February 3rd, 1874.

BATH AND BRISTOL BRANCH.

THE fourth meeting of the above Branch will be held at the Royal Hotel, College Green, Bristol, on Thursday, March 5th, at 7 o'clock P.M.; Dr. E. L. Fox, President, in the Chair.

EDMUND C. BOARD, } *Honorary Secretaries.*
R. S. FOWLER, }

Clifton, February 1874.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE next meeting will be held at the Ship Hotel, Faversham, on Thursday, March 5th, 1874, at 3 o'clock; Edward Garraway, Esq., the President of the Branch, in the Chair.

Dinner at 5 o'clock precisely; charge, 5s., exclusive of wine.

Gentlemen who wish to make communications to the meeting are requested to inform me *at once*, in order that a notice thereof may be included in the circular convening the meeting.

EDWARD W. THURSTON, *Honorory Secretary.*

Ashford, February 16th, 1874.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council, held at the Queen's Hotel, Birmingham, February 4th, 1874—present, Mr. George Southam (President of Council) in the Chair; Mr. Alfred Baker, Mr. T. H. Bartleet, Mr. E. C. Board, Dr. Bryan, Dr. Carpenter (Croydon), Dr. B. Foster, Dr. E. L. Fox (Clifton), Dr. Parsons, Dr. Sibson, F.R.S., Dr. Steele, Dr. Stewart, Dr. Underhill, Dr. Wade, Dr. A. T. H. Waters (Liverpool), Mr. Wheelhouse, and Dr. Wilkinson.

The minutes of the last meeting were read and confirmed.

Resolved—That the sixty-seven gentlemen whose names have been circulated be, and they are hereby elected, members of the British Medical Association.

Read letter from Mr. R. J. Upton, Solicitor to the Association, respecting the registration of the Association, and enclosing an advertisement.

Resolved—That the General Secretary be authorised to sign the advertisement, and that it be inserted twice in the *Times*.

Resolved—That the President of the Council, Dr. Sibson, Dr. Stewart, Dr. Carpenter, and Dr. Falconer, be a Subcommittee to confer with Mr. Upton, and make arrangements for registration of the Association, and report to the Committee of Council.

Read minutes of Arrangement Committee.

Resolved—That, with the following alterations—viz., that the second general meeting be held at 11.30 A.M. on the 12th August, and a meeting of the Committee of Council be held at 9 A.M. on Thursday, August 13th—the minutes of the Arrangement Committee be approved, and the recommendations carried into effect.

Resolved—That Dr. Russell Reynolds be requested to give the Address in Medicine.

Resolved—That Mr. Cadge be requested to give the Address in Surgery.

Resolved—That Dr. Matthews Duncan be requested to give the Address in Obstetric Medicine.

Resolved—That Messrs. Price, Holyland, and Waterhouse, be appointed public auditors for the year 1873, in conformity with Law 23.

Resolved—That the minutes of the Finance and JOURNAL Committee of November 12th and January 8th be approved, and the recommendations carried into effect.

CORRESPONDENCE.

INJECTION OF PERCHLORIDE OF IRON IN *POST PARTUM* HÆMORRHAGE.

SIR,—I tender the most ample apology to Dr. Gream for the erroneous inference I drew from his letter in your JOURNAL of January 17th. I assumed that Dr. Gream had witnessed "death" from the injection of perchloride of iron to arrest *post partum* hæmorrhage. In this, I am happy to find that I misunderstood him; but, in extenuation, I plead that, having, as Dr. Gream requests, read his letter again, I cannot help thinking that the structure of the sentence which misled me might mislead others. I have italicised the ambiguous sentence:—"The injection of perchloride of iron is not likely to become a popular remedy. *It is known to produce mischief, which I myself have witnessed, and even death;* besides, it is never required." Dr. Gream's personal knowledge, therefore, is limited to "mischief"; but what this is he does not explain.

Dr. Gream tells us he has "never seen a woman die from uterine hæmorrhage, when under his own care, under any circumstances whatever." But quick death is not the only mischief that may result from hæmorrhage. Has Dr. Gream never seen women who had suffered from hæmorrhage die of septicæmia?

Dr. Gream invites me to record the *post mortem* appearances of all the fatal cases I have had. I also may say, that I have never lost a patient from hæmorrhage who, from first to last, had been under my care; and, for this immunity, I am convinced that I am, in some measure, indebted to the use of perchloride of iron. In my *Obstetric Operations*, I fairly set forth all the facts with which I was acquainted which seemed adverse to this remedy. The present discussion has not been provoked by me. I am, therefore, entitled to take my own time and opportunity to lay before the profession any subsequent experience, and the judgment at which I may arrive upon the experience and criticism of others. It is quite clear that, at present, neither Dr. Gream nor Dr. Snow Beck is able to approach the subject with the necessary calmness. I have more confidence in myself; still I prefer to postpone the task until the solstice of controversy shall have passed away.

In the meantime, all I feel called upon to do is to take note of the cases and facts which are published, and to ask for such precision in record as can render them fit for scientific deliberation. The importance of observing rigorous precision in record will be obvious to those who know how fallacious "facts" often become for want of it. For example, unless adequate details be given to identify cases, nothing is more easy than to repeat the same case once or several times, thus helping to make a false aggregate. Into this error, as I have shown (*Obstetrical Journal*, January 1874) Dr. Snow Beck has already fallen.

Dr. Gream, fairly carried away by his enthusiasm, does not hesitate to endorse the statements of Dr. Snow Beck. His fervour has made him sublimely indifferent to the laws of evidence. Dr. Snow Beck will be judged, not by Dr. Gream's chivalrous championship, but by his own graces of style, by the trustworthiness of the "nine or ten cases seen by himself, and of his other statements," and by the candour and logic of his arguments.

Dr. Gream's wrath falls heavily on the Obstetrical Society. He withdraws from it, and foretells its speedy collapse. No doubt, the blow is severe, but it is not altogether crushing. Prophecy opposed to Dr. Gream's may be rash, but I venture to hope that, although the broad shadow cast by his goodly presence, as he turns indignant from its door, may involve the Society in momentary occultation, it will, nevertheless, escape extinction. I am, etc., ROBERT BARNES.

London, February 1874.

INSTRUCTION OF MIDWIVES.

SIR,—It is a relief to my mind that men of such experience and acuteness as Drs. Gream and Steele cannot urge more potent arguments against the instruction of midwives than those which appear in your last number of the JOURNAL. These gentlemen are two of the only three members of the profession who, to my knowledge, disapprove of the attempt now being made to meliorate the condition of midwives. The opinions of this little minority I fully respect, and the integrity of their motives no one will doubt; at the same time, it is difficult to understand the mode of reasoning they have adopted in arriving at their conclusions.

In answer to Dr. Gream, I can only reiterate what I said in my last letter. His fearful prophecy of the speedy collapse of the Obstetrical Society of London, however, demands the serious attention of its Fellows. If it be true that they are introducing into their present robust body a septic material which is to cause its corruption and sudden disintegration, they cannot be too thankful for the kindly warning. But it may possibly be a false alarm. For their consolation and encouragement, let them look abroad, and they will there see obstetrics honoured and flourishing, and even obstetrical societies existing, the professors and members of which actually teach midwives. If Dr. Gream is determined to separate himself from every body which does not agree with him upon the subject of midwives, he will next have to give up his honorary Fellowship of the King and Queen's College of Physicians of Ireland, for that college has lately decided to exercise its ancient privilege of granting diplomas to midwives. He may also even have to break his connection with the profession altogether; for it will, I believe, not only encourage, but demand the improvement of the present race of midwives—the present race of midwives for "the reintroduction of women to midwifery," of which Dr. Gream complains, is not possible, they having practised it without intermission at least for as long a period as we have any historical record of what has been going on in the world.

It is not easy to reply to my good friend Dr. Steele's desultory letter. Wanting in logical sequence, it is like a conflagration beginning, by accident, at one place and ending in the same way at another, when all available materials have been consumed. I will, however, endeavour to to arrive at his meaning, and, for the sake of brevity and perspicuity, will answer his objections under the three following propositions.

1. Are midwives desirable or necessary? If the existence of supply may be taken as a true token of demand, it must be admitted that there exists among the poorer classes an unmistakable desire for the assistance of midwives. In answer to inquiries instituted by the Obstetrical Society of London, it was found that, in large manufacturing towns and villages, from 30 to 90 per cent. of the confinements were attended by midwives; whilst, in West London, only 2 per cent. of the labours were conducted by women. These facts prove that the employment of midwives is due to their being able to attend cases for a small remuneration. The demand for midwives is among that class of people who cannot afford to pay a medical man, and who would not have parish relief. When I say cannot afford, I do not mean that, having a careful and steady husband, a woman could not put by sixpence a week, much to the advantage of the regular practitioner; but how seldom is this done. With the majority, it probably never will be done. The establishment of provident societies—no, not even of an obstetrical savings' bank—by Act of Parliament, with stringent compulsory clauses, would not, in many cases, ensure the timely accumulation of the higher professional fee. A sum large enough to repay the services of an expensively educated medical man being, therefore, in a large number of cases, not obtainable, what is to be done? Will medical men condescend to a lower station in society, a smaller house, a meaner fare, and a commoner dress, so that they may be able to take the little fee and undergo the fatigue and discomforts of low midwifery practice? Will they be content to thus spend their lives watching with patient endurance the tardy healthy physiological process of labour in the 30 or 90 per cent. of the poor women now attended by midwives? There is not a more self-sacrificing profession than ours; but this is too much to expect even from us. Again, are we to force these poor or improvident women upon the parish, and thus increase our fees and our rates by pauperising, at the same time, all the midwives and their patients? This alternative seems to have objections. What, then, is to be done? I can see nothing but to admit that midwives are desirable and necessary.

2. Is it derogatory to the medical profession for it to endeavour to improve midwives? In speaking of a midwife, I adopt the definition of the Obstetrical Society of London, as amended by the subcommittee of the Parliamentary Bills Committee of the British Medical Association. She is not a medical woman, but a "clever woman of the humbler sort," able to attend natural cases of labour, and to recognise conditions requiring medical aid. It would be derogatory to the profession if there were any pretence that a woman, such as I have now briefly described, was in any way an equal in skill and learning with a qualified obstetrician. It is not intended to place her in any such position. In her relation to the obstetrician, she will be as a nurse, or as a soldier to a general, "trained and competent," but under command when a battle has to be fought. This derogatory feeling seems to possess more particulary the minds of men in the prime of life. In the last generation, obstetricians were called men-midwives, and the word midwife then meant more than it does now. I believe these gentlemen have a difficulty in recognising the change which has taken place in the signification of the word, and cannot divest themselves of the idea that by it is meant a person capable of attending midwifery in all its emergencies. I feel sure, if they would only accept the definition given above, that they would take a different view of the class of women we wish to improve, and would not see in them equals or rivals, but useful assistants when emergencies occur, and competent watchers of a process sometimes only a little more dangerous and interesting than the natural expulsion of the contents of any other hollow viscus. So far from its being derogatory for us to attempt to render the calling of a midwife useful and respectable, I think it would detract from our good fame were we to neglect to make those working in a parallel but lower groove as capable and serviceable as possible.

3. Ought not the poor to have as good attendance as the rich? This is Dr. Steele's best argument, and, in accordance with the rules of rhetoric, I give it its full power by placing it last. My answer to this question is, certainly, *if* they can get it. It is very desirable that a physician, when his patient is very ill, should be always in attendance. It is also equally desirable that a surgeon, after an operation, should remain with his patient. May not a change of the symptoms rapidly take place in one case demanding a change of remedies, and may not secondary hæmorrhage occur in the other requiring immediately great surgical skill? If it were possible, it would, doubtless, be very much to the advantage of the poor women of Liverpool, if Dr. Steele could be present at all their confinements. It is, however, quite impossible. This optimist view of midwifery practice is the one which Dr. Tyler Smith took when a younger man, and which he abandoned as his judgment ripened. It shows a kind heart to wish the best for the poor; but it is not characteristic of a clear head to neglect a partial good for an utopian supreme good utterly unattainable.

Dr. Steele says that it is not a "creditable" part of our scheme that the services of the midwives we would instruct are to be devoted to the exigencies of the poor. I find it quite impossible to understand what my friend means by this statement. We distinctly aver that it is for the humbler classes midwives are required. We believe that, by instructing them, we shall benefit the poor, and only do that which humanity prompts and our position demands. If our reputation is to suffer, it will be by neglecting to do that which both medical and lay writers have distinctly said would be a disgrace to us were we to neglect.

With both Dr. Gream and Dr. Steele, I confidently look to the general profession for a practical expression of opinion upon this subject. There has been no attempt to act without the sanction of the great medical body. The proceedings relative to the instruction of midwives of the British Medical Association, and of the Obstetrical Society of London, have been widely published. I have done my best to bring the whole matter before the profession, and have sometimes regretted that there was no opposition to give it popular zest. A little gust has at length appeared, and, if it rise to a storm, it will, I am confident, only clear the air, make the truth more manifest, and please yours, etc.,

J. H. Aveling.

1, Upper Wimpole St., W., Feb. 16th, 1874.

PLUG FOR EPISTAXIS.

Sir,—Under the heading of "New Inventions," Dr. Rose, some few weeks ago, described a plug for epistaxis, which, he will see, is identical with my original idea, if he will take the trouble to refer to a communication of mine to the *Lancet*, of December 21st, 1872, signed with my initials, A. G.

Under the same heading of "New Inventions," I see described, in last week's *Lancet*, what is called, by Coxeter and Son, a new aspirator, in which a brass cylinder is substituted for the glass one generally used. It thus becomes identical with the combined stomach-pump and aspirator, which I described in your Journal more than twelve months ago, even to the small piece of glass tubing introduced into the suction-tube, to see the character of the fluid.

As I have no pecuniary interest in either of these instruments, I have, of course, no objection to any one manufacturing them who chooses to do so, and shall be only too pleased to see them making any improvements they can, but I do not think it quite fair that you and the editor of the *Lancet* should describe them as new inventions.

I am, etc., Alfred Godrich, Fulham Road.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

QUARTERLY RETURN OF THE REGISTRAR-GENERAL.

According to the Quarterly Return of the Registrar-General, for the three months ending December last, 128,283 deaths were registered in England and Wales, the annual death-rate being 21.8 per 1000, it having varied from 16.3, in the agricultural counties of the South-Eastern Division, to 25.1 in the principal mining population of the Northern Division, and 25.3 in London. In the eighteen large towns and cities, the annual mortality last quarter averaged 25.5 per 1000, the variations ranging from 20.4 and 20.5, in Norwich and Portsmouth, to 30.8 and 33.4 in Leeds and Newcastle-upon-Tyne, the excessive rates in the two latter towns being principally due to the fatal prevalence of scarlet fever, which disease, together with diphtheria and measles, is on the increase, and is assuming an epidemic form, especially in certain of the northern and western portions of the kingdom. In smaller towns, it has already caused a large mortality, and amongst those in which the largest number of deaths have occurred are Lincoln, Dudley, Gateshead, Merthyr-Tydfil, Blackburn, and Preston. The unenviable precedence, which the northern counties take in the matter of their general mortality, is also retained as respects their infant mortality, for in these, out of every 100 children born alive, 16.6 die within the first year of life, whereas the proportion does not exceed 10.7 in the south-eastern agricultural districts. The annual death-rate, from the seven principal zymotic diseases, was 4.0 per 1000, ranging from 1.5 in Norwich, to 8.8 in Newcastle-upon-Tyne. The deaths from small-pox have now steadily declined since the first quarter of 1872, when the recent epidemic reached its climax; in that quarter they numbered 7720, whereas last quarter they had fallen to 249, which is the smallest number referred to this disease, in any quarter within recent years. Measles caused 3233 deaths in England and Wales last quarter, and amongst the places in which it was epidemic, the largest number of deaths, namely, 1420, took place in London. The metropolitan epidemic is, however, now steadily subsiding. One of the most noteworthy points recorded by the Registrar-General, is a decline in the fatal prevalence of fever, 3810 deaths having been recorded as due to this cause last quarter, as opposed to 4692 and 4023 in the two preceding corresponding quarters; and to the steady, although slow, progress which is being made in sanitary administration throughout the country, this result must, to a great extent, be due. Amongst the districts in which fever was specially prevalent, the principal ones are the manufacturing and mining towns of Lancashire, the West Riding of Yorkshire, and Durham, and the towns of Cambridge, Barrow-in-Furness, Market Weighton, Kirk Leatham, Durham, and Workington. The combined effect of the severe cold and the dense fog, which prevailed in London in the early part of December last, was most marked in persons suffering from phthisis, and other diseases of the respiratory organs, for, in the twelfth week of the last quarter, when they mainly prevailed, the number of deaths due to these causes rose, from a weekly average of rather less than 400, to 1112.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Merthyr-Tydfil.—In laying the mortality statistics of the parish of Merthyr-Tydfil, during the third quarter of the past year, before the Sanitary Authority, Mr. Dyke draws attention to several points of interest. The general mortality was at the rate of 20.6 per 1000 inhabitants, the number of persons dying at the age of 70, or upwards, being 71 per 1000 deaths, and the average age at death being 25 years; whereas, in the years 1850-52, previous to the initiation of measures for the improvement of public health, only 55 persons, out of every 1000 dying, reached the age of 70, and the average duration of human life was only 17½ years. The saving of infant life has, also, been very considerable, and the extremely small mortality from diarrhœa amongst children, to which the Registrar-General drew special attention in his ninety-ninth Quarterly Return, is stated by Mr. Dyke to be due to the efficient daily removal of refuse, to the construction of a well-devised system of sewerage and drainage, to the provision of an abundant supply of pure water, and to the regular inspection of dwellings. The great saving of human life, which may be effected by the adoption of efficient sanitary measures, has, for some time past, been shown by the results obtained in Merthyr-Tydfil; and we hope that other authorities may be stimulated to obtain similar results by the adoption of similar measures. The latest sanitary news, however, which we have from Merthyr is to the effect that, during the fourth quarter of 1873, the mortality had risen to 34.4 per 1000, owing to the prevalence of scarlet fever in an epidemic form, and we hope that every effort is being made to stay its spread by means of proper isolation and disinfection.

Canterbury.—From a brief report, prepared by Mr. Rigden, it appears that, during the past year, the mean mortality for this city was at the rate of 20.6 per 1000 of the estimated population; and that, if deduction is made for persons who, though resident beyond the city boundary, have yet died in it, in the Canterbury Hospital, the death-rate would be represented by 19.8 per 1000. Out of a total of 438 deaths, 53 were due to zymotic causes, and amongst these we find 13 as due to scarlet fever, 8 to measles, 9 to diarrhœa, and 11 to fever, the type of which is not indicated in the report, but which we presume to have been enteric fever. Although the gross mortality is not large, yet it is evident that preventable causes of death still prevail unduly in Canterbury; and the epidemic prevalence of scarlet fever having entirely subsided, it is especially to be desired that the Sanitary Authority should take such steps as will arrest the constantly recurring deaths from "fever." The advantages which Canterbury derives from its excellent water-supply are not universally made use of; and, from the description of some of the cottage property in the town, it is clear that conditions which are inimical, both to health and to common decency, are by no means exceptional.

Vaccination.—Mr. Joseph Dixon of Brighton, Public Vaccinator for Hove, has been awarded a gratuity by the Local Government Board for efficiency in the performance of the duties of that office.

X. Y. Z.—A medical man with only one qualification can hold the office of Medical Officer of Health under a Local Board, in cases where the appointment is not under the control of the Local Government Board.

Querist.—We believe that no more appointments are being made for the purposes of vaccination inspection only. All the Medical Inspectors under the Local Government Board who have received appointments within the last two or three years, devote a portion of their time to this work. These appointments are in the gift of the President for the time being.

MILITARY AND NAVAL MEDICAL SERVICES.

NAVAL SURGEONS AT NETLEY.

Sir,—The answer of your correspondent X. Y. Z., in the Journal of the 10th inst., so fully disproves the statement of the talented gentleman who occupies the post of Naval Medical Director-General, viz., "that the educational course at Netley was costly to the State," and, *ergo*, not to the surgeon, that I feel somewhat doubtful whether such answer should be supplemented; still, there are two points not touched upon by X. Y. Z., which are very important, and which should be known to intending candidates next month.

The one is, by what authority are surgeons, pursuing their course at Netley, deprived of 6s. *per diem* of their pay? and, secondly, if the Admiralty allow these officers to count their time so occupied at Netley, why do they still refuse them their full pay during the period of such instruction? The only answer to these questions is, that the 6s. are stopped to cover the expenses of this costly educational course of instruction given at Netley to the *naval* medical officer, in his case reducing the burden on our great country to a minimum. It should also be remembered that the candidate is compelled to go through this course of costly instruction; he has not to ask for it, but is ordered to submit to it.

A firm front shown just now would probably be the means of obtaining three prizes, of which the naval medical service is now most unjustly deprived. 1. The granting to all medical officers the right to retire, after twenty years' full-pay service, upon the half-pay earned, thereby placing us more nearly on a footing with our army brethren, who may retire after twenty-five years' full-pay service, which is with them continuous, excepting under special circumstances. 2. The granting to staff-surgeons the maximum retirement of £450, in lieu of £400, the former sum being allowed to all other of the civil and to the navigating branches. 3. The honorary rank of deputy-inspector, given to some staff-surgeons on their retirement, who have had very long periods of service, should be, as in the case of paymasters retired with the rank of paymasters-in-chief, attended by something substantial, in the shape of an increase to the widow's pension. The staff-surgeon, retired as honorary deputy-inspector, leaves only £80 a year, whereas the paymaster, retired with the rank of paymaster-in-chief, leaves his widow £90 a year; and the pensions of the widows of deputy-inspectors-general are much inferior to what is due to their relative rank.

I am, etc., O. P. Q.

ARMY MEDICAL RESERVE.

The present moment appears to be a favourable one for redirecting attention to a very sensible suggestion, made by the medical officers at Aldershot, in May last, in their Memorial to the Secretary of State for War, regarding the Army Medical Warrant of 1st March. The suggestion is as follows. "With a view to prevent the ever-recurring block in promotion, and to provide for the emergency of sudden war, the organisation of a Medical Reserve, composed of officers over twenty years' full-pay service, is suggested, such officers to receive one pound *per diem*, and be available, in time of war, for all home duties, up to the age of fifty-five years; and, when so employed, that they should receive the full pay and allowances of their rank."

How very useful such a Reserve would be at this moment, even with a "small war" like that in Ashantee, those authorities may consider, who know how many medical officers have gone out to the West Coast of Africa, and how many civil medical practitioners it has been found necessary to place in medical charge of troops, in lieu of army surgeons left for the seat of war. The severe strain now placed on the Army Medical Department is only a small example of what must necessarily recur every time we are engaged in war, unless something be done to form a "Medical Reserve," as suggested by a number of experienced military surgeons, many of whom know what war is.

Efforts to form large reserves of fighting men, ready to call out in case of emergency, are very necessary and laudable; but an ample reserve of experienced military surgeons is quite as necessary, and, if possible, more laudable. It ill becomes a rich, powerful, and humane country like England, ready at all times to send forth her open-handed succour to other suffering nations, that *her own* soldiers should run any risk of want of skilled attendance, and that no effort should be made to provide, in this respect, for future contingencies, as the bad policy, if not great inhumanity, is so apparent that it is hardly necessary to dilate further on this point.

The authorities, whose business it is to look into these matters, should not forget the experience of the Crimean war, nor how the Government were obliged to send round "begging" letters to the medical profession, beseeching them, on the score of humanity, to come forward and succour our sick and maimed soldiers, struck down in fighting their country's battles in a far-off land.

The "suggestion" points out how a recurrence of that lamentable state of affairs may be guarded against; so let those concerned profit by it.

THE ARMY MEDICAL SERVICE.

A MEDICAL officer of the army writes to us: There is one question with regard to the changes effected in the Army Medical Service, now nearly a year ago, which perhaps it would be well that young medical men should ponder over before they enter that service; and that question is, that for the first fifteen years at least of their service, they will "enjoy" the prospect of never remaining in any one station for any length of time, but of being *always on the move.* This might, for a time, suit those who are fond of a "roving" life, but I fancy that most men, after a certain period of constant changes from one end of the world to the other, get tired of that sort of thing, and feel a wish to settle down, and perhaps marry.

Under the new warrant they will, alas, find this difficult, if not impossible, unless a surgeon be so very fortunate as to get appointed to a regiment for five years, but the chances of this good luck are few and far between. I have no doubt that married medical officers could give you many instances of the great hardships and pecuniary loss inflicted by the constant changes of station they have to undergo, and which were fortunately avoidable, to a great extent, under the old system, as they could, by exchange or otherwise, get appointed to a regiment, where they were for some time secure of a home, and from those harassing orders to "pack up and be off," at a few days' notice. There can be little doubt but that this moving about has been considerably increased since the new warrant was issued, as I hear constant complaints on this head from married as well as single medical officers. Like most other folks, military surgeons appreciate a fair amount of peace and comfort, and this constant changing of station is neither popular, nor likely to promote either efficiency or contentment, nor to induce proficient medical men to enter Her Majesty's service.

SURGEON-MAJOR GORE.—The indefatigable exertions of this officer in the performance of his sanitary and other duties at Ashantee, having resulted in a severe attack of fever, he has lately appeared before a medical board at Whitehall Yard. We understand that, in addition to general debility, he is also suffering from scorbutic symptoms, affecting the lower limbs; and we sincerely hope that a short residence in Ireland, whither he has proceeded on sick leave, may restore him to his former health.

DEPUTY SURGEON-GENERAL HOME.—We are glad to learn that a great improvement has taken place in the health of Deputy Surgeon-General Home, V.C., since his return to this country.

INDIAN MEDICAL SERVICE.—List of candidates for Her Majesty's Indian Medical Service, who were successful at the competitive examinations held at London in August 1873, and at Netley in February 1874, after having passed through a course at the Army Medical School, Netley. [Maximum number of marks, 6900.]

Wilcocks, A. J.	5215	Collis, J. G.	4284
Moloney, T.	4671	Wilkins, T. J. H.	3955
Deakin, C. W. S.	4544	Bartholomens, L. M. L.	3510
McKay, H. K.	4505	Thompson, P.	3105
Swaine, F. R.	4390	Ross, R. E.	3057
Allison, H.	4297		

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, February 5th, 1874.

Lucas, Henry Owen, Highgate

Thursday, February 12th, 1874.

Hughes, Thomas Jones, East India Dock Road, Poplar
Power, George Edward, Ladywell, Lewisham
Smith, Herbert Neale, Richmond Villa, Brighton
Symonds, Horatio Percy, Beaumont Street, Oxford

The following gentleman also on the same day passed his primary professional examination.

Hawkins, William, St. Thomas's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK INFIRMARY—House-Surgeon: £105 per annum, furnished apartments, etc. Applications, 1st March, to W. T. Hindmarsh, Hon. Sec.

AXMINSTER UNION, Devon—Medical Officer for the Lyme Regis District: £58:10 per annum, and fees. Applications, 4th March, to W. Forward, Clerk.

BERKS COUNTY HOSPITAL, Montiford—Assistant Medical Officer: £80 per annum, board, and furnished apartments. Applications to R. B. Gilland, Medical Superintendent.

BERKSHIRE LUNATIC ASYLUM, Moulsford—Assistant Medical Officer: £80 per annum, board, and apartments. Applications to Dr. Gilland, Medical Superintendent.

BLOOMSBURY DISPENSARY—Resident Medical Officer. Applications to F. Latreille, Secretary.

BOLTON INFIRMARY and DISPENSARY—House-Surgeon: £120 a year (increasing by £10 to £150), with furnished apartments, washing, and board.

BRISTOL GENERAL HOSPITAL—Assistant House-Surgeon: £50 per annum, board, lodging, etc. Applications, 20th March, to Henry Fox, Sec.

CITY OF LONDON—Medical Officer of Health.

CREDITON UNION, Devon—Medical Officer for the Bow and Colebrooke Districts: £36:15 and £15 per annum, respectively.

CUMBERLAND INFIRMARY, Carlisle—Surgeon. Applications, 26th instant, to John Laver, Sec.

DEVON COUNTY LUNATIC ASYLUM—Assistant Medical Officer: £120 per annum, increasing to £150. Applications, 25th instant, to T. E. Drake, Solicitor, Exeter.

DEVONSHIRE—Public Analyst. Applications, 26th instant, to H. Ford, Clerk of the Peace, Exeter.

DURSLEY UNION, Gloucestershire—Medical Officer and Public Vaccinator for District No. 3: £80 per annum. Applications, 25th instant.

EASTERN DISPENSARY, Bath—Two Honorary Medical Officers. Applications, March 2nd, to F. Savage, Honorary Secretary.

EAST PRESTON, Horsham, Steyning, Petworth, and Thakeham, Rural, and Littlehampton, West Worthing, and Worthing, Urban, Sanitary Districts, combined: £600 per annum, for three years. Applications, 25th instant, to Robert French, Littlehampton.

EVELINA HOSPITAL FOR SICK CHILDREN—Physician.—Surgeon for Out-patients. Applications, 28th instant, to the Committee.

HELMSLEY UNION, Yorkshire—Medical Officer for the Workhouse: £13 per annum: and the Helmsley District: £47 per annum.

HOLBEACH UNION, Lincolnshire—Medical Officer for the Sutton Bridge District: £20 per ann., and fees. Applications. 16th March, to E. G. Ayliff, Clerk.

KILKEEL UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Kilkeel Dispensary District No. 1: £100 per annum, and fees. Applications, 23rd instant, to James Walmsley, Hon. Sec.

LITTLEMORE PAUPER LUNATIC ASYLUM, near Oxford—Resident Assistant Medical Officer: £80 per annum, increasing to £120, furnished apartments, and board. Applications, 23rd instant, to the Superintendent.

LICHFIELD FREE DISPENSARY—Medical Officer.

LICHFIELD UNION—Medical Officer to the Workhouse: £25 per annum.

LIVERPOOL SCHOOL FOR THE INDIGENT BLIND—Honorary Physician.—Honorary Surgeon. Applications, 28th instant, to Courtenay Cruttenden, Treasurer.

LONDON and NORTH-WESTERN RAILWAY COMPANY—Medical Officer for the Lichfield District.

LOWESTOFT Urban, Lowestoft Port, and Mutford and Lothingland Rural, Sanitary Districts: £50, £20, and £50 per annum, and private practice. Applications, 21st instant, to Wm. Rix Seago, Lowestoft.

METROPOLITAN FREE HOSPITAL, Devonshire Square—Assistant Physician. Applications, 21st instant, to George Croxton, Secretary.

NARBERTH UNION—Medical Officer for District No. 1, and the Workhouse: £35 and £20 per annum, and fees. Applications, 21st March, to John Thomas, Clerk.

NORTH WITCHFORD UNION, Cambridgeshire—Medical Officer to the Workhouse: £60 per annum: and the First District: £40 per annum.

NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th March, to E. M. Kidd, Sec.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—Junior House-Surgeon: £80 per annum, with board, washing, and lodging. Applications to R. Blair, Esq., Preston.

QUEEN'S HOSPITAL, BIRMINGHAM—House-Physician and House-Surgeon: £50 per annum, with board, lodging, and washing.

RHAYADER UNION—Medical Officer for the whole Union: £80 per annum. Applications, 23rd instant, to John Jarman, Clerk.

ROYAL INFIRMARY FOR CHILDREN AND WOMEN, Waterloo Bridge Road—Resident House-Surgeon: £50 per annum, to commence.

ROYAL MATERNITY CHARITY—Two Physicians. Applications, 28th inst., to John Seabrook, Sec.

ROYAL MEDICAL COLLEGE. Epsom—Teacher of Botany and Zoology: £1:1 per visit. Applications to the Head Master.

ROYAL SEA-BATHING INFIRMARY, Margate—Resident Surgeon. Applications, 26th instant, to J. T. Walker, Sec., 1, Queen Street, Cheapside.

ST. MARYLEBONE PARISH—Dispenser: £80 per annum, with furnished apartments, coal, and gas.

SWAFFHAM URBAN SANITARY DISTRICT—Medical Officer of Health; £20 per annum. Applications, 2nd March, to J. Plimsaul, Clerk to the Authority.

TORBAY INFIRMARY AND DISPENSARY, Torquay—House-Surgeon and Secretary: £100 per annum, board, and apartments. Applications, 7th March.

WAREHAM AND PURBECK UNION, Dorset—Medical Officer for the Swanage District: £60 per annum.

WEST RIDING LUNATIC ASYLUM, Wakefield—Assistant Medical Officer and Pathologist.

WILLITON UNION, Somersetshire—Medical Officer for the Minehead District: £40 per annum.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ...... Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ...... Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY . St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY.... St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY .... Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY.... St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Maunder will show a patient the subject of Excision of the Ankle-joint; also, the patient's child, whose corresponding lower limb is short. Dr. Farquharson, "On some peculiarities of Pneumonia in early life"; and communications from Mr. J. A. Bloxam and others.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Fairlie Clarke, "Cases of (so-called) Ichthyosis Linguæ"; and Mr. Geo. Gaskoin, "On the Relations of Asthma to Cutaneous Disease"; or, Dr. Hayme, "On the amount of Carbonic Acid in the Air on board Wooden Frigates."

THURSDAY.—Hunterian Society (London Institution), 7.30 P.M.: Meeting of the Council. 8 P.M.: Dr. Barnes's Inauguration Address; Dr. Braxton Hicks, F.R.S., "Some Remarks on Paracentesis of the Abdomen in Ascites, with Tumours; and some Remarks on Incontinence of Urine in Females; and a Case of Albuminuria in Pregnancy."

FRIDAY.—Clinical Society of London, 8.30 P.M. Adjourned debate on Mr. Prescott Hewett's address on "Pyæmia"; Dr. Cayley, "Case of Hæmoptysis"; Mr. T. Warrington Haward, "Case of Blood-cyst of Hand."—Quekett Microscopical Club (University College), 8 P.M. Mr. Hawkins Johnson, F.G.S., "The Microscopic Structure of Flint and Allied Bodies."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

PREVENTION OF CRAMPS AT NIGHT.—If Ignoramus will place blocks of wood, six inches high, under each post at the head of his bed, and have his bed made slanting from the head to the foot, he will not suffer from cramps.—SURGEON (Camberwell).

AMYL COLLOID is a preparation introduced by Dr. Lackersteen, and prepared by Robbins of Oxford Street. A description of it will be found in the BRITISH MEDICAL JOURNAL of December 21st, 1872, page 677.—HERBERT M. MORGAN.

OBSTETRICAL SOCIETY OF LONDON.

SIR,—I fully agree with the remarks of a "Senior Fellow" as to the unhappy and painful reading of the paper on Wednesday last at the Obstetrical Society, and I also most powerfully endorse his suggestion that every fellow should be allowed to read his own paper. He is acquainted not only with the subject but the writing, which is most desirable. As far as I can see, this plan answers very well at the Medical Society. I cannot, however, agree in attaching the blame to the worthy secretary who read the paper, as I have seen the author of the said paper sadly puzzled and hesitating when reading the papers of other authors. I fear that pressure of time prevents that care in caligraphy which is absolutely necessary for a stranger to read what to the writer would be perfectly intelligible. Therefore, by all means, let every man read his own writing.

I am, etc., C. J. H.

THE case reported by Dr. Powell (Dublin) in the *Farmers' Gazette* seems a very doubtful one, and it is a pity a medical man should choose this medium for discussion of a rather difficult therapeutical question. The *Veterinarian* would have been a better medium for the publication of his views on the use of Leclanche's batteries.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

DR. MORGAN (Dublin).—Not received.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE, EAST ANGLIAN, AND SOUTH MIDLAND BRANCHES.

FORASMUCH as the Annual General Meeting of the Association is to be held at Norwich early in August next, the members of the Councils of the above Branches have decided to recommend the postponement of the combined meeting, which it was agreed to hold at Cambridge at the end of June next, until the year 1875.

COUNTRY CORONERS.

SIR,—It appears to me a most shameful thing that adults and infants, who die suddenly in the country (where no medical aid or attendance has been had), should be allowed to be buried without an inquest being held. Such things are not sanctioned or allowed in towns; and why, therefore, should they be in a country, with a population of nearly three thousand inhabitants, as appears to be the case in the district in which I am a resident? Only a few days back, the coroner was informed by the medical man of the district, that he was hastily summoned to the house of one of his patients, to see a child whom the mother on waking in the morning found by her side dead, although it appeared perfectly well on going to bed the night previous. The coroner observed to the policeman who bore the note which the medical man had sent him, informing him of the facts of the case, and also of his not having seen the infant since its birth (being an infant of not more than six weeks old), "that he did not think he should hold any inquest, but he had better ask the overseers of the parish, and, if they thought it necessary, he would then hold one." The overseers, three in number—one being a market carrier, and the other two small farmers—could not see any reason for an inquest; but I contend that, if such things be allowed, and the lower class of an agricultural district become cognisant of the fact, it opens the field very widely to crime. During the past seven years in which I have been a resident in the parish, I am not aware of there having been more than one inquest; although this case is certainly not an isolated one by many, to my own knowledge, as I could name several who have died suddenly (and without medical aid), and no inquest held.

January 21st, 1874. I am, etc., JUSTICE.

FROM reading D. B.'s communication in your columns, permit me to suggest in reply, that the case was one of gonorrhœal rheumatism, and the rash probably dependent upon copaiba.—JOSEPH SMITH, M.R.C.S., etc.

QUESTION OF ETIQUETTE.

SIR,—A young woman in this neighbourhood in an advanced stage of consumption is pronounced by the homœopath who is attending her to have typhoid fever, thereby causing great alarm to her neighbours and friends. Am I justified in seeing her at the urgent request of her employers, in the absence of the homœopath, and giving my opinion as to the nature of the case?

Feb. 19th, 1874. I am, etc., M.B.

⁂ Yes.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail; The Blackburn Times; The Glasgow News; The Glasgow Herald; The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Broadbent, London; Dr. Smart, Haslar; Dr. Finsterlin, Munich; Dr. George Johnson, London; Mr. Briebach, London; Mr. Manson, Howden; Mr. Jackson, Wolverhampton; Mr. R. Davy, London; The Military Secretary, India Office; Mr. E. N. Smith, Paddockhurst; Dr. Carrol, Staten Island; The Secretary of the Clinical Society; Dr. Sieveking, London; Mr. J. Smith, Jersey; Our Paris Correspondent; Mr. Paget, Leicester; Mr. E. J. Adams, London; Mr. Fairlie Clarke, London; Mr. A. Godrich, London; Dr. Powell, Dublin; Mr. J. H. Hatchard, Hastings; Mr. T. Fitch, Portland, Maine; Mr. Thurston, Ashford; A Member; C. J. H.; Mr. W. J. Harris, Kilburn; Dr. Robinson, New York; Our Dublin Correspondent; Dr. Pierce, Manchester; Mr. Jeaffreson, Newcastle-on-Tyne; Mr. W. Berry, Manchester; Mr. F. J. Fegen, London; Dr. R. Barnes, London; Dr. Hickman, London; Dr. McCall Anderson, Glasgow; Our Glasgow Correspondent; Dr. Ransome, Manchester; Dr. Inman, Clifton; The Secretary of the Pathological Society; Dr. Dyce Duckworth, London; M.R.C.S.Eng.; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson, London; Mr. Foster, Huntingdon; Dr. Cobbold, London; Mr. G. H. Fosbroke, Redditch; Dr. Thomson, Peterborough; Dr. Edis, London; Mr. T. Holmes, London; Mr. Eastes, London; Assistant-Surgeon Bainbridge, Dhoolia, Khandeish; Dr. A. Mackintosh, Chesterfield; Dr. J. William, Pen-y-groes; Dr. J. W. Moore, Dublin; Dr. Neal, Sandown; Dr. Morgan, Dublin; Dr. Munro, Cupar-Fife; Dr. Mackey, Birmingham; Dr. Althaus, London; Dr. Whistler, London; Dr. Woodforde, Reading; Dr. Steele, Liverpool; Dr. Deas, Macclesfield; Dr. Foster, Birmingham; Dr. Parker, Handsworth; Mr. Ingpen, London; Dr. Aitken, Netley; etc.

LETTSOMIAN LECTURES

ON

SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

LECTURE III.—*Continued.*

Syphilitic Cerebral Tumours.—Among the most interesting examples of syphilitic disease of the brain, are those in which the morbid deposit takes the form of a distinct tumour. The symptoms common to nearly all cerebral tumours, when any symptoms at all are present, are, severe pain in the head, vomiting, and double optic neuritis, the pain being fixed in seat or radiating from one point, but variable in intensity at different times. Cases, however, are on record in which tumours have attained a large size without giving rise to abnormal phenomena of any kind; and, although the concurrence, for any long time, of the three symptoms mentioned would be almost conclusive of the existence of tumour, the absence of one or other would not necessarily be conclusive to the contrary. Superadded to these general symptoms may be hemiplegia, motor or sensory, if the central ganglia be involved, or paralysis of individual nerves if the tumour be situate at the base of the brain, or convulsions if the grey matter of the surface of the hemispheres be affected.

The symptom of greatest importance is unquestionably the double optic neuritis; and, as Dr. Hughlings Jackson, in particular, has pointed out, it may for some time be the only symptom; or, if not quite alone, it may be associated with symptoms so slight as to have no significance independently of it.

We must not wait till vision begins to suffer before examining the eyes. It is with constantly renewed astonishment, notwithstanding the frequent illustrations brought forward by Dr. Jackson, and exhibited to this Society and elsewhere, and my own experience, that I see the extensive changes in the disc compatible with good vision. We are as yet in uncertainty as to the immediate mode of production of optic changes, and of the chain of causation by which they are connected with tumours. It may, perhaps, be taken as certain that one way in which changes in the optic disc are produced is by increased intracranial pressure; and it appears probable, moreover, that this intracranial pressure operates through fluid being forced along the sheath of the optic nerve between its two layers, which bulges out the sheath near the eye, and compresses the nerve and its vessels. But the optic changes may be entirely absent, or having appeared may subside, when we have every reason to suppose, from examination after death, that intracranial pressure must have existed; and they may be present when we can see no cause of intracranial pressure. If the existence of fluid in a position to be carried into the optic sheath be a condition required for the production of strangulation of the nerve, the absence of effusion in the membranes at the base of the brain may explain some cases in which optic changes have not appeared. But it is not even a settled point whether there is, or is not, a distinction between ischæmia of the disc, a vascular strangulation or obstruction due to intracranial pressure, and neuritis descendens, an inflammation propagated to the disc by the continuity of the neurilemma with the pia mater; or, admitting the distinction, whether the difference can be made out by ophthalmoscopic characters. Till this is decided, we cannot so much as pass the threshold of the inquiry as to the mode of production of optic changes in diseases of the brain. If I were not held back by the doubts of men such as Dr. Hughlings Jackson and Mr. Hutchinson, whose opinion in this matter I hold to be far higher than my own, I should consider my own experience warranted me in following Dr. Clifford Allbutt in recognising a difference between optic ischæmia and neuritis.

While we cannot explain satisfactorily the mode of production of optic changes, their clinical associations and significance are better known. They commonly, almost constantly, accompany tumours in whatever part of the brain they may form, and perhaps more constantly syphilomata than any others; they usually accompany abscess, very frequently meningitis, especially inflammation of the membranes at the base of the brain; rarely hæmorrhage, unless as a consequence of consecutive inflammation; rarely embolism or thrombosis, though, in one case of thrombosis, I have seen the most marked optic ischæmia. They do not accompany the molecular change inappreciable to the naked eye, and, as a rule, even by the microscope, which gives rise to epilepsy or chorea.

Syphilomata usually give rise both to general symptoms and to such as aid in giving the locality, and I do not remember to have read of a case in which an unsuspected syphilitic tumour has been found after death. This is, no doubt, a consequence of the fact that syphilomata affect either the surface of the hemispheres, or, if they form in the substance, it is at vascular parts such as the central ganglia.

I must trust again to my cases to illustrate the effect producible by syphilitic tumours; but I must notice more particularly a form of affection to which Dr. Hughlings Jackson has specially called attention as frequent in connection with syphilis, and in some sort characteristic of syphilitic cerebral disease. The prominent feature in these cases is unilateral convulsion, unattended, for the most part, with loss of consciousness. The convulsive movements may vary in degree from a mere twitch or slight stiffening to the most violent agitation, and may be accompanied or preceded by sensations of various kinds. Usually, the starting-point is constant in a given case, and very frequently this will be the thumb and index finger; beginning here, the agitation may in one attack be confined to the upper extremity, and there may be no loss of consciousness; at another time, it will invade the entire lateral half of the body, travelling up the arm to the shoulder and face and down the leg, becoming bilateral where the nerve-nuclei of the two sides are associated; or sometimes the arrival of the agitation and accompanying sensation at the head and face, may be the signal for general convulsions and loss of consciousness. If the convulsive movement begin in the foot or face, a similar course may be followed, and, after the unilateral convulsions, the limbs which have been affected may be left paralysed for a time from exhaustion of the nerve-force; and when the hemispasm, as it has been called, is on the right side, and especially when the starting-point is the face or tongue, temporary loss of speech is very common.

Sooner or later, and often very early, optic neuritis usually comes on. Dr. Jackson has shown that this hemispasm is due to disease in the convolutions of the opposite hemisphere, almost always near the fissure of Sylvius, and has shown that particular convolutions are involved according as the convulsions begin in the hand, foot, or face, thus extending our knowledge of the localisation of function in the cortex of the brain, and giving occasion for the experiments of Dr. Ferrier, which have deservedly excited universal attention.

Dr. Hughlings Jackson has usually found the disease in these cases to be a syphilitic tumour; but the symptoms are, of course, determined by the situation, and not by the nature of the growth. The frequency, however, of syphilomata in these cases will, in cases of doubtful character, be a reason for entertaining the hypothesis of syphilis as a provisional diagnosis.

I do not find many examples of unilateral convulsion in the large collection of cases of syphilitic cerebral mischief by Zambaco, Gros, and Lancereaux; one reason being, that observers have not been duly aware of the importance attaching to them. The latter authors, giving the situation of syphilitic tumours in the brain, find, in one case, the entire cerebral mass infiltrated; in one, disseminated exudation in different parts; in six, tumours in the anterior lobes; in three, in the middle lobes; in three, in the corpora striata; in three, a great part of the hemisphere.

Some of these must certainly have been Dr. Jackson's cases. I have only had the opportunity of following one case of unilateral convulsion with double optic neuritis to a termination. I narrate it here with a certain reserve; there was no syphilitic history, there were no syphilitic lesions of the organs generally, and the tumours found in the brain, though certainly not malignant or tubercular, could not be definitely pronounced to be syphilitic, and the only corroborative evidence was a remarkable thickening and condensation of the bones of the skull. Other cases, distinctly syphilitic, recovered or disappeared.

CASE I. *Unilateral Convulsions (Hemispasm); Optic Neuritis; Small Tumours on Supramarginal Lobule.*—Clara C., aged 36, a widow, earning her bread as a needlewoman, first came under my care as out-patient of St. Mary's Hospital, on October 4th, 1867, with the following history. She had enjoyed good health; had had seven children, of whom, however, only three were alive, the others having died young. There was no distinct evidence of syphilis. During the previous winter (1866-7), she had been much exposed to cold; had been hard-worked and poorly fed. In March, 1867, she had a fit for the first time, in which she lost consciousness for half an hour, and was convulsed; she slept after it for several hours, and it left her weak, but she was living very poorly at the time. Nine days afterwards, she had, three times in twenty-four hours, a pricking sensation in the left fingers, which extended up the arm; the left side of the face "worked," as did also the jaw, so that it was with some difficulty she avoided biting the tongue; the eyes were spasmodically closed; there was no loss of consciousness. Attacks similar to that last described had come on at intervals of fourteen, twenty-one, or twenty-eight days, the last a month before her admission; they were usually induced by excitement, and lately had not gone beyond agitation of the hand and arm.

Two months ago, she began to have severe pain in the head, more particularly in the occipital and right temporal regions. The pain had come on at intervals, especially after excitement. She could not lie on the right side, this position bringing on pain in the right temple. The pain had now ceased; but, three or four weeks since, she began to lose her sight, and she had rapidly become almost totally blind.

October 8th, 1867. She was fairly well-nourished, but rather pale; her expression was sad, but resigned; the patient was particularly intelligent and clear-headed. Vision was almost completely lost. She could distinguish a strong light, and tell when a large object was passed between her eyes and the light, nothing more; the eyes had the restless movements characteristic of amaurosis; the pupils were large, but not greatly dilated, and quite insensible to light; the right rather the larger of the two. On the 4th, the right pupil was dilated to the utmost degree, so much so that there seemed to be no iris. The eyes were examined by Mr. Hart, who found optic neuritis passing into atrophy. The left side of the face was rather smoother than the right, and moved less when she spoke; the difference was very slight. The tongue was put out straight; it had a brownish fur upon it. The left hand was rather weaker than the right; its movements were not interfered with, but simply deficient in power. Sensation was apparently equal on the two sides of the face, but defective in the left hand, whether tested by pricking or by compasses. She had great difficulty in picking up any small object such as a pen, but it was not easy to decide whether this arose from deficient sensation or from imperfect co-ordination. She was ordered three grains of iodide of potassium in infusion of quassia three times a day.

October 15th. She had no fits since the previous visit. Her general condition and state of vision were much the same. She imagined she saw a little better, and better at some times than others. The fingers of the left hand were slightly flexed, and, when she tried to extend them at my request, they were moved vaguely in various directions. The ring and little fingers, she said, were weaker than the others. The catamenia were overdue fourteen days.

I saw her only once more, on October 24th, when she said she was losing the sense of smell.

The patient now attended one or more ophthalmic surgeons, in the hope of recovering her sight. She was under my care a second time, for a brief period only; the notes of this attendance have been lost, but no important change in her condition had taken place. She again applied as out-patient on January 7th, 1870. On the previous day, January 6th, she had had nine convulsive attacks, which she described as follows. First the left hand became cold, then the hand began to work, and, after a short time, the eye (lid); she bit her tongue and foamed at the mouth, but she did not lose consciousness. The leg was not affected. The attacks left a pain in the temples, and afterwards the catamenia, which were overdue three weeks, came on. Her intelligence was quite unimpaired, but she had become very nervous, apprehensive, and low spirited; she often "gave way," and cried. She had, when seen, pain in the right side of the head, and the tongue was still sore from the injury done to it in the convulsions. Vision was entirely gone; the eyes were restless; the pupils dilated and insensible. The optic discs were in a state of advanced atrophy.

The sense of smell had been entirely lost for four or five months, and with it the sense of taste, in a great measure. She was unable to distinguish or perceive the odour of meat, beer, wine, scents, etc., but the pungency of smelling salts was felt. She could taste bitters, sweets, acids, and salt, and appreciate pungent substances, but meat, beer, and flavours generally, she did not taste. This loss of smell and taste had been gradual. She had begun to fear the right ear was becoming deaf. The left hand was habitually semiflexed; she could move it in any way, but could not use it; sensation was impaired, but not lost. There was no distinct evidence of paralysis in the face or tongue. She was ordered thirty grains of bromide of potassium, and fifteen minims each of aromatic spirit of ammonia and tincture of orange-peel in water every four hours.

Nothing further of any importance was noted, except that she complained on the 24th of giddiness, pain at the back of the head and nape of the neck, "pricking and shooting" in both eyes and at the top of the head, till the 31st, when "twitchings" of the hand and face came on at 10.30 A.M., and again while she was at the hospital. The movements began in the hand, but, when she was under observation, consisted of repeated (almost rhythmical) simultaneous rapid contractions of the flexors of the fingers of the left hand, and twitchings of the corner of the left eye and of the left angle of the mouth. The hand was rigid when held, and it did her good when the movements were restrained. The eye felt tight. The movements lasted for some minutes, varying in intensity, and ceased soon after the administration of a draught containing ether, ammonia, and camphor. She was greatly distressed during the attack. The bromide, which had been discontinued for a week, was resumed, and she was ordered to take ether and ammonia whenever she was threatened with an attack.

February 7th. The ether draught had cut short several attacks during the week, and had relieved a sensation in the head of extreme tension, as if it would burst. She had been very low-spirited; could not bear to be alone. At times, the left side of the mouth had been drawn up, and she found the left leg becoming weaker, and giving way at times.

February 14th. No attack. She was pretty well till this morning, when she had a round of immoderate laughter, and lost her memory completely for a time. At the visit, she did not recognise my voice as usual, and she had to be told that I was present. The left hand had been very cold on the previous day.

She was now admitted into the hospital as in-patient. Iodide of potassium was given in large doses, and various means were tried. She had fewer attacks, and rarely lost consciousness.

The events of the last few days of her life were as follows. She was greatly excited about the expected confinement of her daughter, and, on April 7th, she complained much of headache, and was in very low spirits. On the evening of the 8th, on which day the confinement had occurred, she had a series of severe epileptiform fits, preceded, for some time, by violent movements of the left hand, arm, and leg, which she begged to have restrained by the nurse. In the fits, she was unconscious, and convulsions were general, but by far most violent in the left limbs; the tongue was bitten, and her face became livid. There were four violent convulsions between 9 and 10.30 P.M., and she was unconscious in the intervals. After 10.30 P.M., she became partially conscious; she knew when she was spoken to, but, unless disturbed, took no notice of anyone. She remained in this state through the night, and in the morning, April 9th, had another series of fits, slight and short; there were eight of them before 10.30 A.M.; for the remainder of the day, she was dull, heavy, and sleepy. At 6 P.M., the attacks recommenced, all beginning in the left hand, and the convulsions were throughout most violent in the left arm and leg, and the head was turned forcibly over the left shoulder. They occurred about every half hour through the night, and in the intervals the left arm was quite powerless. Again, on the 10th and 11th, during the day, the attacks were few and slight, but very numerous in the night. The convulsions now, however, lasted only a few minutes, during which time she was unconscious; afterwards, she slept heavily, and snored for a short time, but, in the intervals, said she was better. She complained much of pain in the head. Indications of exhaustion set in, mucus accumulated in the air-passages, and she died quietly at 8 A.M., April 13th, having had no convulsions for fifteen hours.

When the epileptiform attacks first set in, the bowels had been confined for two or three days, and a croton oil pill was given and stimulant enemata were used. The ether and ammonia draughts, which had frequently been found useful before, were taken, and, other measures failing, leeches were applied to the head; but nothing seemed to have any influence in preventing or moderating the fits. Beef-tea, milk, and brandy were given freely so long as she could swallow, and nutrient enemata were administered when she was unable to take sufficient food by the mouth.

On *post mortem* examination, the thoracic and abdominal viscera were found to be healthy, except that the liver was paler and softer than usual. The bones of the cranial vault were unusually thick and heavy. The dura mater adhered firmly to the pia mater over the posterior part of the right hemisphere, and, when it was detached, there were seen two small bodies about the size and shape of a small split pea, each surrounded by a circular depression; the depression, with the body in its centre, would have been more than covered by a shilling. The precise seat of the lesion was the supramarginal lobule, the irregular convolution just above the posterior end of the fissure of Sylvius, and behind the lower end of the second ascending parietal gyrus. The small tumours were almost white, very firm and hard, and presented no structural peculiarities by which they could be identified. Around them, the grey matter had been absorbed or destroyed to the extent indicated by the depression, leaving only connective tissue which had a gelatinous appearance. No other morbid change could be found, nor could any degeneration of fibres between the seat of disease and the central ganglia be traced.

CASE II.—In October 1871, I saw, with Mr. Walter Coulson, a gentleman who, after syphilis in 1867, suddenly lost power in the right arm while driving about Vienna. He felt giddy, but did not lose consciousness, and he went to several places afterwards. The paralysis in the arm grew worse, and became almost complete before the day was out; but, in the course of a few months, he regained power, and the only difference now experienced was, that he did not use this hand so well in playing on the piano as before. This was probably thrombosis of a small branch of the middle cerebral artery, due to syphilitic inflammation, one of the modes in which paralysis may be indirectly induced by syphilis.

Twelve months later, he began to have a peculiar twitching in the left upper extremity and face. The fingers, especially the two middle ones, stiffened, the face was drawn, and he could not speak; he put his handkerchief to his mouth for a minute or two, and was then right again. These attacks were not more frequent after exertion or excitement, and did not prevent his conducting extensive and important business affairs. They were more frequent when in England than when travelling, and occurred rarely while at sea. They were apparently more frequent after cold baths. Iodide of potassium had been given in large doses for some time. It was continued together with cod-liver oil and phosphorus, and, when I last heard of the case, the attacks had ceased.

CASE III.—Samuel M., aged 32, had had syphilis four years before his admission into St. Mary's Hospital in May 1869, but had not suffered from any recent manifestations till he became subject to attacks of the following character. A feeling of pins and needles came in the right hand and arm, which he could move, but not use for any purpose, having almost lost power in it. After this, he lost his speech for a quarter of an hour, and the face was a little drawn; but he never became unconscious. He suffered also from pain in the head. The symptoms entirely disappeared under treatment by iodide of potassium.

CASE IV. *Pain in the Head; Intellectual Disturbance; Double Optic Neuritis.*—Joshua C., aged 33, wheelwright, was under my care in St. Mary's Hospital from July 7th to August 15th, 1871. He was said to have had a sun-stroke twelve months before, and to have had numerous blows on the head in the course of his work. Syphilis was denied, but he had numerous pigmented scars on the legs, and an ulcer of syphilitic appearance. He had for six weeks been suffering from pain in the head and abdomen, of which he still complained when first seen, together with noises in the ears. He had a confused and dazed look; his speech was hesitating; his answers were usually correct, but he required time. He read in the same slow, hesitating way, stopping at short common words. Pulse, 80; temperature, 98. Tongue white and moist. His bowels were confined. He had perspirations at night. Vision was good. On ophthalmoscopic examination, there was a generally exaggerated redness of the fundus; the discs were hyperæmic, presenting many vessels, not well defined, especially at the outer margin; the left had an appearance of elevation not present in the right; the retinal veins were large and dark; the arteries small. Iodide of potassium was given in moderate doses, but he grew worse; had delusions; voices came to him from a ventilating aperture in the wall opposite, telling him to place his arms in certain attitudes; Lady Jane was always ringing in his ears; he talked of purgatory, etc. One day, he dressed himself under the bedclothes, got out of the ward, and slid down the bannisters of the staircase, and was greatly excited when brought back. At another time, the right arm, and then the entire body, became rigid. The ophthalmoscopic appearances became more decidedly those of optic neuritis; the discs red, swollen, irregular, ill-defined; the retinal veins very large and tortuous; there were, however, no hæmorrhages.

On July 26th, the iodide having failed to do good, a grain of calomel was given three times a day for three days, then twice a day. On August 2nd, the gums had become affected, and there was a marked change in the symptoms. The patient was quiet, had no delusions, answered better, and did not ramble in his talk. The optic neuritis subsided, and the improvement continued; he left on August 15th, free from any active symptoms, but stupid and weak, and he remained in this condition for some time, having a peculiar weak and distressed look.

CASE V. *Motor Paralysis of Right Limbs only; Loss of Sensation in entire Right Half of Body and Face; Slight Mental Disturbance; Fits.*—A needlewoman, aged 36, married five years, but without children, came under my care at St. Mary's Hospital in March, 1872, with the following history. She had been ailing for twelve months, but not sufficiently to interfere with her work, till, after suffering for a fortnight from nocturnal pain at the top of the head, across the forehead, and over the right eye, she became unable to read or sew, on account of dizziness and dancing of objects before her eyes. This was about a month before she came under my care. A week later, one day while lighting the fire, the right arm became numb, with a sensation of pins and needles; and, a little later, the right leg was similarly affected, and was alternately hot and cold. She felt it necessary to keep both arm and leg moving. A week after this, or about a fortnight before her admission, she observed that the right leg dragged as she walked, and she was unable to flex it while standing, though she could draw it up when in bed; the right upper extremity also became weak, so that she could not hold a teaspoon. She had a gnawing pain also in the right shoulder.

When she came under observation, there was a little dragging of the right leg; the right arm and hand were very weak; she was unable to pick up a pin or to grasp the hand, but then no evidence whatever of paralysis of the face could be elicited; she even winked the right eye equally well with the left; the tongue was protruded straight. Sensation was markedly impaired over the entire right half of the body and face, so much so that the prick of a pin was scarcely at all felt. The right pupil was somewhat larger than the left; both were sluggish; the optic discs were normal. The pain in the head had increased, and was especially severe in the afternoon and evening; she was scarcely able to open her eyes on account of it. The pulse, heart-sounds, temperature, and urine, were all normal. The abdominal aorta pulsated more strongly. There was no acknowledged history of syphilis, but the soft palate had been perforated by an ulcer, and there was reason to believe that she had been a prostitute.

Iodide of potassium was given in doses of eight grains three times a day. After a week, during the greater part of which she had been growing worse, it was increased to sixteen grains. At this time, she was unable even to raise the right hand; the leg dragged more than ever, the toe turning out, and the foot falling like an inert mass. The left arm appeared to be weak as well as the right. Sensation was all but extinct in the right half of the body and face as well as in the limbs, though there was still no motor paralysis of the face or tongue. She had now also become excitable and troublesome.

A week later, improvement was manifest, but the dose of iodide was again increased to twenty-four grains, and with it was given one-sixteenth of a grain of biniodide of mercury. From this time, the progress was very rapid. In another week, she was cheerful, useful, and active in the ward, having recovered power in the hand, though the leg still dragged. Sensation had returned everywhere, and the headaches had ceased.

Her stay in hospital was only twenty-six days, but she returned in little more than a month suffering from fits. She had taken iodide of potassium in twelve-grain doses for a short time after her discharge, but had soon neglected herself, and discontinued it. About three weeks afterwards, the fits began to come on; in the first, she felt hot and cold, then fell down, but did not lose consciousness; afterwards, she had usually two a day, and in most became unconscious. She had begun to take the medicine again before she was readmitted, and the attacks had already diminished in violence, but she was strange in her ways; she had also nodes on two ribs and on the right shin. The fits witnessed in the hospital were of different degrees—in the night, there were slight general convulsions; she did not wake, and did not know in the morning that she had had an attack, but said she had had a good night; by day, she suddenly seized the bedstead above the head; the eyes were closed, and the lids trembled; it was doubtful whether consciousness was lost, or not. The right limbs had again become weak, and sensation was impaired in the right half of the body generally.

The improvement under treatment was again very rapid, and she left the hospital in a fortnight to go to a convalescent institution, taking medicine with her. She was heard of some time later, quite well.

In the only case I have had the opportunity of examining after death in which there was the combination of symptoms presented here, partial paralysis of the limbs with disproportionate impairment of sensation in both face and limbs, the lesion was situate at the junction of the tegmentum with the thalamus; and I suppose, in the case just related, a small gumma had formed about this point, but I think it possible that exudation in the pia mater encircling the crus cerebri might give rise to a similar condition.

Cerebral Affections in Infantile Syphilis.—Cerebral affections have not been frequently met with in infantile syphilis, but a few cases are on record, and it is extremely probable that many have been considered to be examples of tubercular meningitis. If no *post mortem* examination had been made in the case I first relate, or if the *post mortem* evidence had not been so conclusive, I should have been unable, either from the symptoms, or from the history, to pronounce it syphilitic. Addittional interest is given to this case, by another with which I am opportunely favoured by Dr. Heywood Smith, and in which the mode of access of the meningitis was strikingly similar. Dr. Smith's patient has, happily, survived the attack.

CASE I. *Syphilitic Disease of Brain and Liver in a Child; Convulsions. Left Hemiplegia; Coma. Induration of Right Cerebral Hemisphere and part of Thalamus; Acute Meningitis.*—A child, aged 3, was brought to me at St. Mary's Hospital, on May 24th, 1873, suffering from acute cerebral symptoms. The mother had never been well since her marriage; had only had one other child, and this died at the age of five weeks, from atrophy; no miscarriages. The little patient was small, had always been delicate, had cut her teeth late, and had already lost some of them. The fontanelles were still open, but there was no other evidence of rickets; she had only walked three months, but talked early; was extremely sharp and precocious, and liable to fits of excitement, in which nothing could pacify her. The child was said to have had a series of falls three weeks before, and to have knocked her head, but had apparently been none the worse, till, two days before her admission, she became unconscious, screamed and kicked, and the convulsions, of which this description was given, lasted an hour and a half, after which she recovered; she remained conscious, however, only for a few hours, and it was observed that the left limbs were paralysed.

She was unconscious when admitted, moaned much, and at times screamed. The face was pale; the eyes were half open, and always turned to the left; the pupils were small; there was no facial distortion. The left arm and leg were partially paralysed, the leg apparently more than the arm; they were slightly rigid, and the thumb was drawn into the palm. The right limbs, especially the leg, were continually in motion. The pulse was frequent and weak; she swallowed food well; the bowels were not open; her urine was passed in bed. I failed to obtain a satisfactory view of the optic disc. She remained in much the same state till the morning of the 26th, when another attack of convulsions came on, affecting chiefly the right limbs, which were afterwards more quiet; but there were frequent convulsive attacks, in which the limbs jerked less violently, and the hands and feet became bent and rigid, so remaining even after death. During the last few hours of life, the temperature rose rapidly to 105 deg.

Post Mortem Examination.—The child was small for her age: the fontanelles were open, but there was no other evidence of rickets. The lungs were greatly congested, but no tubercle was found in them, or in any part of the body; and the abdominal and thoracic viscera were normal, with the exception of the liver, which was small, pale, and presented, on its surface, several depressed cicatrices of different sizes, with vascular ramifications. They were not deep, and the capsule was not greatly thickened; the lobules were wasted at these parts.

Brain.—When the dura mater, which presented nothing abnormal, was removed, intense meningeal injection was seen at the posterior part of the hemispheres, especially on the upper surface, but also on the inner and lower aspects; it extended into the sulci. There was undue softness of the posterior part of the right hemisphere, about the annectent gyri; almost black redness of the apex of the left occipital lobe, which was of leathery hardness. Nothing abnormal was found at the base, or in the Sylvian fissures; no tubercle anywhere. On section of the brain, there was seen great hyperæmia of its substance, especially posteriorly; the red points and striæ were excessively numerous, and there was a general dusky pink staining. A patch of red and softened brain-substance was found near the surface of the right hemisphere, about the annectent gyri. The ventricle had contained an excessive amount of fluid; the surface of the corpora striata, and the ventricular walls generally, presented unusual vascularity, especially posteriorly; in the right corpus striatum were one or two vascular patches, but its consistence was normal. The principal change was in the left occipital lobe, which was hard and shrunken. The induration was bounded by the occipito-parietal and calcarine fissures, and involved, therefore, the cuneiform lobule. The pia mater was of a deep red colour, almost black, and adherent. The grey substance had undergone atrophy, the white was firm and tough, like leather; the posterior cornu of the lateral ventricle was enclosed by this indurated white substance, but from the interior presented no abnormal appearance. There were superficial induration of the posterior part of the left optic thalamus, and some induration of the superficial transverse fibres of the pons; cerebellum normal.

The following is Dr. Heywood Smith's case, which I give in his own words.

CASE II. *Symptoms of Tubercular Meningitis with an Hereditary Syphilitic Origin.*—At 7.30 A.M., on Friday, November 14th, 1873, I was sent for to see C. M., aged 6½ years, who was said to be in a fit. On arriving, I was told that his sister was roused before seven by a noise, and found her little brother, as she said, shivering and unconscious. When I saw the boy, he was totally unconscious, with a slight tremor over the body. The eyes were nearly closed, the pupils inactive to light, left one more dilated than the right. Pulse small and rapid, 120 to 140. The respiration was reduced to 10, and at times seeming as if it would cease altogether; so much so, that it was frequently necessary to have recourse to artificial respiration. Ice was applied to the head, and brandy and ammonia were given in small quantities; but owing to the difficulty in deglutition, nutrient enemata were substituted. Two grains of dry calomel were shaken on to the tongue. Consciousness was not recovered till 2 P.M., quite seven hours after the fit was first discovered. On a cold hand being placed on the boy's forehead, he started up with a cry and expression of extreme terror. Though he had so far come out of the fit, yet the intellect was not clear; there were periods of great restlessness and excitement, with delirious muttering and fear, as if from things seen about the room. It was not till three days that he became fairly rational. Dr. Dickinson saw the case with me on the Friday afternoon, and pronounced it a case of tubercular meningitis, and gave little or no hope of recovery. On the return of consciousness, the boy's whole expression was found altered—an alteration which had never wholly passed off. The eyes appeared drowsy, the pupils acted but sluggishly; the left pupil scarcely acted at all, and was permanently dilated; the abdomen was retracted, but not tender; the memory was confused, and headache was complained of, especially at a spot on a level with, and near to, the outer angle of the left eye. The same evening the calomel (two grains) was again repeated, and a mixture, containing iodide and bromide of potassium, given every three or four hours. The parents said that, until the fit, the boy had no signs of ill-health, with the exception of slight headache; of this, however, he had complained off and on for about a fortnight, but no heed was taken of it, as it was supposed to be mainly an excuse to get off his lessons.

The boy steadily improved, and began to be more cheerful and natural, till about a fortnight after the commencement of the attack, November 28th, there was an accession of fever and pain. Mercury was again administered freely, with aperients, and in a few days he was fairly recovered. About this time, the father's friends wishing to have Dr. West's opinion, he saw the child with me, December 3rd. He confirmed the former diagnosis, and gave an unfavourable prognosis. We got the child out of bed, and made him walk; there was decided failure of the left leg, the boy coming down on the right with more force; the mouth was slightly drawn to the right; the left pupil still remained dilated. I forgot to mention that, on December 1st, owing to the persistent pain in his temple, a small blister was applied, with very marked relief, the child apparently losing all pain. He was put upon a little quinine and cod liver oil; but the iodide of potassium, though at times intermitted, was persevered with, the quantity taken being about ten grains per day.

As the boy gained strength, I allowed him to play about with his toys, and to go out a little; and on watching him with his things, I noticed he looked at objects obliquely, and had some little difficulty in judging distances. I then tried him with letters, and each eye separately, when I found that, though he could read with the right eye, he could not see distinctly with the left, and, moreover, that he did not look directly with that eye. I therefore asked Mr. Power to see him, when he found that there was marked retino-choroiditis at the posterior pole of the left eye, with a distinct patch of effusion in the fovea centralis, marring permanently the direct vision of that eye; that there was a similar condition in the right eye, but there the inflammation, fortunately, was not central, but was situated more equatorially, nearer the ora serrata.

It is now nearly eleven weeks from the onset of the attack; the boy's health steadily improves; the tongue, which was patchy, is clean; the appetite is fair (though he prefers a latish dinner); he sleeps well; is playful, active, walks out, and runs about. There is still slight, though very slight, inequality in the gait, with permanent dilatation of the left pupil; the strange alteration of the child's expression, accompanied by greater fulness about the mouth, remains persistent. The great interest that attaches to this case, however, is the history.

When the child was six months old (six years ago), I was sent for to see it because of a rash, which the mother told me of, and attributed to the teeth coming. On my going upstairs to see the child, I found it completely covered with a syphilitic rash. The mother afterwards asked me what was the matter. I said the child had a constitutional disturbance, manifesting itself in a skin-eruption, but that I had no doubt it would soon be well. In three or four days, the rash had entirely disappeared under mercury, and the child was kept for nearly a year under small doses of iodide of potassium; and from that time to the present (though I had often wondered when I should be called to see the child again), he has remained in good health. The history of the case puzzled me then, as the mother appeared perfectly healthy, until one day, calling when the father was at home, I found his voice shrill and cracked. During my recent attendance, I found that the mother had miscarried two or three times since, without definite known cause. It was, however, only the other day that, on putting a rather close question to the father, he told me that, when I had first seen his child, six years ago, he wondered why I had given it mercury then, as he did not suppose it possible that any taint could have been conveyed after so long a time. He then said that, at least, thirty-five years ago, he had a bubo, yet he had no other secondary symptoms, no rash whatever, and that he had considered himself quite well.

The question that arises with regard to the present case (that of the child) is, whether it is a case of tubercular meningitis, the tubercular cachexia arising out of the malnutrition resulting from the syphilitic taint, or whether it is possibly a syphilitic deposit in the brain, setting up the inflammation in the eye and the other symptoms. Mr. Power said, with reference to the patch on the retina of the left eye, that it was more like one arising from syphilis than tubercle; whereas Dr. West and Dr. Dickinson said that they had never known true syphilitic deposit in the brain in so young a child. If it were ordinary tubercular meningitis, the child ought to have died in a few weeks, instead of which, by a persistent course of treatment, eminently antisyphilitic, the progress of the case has been favourable as far as general health is concerned, though with the result of damage to the eye.

I have only to add to these comments by Dr. Heywood Smith, that they have my entire concurrence. The preceding case shows that meningitis may be set up in children by old-standing syphilitic disease of the brain, and removes the objection which prevented Drs. West and Dickinson from accepting this view when advanced by Dr. Smith. As Mr. Power states, moreover, the retino-choroiditis observed is suggestive of syphilis, and is not the kind of optic change to be expected as a result of tubercular meningitis, namely, optic ischæmia or neuritis.

CASE III. A child, aged 10 years, was brought to me in March 1873. She had the depressed nose and square head of congenital syphilis, and had no central incisors in the upper jaw. She was the first child by a second husband of a woman who had had eleven children by her first husband, not one of which had reached the age of three months, and most of them had been born dead or died soon after birth. The mother had never been well, but had had no distinct syphilitic symptoms. This child was suffering from slight hemiplegia, most evident in the arm. It was the third attack, and had come on suddenly with agitation of the arm, as had the two previous attacks; and, as in them, recovery was slowly taking place. I have not seen the case since.

[*To be concluded.*]

LECTURE

ON THE

USE OF THE CLINICAL THERMOMETER.

Delivered at the University of Glasgow.

By JAMES FINLAYSON, M.D.,

Fellow of the Faculty of Physicians and Surgeons, Glasgow; and Assistant to Professor Gairdner's Medical Clinique.

AN increase in the heat of the body is one of the oldest and one of the most widely recognised symptoms of disease. It is only of late, however, that accurate estimates of such morbid variations have been made for the purposes of diagnosis and prognosis. The history of the introduction of this method of research, although important and instructive, would take too long to recount. Suffice it to say, that an appreciation of the temperature of the body is now recognised on all hands as supplying a sure gauge of the degree of pyrexia; and that in this respect it ranks along with the pulse, or even in many cases as superior to it. The measurement of the temperature is arrived at by means of a thermometer.

Clinical Thermometers are now made of various sizes, and may be had at various prices. Those of Casella and some other makers leave little to be desired in the matter of accuracy and elegance; but the cost and fragile character of the instruments now in use constitute still a serious drawback to their employment.

The object is to have an instrument with such a bulb as to be very sensitive to slight changes of temperature, and of such a size and shape as to be adapted for introduction into various parts. If it be not well made, changes in the glass are particularly apt to occur in the course of time, so as to introduce errors into the readings. The graduation should be on the stem of the instrument itself, and should be on such a scale as to allow of readings to a fifth of a degree Fahrenheit, or of a tenth centigrade. Self-registering maximum thermometers are now in chief favour in this country, and are made on Phillips's plan of having the upper portion of the mercury detached by an air-speck, so that it remains at the highest point to which it had risen, and the upper end of the index shows the maximum attained. Before being used, this index requires to be replaced so as to join the main column. This is effected by holding the instrument by the bulb, and shaking it down once or twice. Holding it by the bulb protects the instrument to some extent from the danger of contact; and, further, the heat of the hand should cause the column of mercury to rise, and so prevent the detached index from being lost by being shaken into the bulb. Some instruments have a special arrangement to prevent this last accident. The advantage of a self-registering instrument is, that it does not require to be read in the position or at the time that the observation is made. Hence, for observations on patients in places where the light is bad, or where we might dislike to bend closely over the patient, or where we entrust the observations to others, registering thermometers are most valuable. Sometimes a pair of thermometers, duly marked, are left with a nurse or attendant, who has been instructed how to apply the instrument; and the readings may be made by the physician at his visit, and the indices set for a fresh pair of observations for the next night and morning.

When, however, we make the observations ourselves, a thermometer without any registering index is perhaps more useful, as showing at once any tendency of the mercury to fall after it may have reached a certain point, and so calling attention to some deficiency in the application of the instrument—due perhaps to the slipping out of the bulb from its proper place. For those who wish to watch the course of the mercury in such observations, the use of a sensitive thermometer without the complication of an index is especially instructive; and for this reason it is to be recommended to all beginners in the study of thermometry.

If the thermometer be well made, and if for the same patient the same thermometer be always used in the same way, the question of absolute accuracy in the graduation is not perhaps of much consequence in practical medicine. The importance and significance of the measurements usually depend on a *relative* rise and fall; and the indication of the records would be but little affected by having all the figures altered a quarter of a degree higher or lower. Still, for certain purposes, and indeed on general principles, it is desirable to have the instruments accurately graduated, so as to give results comparable among themselves; and, for this purpose, the best way is to have the instrument verified at Kew—obtaining a certificate of its accuracy, or of the amount and kind of its error at the various degrees in use. Any attempt to compare thermometers for yourselves will likely only mislead you, as the difficulties to be overcome in testing thermometers are considerable. The method of placing several instruments in a basinful of warm water is sometimes spoken of as serving to indicate the inaccuracies of clinical thermometers; but this may only indicate certain differences in the kind of bulb, etc. For example, a thermometer with a very large bulb of mercury may be introduced into warm water along with one with a small and narrow bulb, and the former may go on rising after the latter has reached its maximum and has begun to cool; or the different shapes of the bulbs may bring them into relation with different strata of the water, and so with different temperatures. For the sake of accuracy, therefore, a certificate from Kew should be obtained; and, if the thermometer be in use for some time, a further examination may be necessary, from the alterations brought on by age.

The parts of the body whose temperature should be tested are, the mouth, the axilla or groin, the rectum, and the vagina. Sometimes the heat of the urine, too, may be examined with advantage. Other parts of the body may be examined in special inquiries, as, *e. g.*, certain parts of the limbs on the two sides of the body in cases of one-sided paralysis, etc.; but the above are the localities to be investigated when we desire to have a result which may serve as an index of the internal heat. Each of the above localities has advantages and disadvantages; but, in any one case, uniformity in the series of observations is the overruling consideration which should affect our choice.

The *Mouth* is open to the fallacies caused by the air passing through this cavity, unless the person have at the time the intelligence and ability to breathe through the nose, with his lips kept closely shut. The *Axilla* often demands a long time before it can yield an accurate measurement. The patient's arm is sometimes too thin to cover in the thermometer with sufficiently vascular tissue; and there is often a restlessness which makes the restraint of holding the arm in one position for the necessary time seem too irksome. There is sometimes, moreover, a certain degree of doubt regarding the axillary temperature being a fair index of the internal heat. The *Groin* is open to the same objections as the axilla, but may sometimes be preferred in children whose arms are very scraggy. Measurements in the *Rectum* have the disadvantage of involving, except perhaps in the case of children, a somewhat indelicate proceeding, at least for anything like frequent or regular observations. The compression of the bulb by the bowel, and the presence of fæces, may produce some sources of variation. The solid fæces may impede the entrance or proper contact of the bulb; and fluid fæces may bring down matter from higher and warmer parts of the body than that which we aim at investigating. The *Vagina* is free from some of the objections urged against the rectum; but delicacy prohibits the use of this method, except perhaps in obstetrical cases. Moreover, the want of uniformity in the comparison of results (such measurements being, of course, impossible in males or children) limits the advantageous employment of this method to such cases as have been already indicated. The *Urine* possesses a remarkably high temperature, and may often give some useful information in a ready manner; but there is the great difficulty of not always being able to get it at the time when the observation is desired.

Summing up the advantages and disadvantages, we may say: the axilla is the most universally suitable place for making the measurement; the rectum is certainly the best place in which to take the temperature in the case of children; the vagina may be allowed to be the best in puerperal cases; and the mouth may be useful in the case of those on whose intelligent co-operation we can rely.

There is reason to believe that the correlation of the degree of temperature in the rectum, the mouth, and the axilla, varies somewhat under different conditions, both in health and disease; but, for general purposes, we may say that the temperature of the rectum is about three-quarters of a degree Fahr. (about five-twelfths of a degree cent.) higher than that of the axilla, and that the temperature of the mouth occupies an intermediate position.

Method of Taking the Temperature.—Absolute accuracy in thermometric measurements is impossible. The temperature of the bulb of the instrument no doubt tends to become the same as that of the structures in relation with it; and, after a considerable time, the error or difference may be said to be inconsiderable. But the heat of the part, and even of the blood itself, is not a fixed quantity. This variation further adds to the difficulty when we aim at extreme accuracy, and, indeed, imposes a limit on the refinements of minute variations. With a suitable thermometer, however, the temperature of the bulb approaches to that of the parts to which it is closely applied, with sufficient accuracy for all practical purposes, after the lapse of a very few minutes.

Hence, when we have to deal with a closed cavity, such as the *Rectum*, we can take the temperature in three or four minutes; and we assure ourselves of accuracy by seeing that the mercury is stationary for a minute or two before concluding that the maximum is reached. The following description of this method was given in a paper published by me a few years ago. "The patient, if in bed, is made to assume a position on the left side, such as is usually recommended for obstetrical operations in this country. The thermometer is oiled and carefully introduced within the anus. While one hand holds the instrument gently and steadily, the other may lie lightly on the pelvis or buttocks to guard against movement. If disposed to be restless, I usually found that, by getting the nurse to engage the child's attention, or by doing so myself, this tendency soon passed off. In infants or young children very restless from disease, a similar position on the mother's lap, with the face directed to her right breast, is the most suitable. The position indicated involves no exposure to the air." (*Glasgow Medical Journal*, Nov. 1869, p. 12.)

It is important to introduce the bulb of the thermometer into the rectum always to the same depth—say two inches from the surface; and, if there be no mark on the thermometer to indicate this point, an elastic band may be placed on it for the purpose. You will find that, after the maximum has been reached, by introducing the thermometer further into the bowel, we may obtain a fresh increase. Here, as before, uniformity in the series of observations is to be carefully aimed at. Pressing the instrument back against the wall of the rectum may also give an apparent elevation of temperature, due probably to the mechanical compression of the bulb. This, of course, ought to be avoided.

In the case of the *Mouth*, the temperature may sometimes be taken with equal rapidity. The mouth, however, often ceases to be a closed cavity; and as the air, in passing to the lungs, cools down the mucous surface, time is required to allow it to come up again to its natural heat. If the mouth have been kept shut for fifteen minutes previously, the temperature may be taken rapidly; but, if not, we must wait not only till the mercury attains an equilibrium with the temperature of the mucous surface, but until the temperature of the mucous surface itself is brought into equilibrium with that of the deeper parts. All this was pointed out long ago by the late Dr. John Davy. It is usual to insert the bulb of the thermometer under the tongue, keeping the lips well pressed together. Security is attained, as before, by observing that the mercury remains steady for a minute or two before the observation is terminated.

The *Axilla* resembles the mouth in being sometimes an open and sometimes a shut cavity; that is to say, it is sometimes exposed to the cooling influence of the air, and sometimes shut in from it. In the case of the axilla, likewise, we thus require to give time for the surface, which is in contact with the bulb of the instrument, to arrive at an equilibrium with the temperature of the deeper parts. The rule dictated by experience is, to see that the mercury remains at a stationary point for five minutes before we conclude that the maximum has been reached. Care must be taken to keep the arm closely applied to the side; and, for this purpose, we often require an attendant to hold the arm in position, as the patient is frequently unable to manage this properly. The bulb must also be watched, to secure its being well covered, and to see that it does not slip out behind. Time may sometimes be saved by making the patient lie with his arm closely applied to his side for a quarter of an hour before the instrument is to be applied, as this enables the surface of the axilla to attain its maximum temperature. Accordingly, accurate axillary measurements may sometimes be secured in five or six minutes; but, on the other hand, twenty or even thirty minutes may occasionally be required. Approximate estimates may be made in less time, especially if the temperature be found high; but care must be taken before negative influences are drawn from an imperfect observation, so as to conclude that the temperature is not high.

It has been proposed by Förster and others to shorten the time required for measuring the temperature, by heating the thermometer above the degree expected, and allowing the bulb to cool down in the mouth or the axilla. The serious part of the loss of time, however, as already explained, is not thereby affected; for, as Davy pointed out, a thermometer so heated may fall below the proper temperature of the mouth, and only slowly rise again as the temperature of the mouth itself regains its proper standard from being closed in from the air during the observation.

The following are the directions given by Wunderlich for axillary measurements.

"When there is much perspiration, the axilla must first be carefully wiped dry. It is then advisable, as Liebermeister has recommended, to keep the axilla *closed* (by bringing the arm to the side) some time *before* the thermometer is put there. He has pointed out that the time taken by the mercury to reach the maximum was reduced by this means to from four to six minutes. But sometimes this preliminary closure of the axilla may cause loss of time. The thermometer should first be warmed a little in the hand (to 85 or 90 deg. F. in most cases, and, if a registering one, the index must be set), then introduced deep into the axilla (under the anterior or pectoral fold), and the axilla closed by close pressure of the arm against the thorax, which always gives the arm an inclination towards the breast (*i. e.*, to the median line). If the thermometer do not keep its position nicely, if the patient be restless, unruly, sleepy, or forget himself, or if he be very much emaciated, the arm and the thermometer must be kept in apposition by the person who takes the temperature. In any case, it is well to make sure occasionally that the instrument is in good position. For most purposes, the observation may be terminated when the mercury has remained stationary for five minutes. In general practice, it is sufficient to *wait for two or three minutes after it has appeared to stop rising.*" (Wunderlich, *Temperature in Diseases*, London, 1871, pp. 70-72.)

Natural and Abnormal Temperatures.—But, supposing we have obtained an accurate measurement of the temperature, what is natural? what abnormal? During life, the temperature may range from about 78.8 deg. Fahr. or 26 deg. cent. to 113 deg. Fahr. or 45 deg. cent.; but either extreme almost necessarily implies a fatal issue. In health, the temperature may be quoted as about 37 deg. C. (98.6 deg. F.), with a range of 1½ deg. of Fahrenheit's scale above and below this. I speak here of the measurements in the rectum. The temperature of different persons no doubt varies with the individual. There is, moreover, a daily range of temperature in health; and this range is greater in the young than in the old or the middle-aged. This represents the ascertained facts more accurately than is done by speaking of the temperature of the young as being either higher or lower than that of the adult. Both allegations have been made with a certain amount of truth. In children, the daily range may be said to be about 2 or 3 degrees Fahr.; in adults, from 1 to 2 degrees Fahr. These figures may be taken as indicating the range, apart from any violent disturbances of exertion or otherwise. The minimum occurs at night, sometime about or after midnight; a rise of temperature takes place in the early morning hours; during the day, the maximum occurs, or perhaps two maxima may sometimes be traced. In the evening, or at night, there is a more or less rapid decline in the temperature; this decline, and indeed all the changes mentioned, seem to occur rather earlier in the young than in others; and the results of different observers vary somewhat in this respect, very likely on account of their different habits of life. This daily range in health is important as forming a contrast in some respects to the daily range in febrile diseases, in which the maximum is usually attained in the course of the evening.

The normal temperature, however, may be quoted at 37 deg. C. (= 98.6 deg. F.)

Temperatures somewhat below the normal are spoken of as subnormal, and include those from 36 to 36½ C. (= 96.8 to 97.7 deg. F.)

Temperatures much below the normal are found in the state of collapse, and in certain conditions bordering on this state, so that they are often spoken of as collapse-temperatures: those below 36 deg. C. (= 96.8 deg. F.) may be classed under this head.

Temperatures slightly above the normal may be spoken of as such, or as subfebrile, say about 38 deg. C. (= 100.4 deg. F.)

A somewhat higher elevation indicates a moderately febrile state, say about 39 deg. C. (= 102.2. deg. F.)

A further elevation brings us to a highly febrile condition, 40 to 40½ deg. C. (= 104 to 104.9 deg. F.)

Temperatures much above this level are often referred to as hyperpyretic, and are usually highly dangerous to life, say 42 deg. C. (= 107.6 deg. F.)

With such a table, and with a knowledge of the methods already detailed, you may now, by means of a thermometer, easily form an opinion as to the presence or the degree of pyrexia in a given patient. But it does not follow that this implies much assistance in the case. We may, of course, discover a febrile state when perhaps the patient complains of cold more than of heat; and some of you may remember that last session, in Ward 7, I demonstrated to you the elevation of temperature in a patient whom we happened to see in the midst of a violent rigor. In other cases, again, we may perhaps find a very high temperature when, from the pulse, the state of the skin, and the other symptoms, even the experienced are but little prepared for it. And further, an extremely high or low temperature may be taken as indicating a condition of much gravity. On the other hand, however, the temperature may be normal and the condition serious, or the temperature may be that of high pyrexia and yet the ailment may be trivial. The mere reading of the thermometer after a given observation indicates but little; various other points in regard to the temperature must be taken into account.

The Course of the Temperature in regard to the Time of Day is one of these points. In tubercular disease and in enteric fever, we have often normal temperatures in the morning associated with high temperatures at night, and in most diseases the morning temperature will be found to be usually lower than the evening temperature so long as the febrile state lasts. In pyæmia and some other affections, remarkable oscillations from a high to a low temperature occur several times in the day. Such oscillations studied with regard to their degree and periodicity often afford valuable indications. This indicates the propriety of having two or more readings in the course of the day; and, if one observation only be attainable, the evening temperature is usually the most important. The necessity of having the observations at the same hours, as nearly as may be, is likewise clearly indicated, so as to afford comparable results. For the morning, about nine o'clock is best; for the evening, some time between seven and ten.

The Rapidity or the Manner of Rise in the Temperature with regard to the date or duration of the illness constitutes another point. The natural history of many diseases in regard to this point has been more or less completely worked out, and the results may be found recorded, or at least referred to, in Wunderlich's great work on *Medical Thermometry*. Did the temperature rise suddenly within a few hours? Has the elevation been continuous or intermittent? Was the rise gradual and progressive? All these points are important, and an answer may sometimes help us not only positively but negatively. A sudden rise may negative one disease; a gradual and progressive rise may confirm the probability of another. The study of this part of medical thermometry can only seldom be pursued in hospital, and this is one of the subjects on which your attention should be fixed when you are engaged in private practice. You must not be misled by the decline of the temperature in the morning during the initial stage of a fever. The morning temperature is usually lower than that of the previous evening, even although the tendency, on the whole, is towards a daily increment of heat; although lower than the previous evening temperature, it may be higher than the previous morning observation.

The Duration of the Pyrexia may be a useful index. This may, perhaps, seem to you very much the same as saying that the duration of the disease itself may aid in the diagnosis; but, besides this, there is more. The prolonged elevation of temperature, for example, in an obscure chest affection may lead to a diagnosis of phthisis; or the absence of any such continuous disturbance of the temperature may, under certain circumstances, lead to the exclusion of this diagnosis, however probable it might otherwise seem. The decline of the temperature within a few days may exclude the possibility of typhus or enteric fever, with a certainty not otherwise attainable in certain suspicious cases. Again, the persistence of an elevated temperature in a case of enteric fever may convince us, and even convince our patient, of the remnant of some serious disorder, although he may seem to be better and may maintain that he is well with so much plausibility that, apart from the temperature, it might be difficult to gainsay him.

The method of Decline in the Temperature is no less important. Some diseases terminate by a sharp and sudden decline from the previously high temperature down to the normal, or below it—by a well marked crisis, such as is often seen in pneumonia. Other diseases terminate by a more gradual decline, or lysis, as it is called. A period of oscillation is characteristic of the termination of enteric fever; in such cases, the morning temperature gradually, or perhaps suddenly, reaches the normal, while the evening temperature continues for days at its former febrile elevation. All these points are of importance in diagnosis, or it may be in prognosis. An illness which may seem to be simple pneumonia may, by its abnormal behaviour in the defervescence, lead us to suspect the presence of a tubercular element. The apparent defervescence of the primary pyrexia of pleurisy may be arrested in its progress, and may merge into the hectic suggestive of empyema. Or, as happened once in my experience, the sharp defervescence in a febrile case, in which the child seemed to have many very grave symptoms, enabled a provisional diagnosis of relapsing fever to be announced under very unlikely circumstances, and so relieved the state of anxiety till the confirmation arrived by the occurrence of the relapse.

In the cases terminating fatally, it is a point of interest to observe whether the temperature falls before death, or runs up to a maximum just in the agony; and the occurrence of perturbations before the crisis of a fever, whether it be a final exacerbation or a precritical collapse, furnish subjects of deep interest and importance.

It is usual to reduce thermometric observations to the form of a curve on a chart, and in this way the whole course of the temperature from beginning to end, the various oscillations, and the terminal exacerbation or decline, are clearly brought into view. It is well to accustom your eye thus to judge of the course of an acute illness; but for myself, I prefer during the progress of a case to content myself with a careful appreciation of the figures as they are written down. During prolonged observations, and in cases where the changes are of a gradual rather than of a sudden character, the comparison of the average morning and evening temperature calculated for certain sets of days (of successive weeks, for example) may bring out the real tendency of the febrile movement in a more definite manner; and this is one reason why you should always have the results of the observations available in figures. It is a more irksome task to convert a diagram into figures than to convert figures into a diagram, and the risk of error is less in writing the figure down than in marking it on a diagram. For purposes of demonstration, however, and also for rapid comparison, the use of diagrams is most important. Many of you are familiar with the form of chart which I had made some years ago, and which we have for the last two or three years been using at the Clinique, and of which you now see specimens before you.* Its aim is to afford simplicity and flexibility in the delineation of temperatures, and, by the use of vertical red lines, on which to mark the evening temperature, to enable the eye to catch at a glance which is the evening and which is the morning observation in any series of oscillations. This may sometimes be brought out in a more vivid manner by having two separate curves—one for the morning and the other for the evening observations—traced on the same chart in different colours of ink. In the diagram which I now show you, representing a case of enteric fever in a child, the relationship of the evening, or red curve, to that of the morning, or black one, is most striking; and it serves well to show the divergence of the evening from the morning temperature, which has already been spoken of as being typical of the convalescence in this fever. A further point of interest is also brought out by these curves: throughout the fever, and during the early part of the convalescence, the evening curve is invariably higher than the morning one, sometimes by several degrees; but at the completion of convalescence, the evening curve ultimately crosses over the other so as to occupy a lower level, just as I have told you it ought to do in health.

You thus see that the whole behaviour of the temperature forms an important feature in the history of a disease, and that it must be studied as unfolded by actual experience, and not as evolved from any preconceptions of what, from analogy or otherwise, we ought to expect. The want of definite knowledge on this subject leads to many erroneous inferences from the readings of the thermometer; and the vagueness of the indications of the temperature in this respect accounts, no doubt, for the long time it has taken to secure its place in practical medicine. So long as various diseases were confused together, and were not to be recognised from each other, the temperature might only mislead. A high temperature in relapsing fever, for example, has a much less serious significance than the same degree in typhus or enteric fever. But since our means of diagnosis have enabled us to separate such fevers, we can also separate the history of their temperature.

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* It may be had from Hugh Hopkins, 85, Renfield Street, Glasgow.

In some diseases the course of the temperature may be said to be typical, in others less typical, and in some there may be an absence of any typical character. Even in this last case, however, the very absence of certain points may assist the diagnosis. Departures from the typical course in a disease ought, here as elsewhere, to excite suspicion, and the thermometer may indicate a coming danger before any mischief or complication can be detected as the explanation of the disturbance. Sometimes, no doubt, the alarm may seem to have been a false one, for no obvious complication may appear to justify the warning; but this, no doubt, arises from the imperfection of our methods of research, and even in such a case the exacerbation has a meaning which should not be despised.

Along with the pulse, the temperature will be found a most valuable guide in all acute diseases. As a rule, the two will be found to go up and down together; but sometimes a rise or fall in the one will have its significance much affected by a due consideration of the behaviour of the other; they both stand closely related to the most important operations going on in the human body whether in health or disease. By the brilliant achievements of physical diagnosis, we often obtain the evidence of mischief done and of organs changed; but by means of the temperature, when wisely used and considered in its relationship with all the circumstances and conditions of the patient, we frequently get a revelation of the state of turmoil which may result in these physical changes, and so we may sometimes be enabled to foresee the dangers, and perhaps to apply the remedy in time.

ON THE MEDICAL SERVICES OF THE NAVY AND ARMY FROM THE ACCESSION OF HENRY VIII TO THE RESTORATION.

BY WILLIAM R. E. SMART, M.D., C.B.,
Inspector-General, Royal Navy.

[*Concluded from page* 229 *of last number.*]

CHARLES I resolved to prosecute war with both Spain and France vigorously, but in equipping his fleet the want of surgeons became felt. Henry VIII had, under similar circumstances, reorganised the profession, enlarged its basis, united its constituents, and secured its rights and exemptions, and had assigned to the corporation of barber-surgeons the office of providing practitioners for the war-services of the state. Charles confirmed all these, and assigned to the corporation the important office of inspecting the provisions of medicines, etc., to meet the wants of his sailors and soldiers. For this purpose, an Order in Council was signed on the 10th July, 1626, which recognised the duty of the state to provide medicines for the treatment of internal diseases, the surgical remedies being left at the cost of the seamen, to be paid for out of the 2d. per month, given to the surgeons by ancient custom. For the above purpose, an allowance was fixed of £10 to each of the king's ships, £5 for a merchant-ship, and £3 for a Newcastle ship. These moneys, together with the imprest-moneys for surgical chests and instruments, were to be paid "in due time before hand unto the company, who, for the better effecting of the intents and services aforesaid, shall see the said moneys carefully bestowed, and shall have the making, compounding, fitting, and ordering of all the medicines as well physical as surgical, together with all other provisions belonging to a surgeon's chest, *or by their appointment.*"

Thus the entire management of the medical affairs of the navy was devolved on the Company of Barber-Surgeons of London, which selected and appointed one of its members, John Woodall, to execute the office as far as related to the material or chests. He was a surgeon of great merit, who, having made many voyages, had settled in London, as surgeon of St. Bartholomew's, in 1612, when he was selected by the East India Company to be their first surgeon-general, having charge of appointing surgeons and mates to all their ships, and furnishing their chests with medicines and instruments and necessaries. By these antecedents he was ably qualified for the office to which he was appointed by the king in 1626, making him in reality the first supervisor of the medical department of the navy. To Woodall is due the advocacy, from observation and experience, of lemon-juice to prevent and cure scurvy; also the use of tobacco-smoke injection in treating bowel-obstructions, for which he invented the apparatus which naval surgeons carried with them in the first half of this century. His ingenuity as a surgeon led him to devise the trephine in lieu of the dangerous bracetrepan, and he was bold enough to advise amputation of gangrenous limbs. He advocated also the employment of ligatures on large trunks, when his immediate predecessor, William Clowes, had relied solely on styptics and compresses in all amputations, half a century after Ambrose Paré had introduced the use of the ligature into the French army. Woodall, on being employed by the East India Company, issued a treatise, for the guidance of young sea-surgeons, entitled *Viaticum, the Pathway to the Surgeon's Chest;* and, when selected for the naval service, he published a second edition of it for the use of young naval surgeons. The edition of 1639 closes in poetical strain with a caution, which our youngest brethren would now deem impertinent.

"Let surgeons' mates, to whom I write,
be warn'd by me their friend,
And not too rashly give a dose,
which then 's too late to mend.
For many a good man leaves his life
through errours of that kinde,
Which I wish young men would avoide,
and beare my words in minde.
Though *Sulphur, Sal,* and *Mercuric,*
have healing medicine store,
Yet know th' have poyson, and can kill;
prepare them well therefore."

The preface to his book is quaint and interesting, affording social, moral, and religious suggestions that stand the test of time. The work was long in great naval repute, and may have gone out of print early. Among the Sloane MSS., British Museum, there is one, entitled "The office and duty of a Chyrurgeons Mate," which bears the autographs of several successive owners. It contains a written copy of Woodall's preface, followed by observations and receipts for internal complaints, at that time prevalent in ships; and full directions for embalming, which was then as much a recognised duty as *post mortem* inspections are now.

The *Viaticum* of Woodall affords us most graphic suggestions, from which sketches of the service, immediately preceding the Commonwealth, might be drawn without further authority. Being retained by the company, to which was confided the duties of the Directors-General of the Army and Navy, he assisted in the recruiting duties; and, in order to induce young barber-surgeons to enter the State service, he presented to them the advantages of, and the late improvements in, the services in these glowing words:—

"I acquaint the younger sort of surgeons, my brethren, with those especiall favours which it then (1626) pleased our most gracious K. Charles to bestow upon our Corporation in particular, above and beyond his ever blessed ancestors, *for the good of his souldiers and seamen*, and our encouragements, thereby to animate and inable us the more heartily to serve him: And namely;

"First. His Highnesse was graciously pleased, when also he increased the seamen's wages" (from 10s. to 15s. a month), "to augment each surgeon and surgeon's mate in H.M. service *by sea and land* to above a *third penny* from former custome, namely from nineteene shillings foure pence a moneth to 30s." (to surgeons and 20s. to mates). "He hath also beene graciously pleased to give a free benevolence to the surgeons in all His sea services, which never was given them by any of the former Kings nor Queenes of this land before; as followeth, viz.: To all surgeons that serve in His Highnesse own ships. I meane towards the furnishing of their surgeon's chests with Physicall drugs and medicaments. I say for each of them £10, and to each merchant ship £5, and to each Newcastle ship or collier's serving in His Highnesse his affaires £3.

"And neverthelesse all the surgeons in His Highnesse service have, as formerly, by the head of all men that are in pay in any of *his ships or land-service twopence of each man by the moneth:* And for the surgeons in His land-service hee alloweth to the Surgeon-Major of the whole campe 5s. a day; and for his two Mates or servants 4s. a day. Also His Majestie alloweth to each Surgeon 2s. 6d. the day, which is £3 15s. the moneth, and to each Mate £3 a moneth, and moreover allowed and gave to each Surgeon appointed to 250 men, *a surgery chest of £17 valew,* free of account; And moreover His Majestie alloweth to the Surgeon-Major a store-chest or *a magazeen chest of £48 valew,* for a supply to furnish upon all wants and occasions.* And His Highnesse was yet further well pleased to give Authority unto the Masters and Governors of our Society for to have the making, compounding, fitting and ordering of all the medicines, as well physicall as chirurgicall, together with all other provisions belonging unto the Surgeons' chests."

"And further His Highnesse has referred to the ancient Masters and Governors of our Society, the *pressing of all Surgeons and Surgeons Mates* or Servants to Surgeons and Barbers; with also the taking up of any instrument chests, or ready made medicines in His Highnesse name for his service, if occasion be not otherwise."

"These favours and priviledges our Corporation have received from

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* It was probably at this time that army surgeons ceased to receive their 2d. per man, from soldiers, which was deducted long afterwards from seamen's pay.

His Highnesse, together with a new Charter, wherein he hath likewise beene graciously pleased to confirme all our priviledges for the better subsistance of our said Corporation in future times; as also we have never beene denied, as formerly, to have monies impressed before hand for the providing a chest with surgery instruments and salves.

"In regard whereof, and for that Surgeons should with the better courage be instigated faithfully to performe their duties, I have presumed, in this preface, to explaine His Highnesse former favours, as aforesaid, whereby our younger brethren may from age to age the better keepe it in remembrance; and, to that end, I have also further under favour, I hope without offence, presumed to set downe the effect of the Order of the then Lords of His Highnesse most Honourable Privie Council, with the day and year in which some of the recited priviledges were granted and ordered, as also in part the forme and order how His Majestie's officers of his Navy have interpreted, dispensed and disposed of His Majesties said free-gift according to the severall burthens, ranks and orders of the ships respectively, which are as followeth:

Rates of Ships of War.	Free-gift (Medical Chest).	Imprest (Surgical Chest).	In all.
Great Ships of the 1st and 2nd Rankes were all rated alike	10 li.	7 li. 10s.	17 li.
Ships of the 3rd Rancke	7 li.	5 li.	12 li.
,, 4th ,, ...	5 li.	3 li. 20s.	8 li. 10s
,, 5th ,, ...	3 li.	3 li.	6 li.
His Majesties Pinnaces	3 li.	2 li. 10s.	5 li. 10s.

Great merchantmen in H.M. Service at the rate of H.M. great ships, viz. £10 and £7 10s., ordinary merchantmen at the rate of H.M. ships of the 4th rancke aforesaid, namely £5 free gift and £5 10s. imprest, Newcastle ships or colliers at the same rate as H.M. Pinnaces."

This affords a complete view of the improvements effected by King Charles I in the medical department of the navy, at the very beginning of his reign. He was evidently desirous of taking care of his seamen, and acted liberally to the surgeons of his fleet with regard to their pay and the provision of medicines. The fate of that expedition was disastrous in a medical sense, as Secretary Burchett informs us in his "Complete History" of it, where he states that, after the re-embarkation of the troops at Cadiz, the fleet cruised off Saint Vincent to intercept the treasure-ships. "Where, having waited for some time, the men began to grow very sickly; when, to compleat the miscarriage of the expedition, the sick men were distributed through the whole fleet, two to each ship, by which means the sickness was increased to such degree, that there were scarce Hands enough to carry the Fleet home." This is an important fact in the sanitary history of the navy, at a time when war-fleets were unattended by hospital-ships, in which respect the Spaniards were far in advance of us. In the Armada, thirty-seven years before, there were, according to the Spanish account of it (Archdeacon's Translation, London, 1588), "eighty-five Physicians and Surgeons for the hospital-ships."

The first hospital-ship in the English navy to which I find an allusion, is one in the fleet of Admiral Penn, in the West Indies, in 1654, under the Protectorate, of which Dr. Paul Delaune was physician; and since that time an hospital-ship has been attached to our war-fleets.

In 1628, two years after that disastrous expedition, a Select Committee on the State of the Navy reported to the Parliament that there was "not good provision for seamen, that they were ill clothed, *causing infection of ships*," which was inserted in the first letter of remonstrance to the king.

No King of England has ever evinced a greater desire to possess an efficient fleet than Charles I—a laudable desire, which cost him his life in its pursuit. Under his auspices, the great English naval architect, Pett, introduced a new model for ships of war, substituting the low and elegant frigate build for that of the lofty and unwieldy carricks of Italy and galleons of Spain. He patronised his admirals, as Queen Elizabeth had done with hers, and encouraged his seamen. To do so much as he desired to do, he required large revenues, which he could not obtain from his Commons without listening to their distasteful remonstrances and petitions of grievances. In that dilemma, he used means that had been quietly submitted to in earlier reigns. He aimed at making the nobility and landed gentry maintain his fleets for the defence and policy of the country, but which were looked on as unconstitutional by his Parliament. It may be said that the desire to possess a navy was the remote cause of the downfall of the king. There was, at that time, no standing army to cause alarm; but the fleet was the exponent of kingly power, which the Parliament viewed with jealousy. The two Houses of Parliament soon became as jealous of each other in the matter of selecting the admiral to command in chief, as united they had been towards the king; but the Commons, who controlled expenditure, prevailed. Having no confidence in the loyalty to themselves of the king's admirals and captains, the Parliament selected from itself, as officers to command the fleet, men who had displayed talent as soldiers in the field; and, after the style of the Dutch republic, sent civil commissioners in fleets to ensure the performance of its will.

There is conclusive evidence as to the agents and means by which surgeons and their mates were obtained for the navy in a document dated March 23rd, 1635 (Brit. Mus. MSS., vol. 9301, Plut., fol. 57), being a letter from the Navy Office to the Admiralty, which reports as follows. "The Fleet now drawing hand ready to goe to Sea, we have according *to the Antient Custom* given orders to the Masters and Wardens of Barber Chyrurgeons *to press Chyrurgeons* for all the ships of the first fleet, and have given them charge to cause them to appeare before us, att the Meeting House in Mincing Lane, on Fryday in the Afternoon, the 1st of Aprill, for the Vice Admirall and Rere Admirall to be satisfyed of their sufficiency, according to your Lordships' orders." This shows that the Admiralty exercised a selecting power over the levies by impressment enforced by the Company on the freemen of their corporation, who had undergone the ordinary examinations to qualify them to practise in London.

Their mates appear to have performed the office of barber as well as the duties of assistant-surgeon, as we find in the *Viaticum* of Woodall, edition 1617, written for the East India Company reserve:—"For that the surgeon's mate by *due consequent* is to be Barber to the Ship's Company, he ought not to be wanting of these following necessaries: One Barber's Case containing Rasors, Sizers, Combes, Combe brush, Ear-picke, Whetstone, Basin, etc., and whatever else is necessarie to the Barber's profession."

As regards the Royal Navy, this must be received with qualification, inasmuch as, in the second edition of the enlarged *Viaticum*, prepared for use in that service, the author writes: "If the surgeon's mate cannot trimme men, then, by due consequence, there is to be a Barber to the Ship's Company; and he ought not to be wanting of these following necessaries," enumerated as above. From this, it may be inferred that, even prior to the civil war, it was not compulsory on the surgeon's mate to act as barber; and that, as the Barber Chirurgeons' Company provided for both services, it may be assumed that about the same period the two offices began to be dissociated in them.

The Parliament strove to render the medical services voluntary rather than compulsory, as we find in the journals of the House of Commons, October 12th, 1644:—"Ordered, that it be referred to the Master and Wardens of the Apothecaries and Surgeons, to make choice of able and fit men for Surgeons to be sent to my Lord General's Army; and that if such as shall *be chosen and appointed by them* shall refuse to go, that then they repair to the Committee of the Militia; and that they give orders for the *Pressing* of them for the said Service."

In the same year, apparently for the same service, there was another ordinance passed, "For impressing Soldiers, Gunners, and Surgeons for the Army;" and in the following year, February 21st, there was an ordinance "For impressing Mariners, Sailors, Watermen, and Surgeons for the service of this next Summer Fleet."

The Apothecaries' Company was associated with the Barber-Surgeons, probably to secure men more accustomed to the compounding of drugs and the treatment of internal diseases; but I have not found any other instance of their co-operation in the service of the State.

We have seen that, in 1826, Charles I ordered that medicine-chests should be provided for ships. Wanting earlier evidence on this point as regards the army, I may adduce from the journals of the Commons the following ordinance, dated 1st July, 1643, "Ordered, that Dr. Paul de Laune, and Dr. Nathl. Chamberlaine, Physicians, be forthwith sent to the Army, for the Service of the Army; and this House doth declare that whatever Physicians or Surgeons shall be employed, by the House, shall have the same allowances as others formerly have had; and the two Surgeons now to be employed shall have *their chests furnished with Medicines, each of them to the value of Twenty Pounds*; And the Committee for the Safety is ordered to give Warrant for the Wages and Provisions of the said persons; And the Master and Wardens of the Apothecaries are ordered to view the said chests, that they bee good; And the Surgeons are to be approved by this House." If this be, as I conceive, the commencement of providing *medicine-chests* for regiments, as had been done by Charles I for ships, we may notice that the Apothecaries' Company was selected to do for the army what the Barber-Surgeons were doing for the navy; and I think that the difference may have been brought about by the influence of the de Laune family of Huguenot refugees, of which the brother—Gideon—had procured from James I the charter of the Apothecaries' Company. Living to the age of ninety, he educated his brother Paul, who entered the army of the

Commonwealth, and afterwards served as physician of the fleet that captured Jamaica. Gideon de Laune died a wealthy and influential citizen.

The ordinance of the Commons, 1st July, 1643, guaranteed to the medical men of the army "the same allowances as others formerly had." These were, according to an ordinance dated 23rd March, 1642, "For the Scott's Army, 2 Physicians at 5s., 2 Surgeons at 4s., 4 Mates at 2s., and 2 Apothecaries at 2s. 6d. a-day;" and I have not learned of any augmentation of this under the Commonwealth.

The same journals show that on each occasion of voting the navy estimates, which was done twice annually, for the summer fleet and for the winter fleet, moneys were granted to defray the cost of "Physicall Drugs and Medicaments for Surgeons' Chests;" and that on March 24th, 1648, when a great part of the fleet had revolted and joined Prince Rupert, an addition was made to the pay of the navy, omitting surgeons; but when a further increase was voted 21st December, 1652, the pay of surgeons was advanced to £2 10s., and that of their mates to £1 10s. a month. This augmentation was given to the navy under the pressure of our first naval war with Holland, when the two republics contended for mastery of the narrow seas, when Van Tromp and De Ruyter were the opponents of Blake and Ayscough, in undecided battles, until the 29th November, when Blake was beaten.

The Parliament took vigorous measures to repair that disaster, and in February, 1653, a succession of defeats of the Dutch induced peace. The war, being entirely a naval one concerning the foreign commerce of the two countries, effected great benefits to seamen. Ships were first rated and ranked; seamen were first classified as able seamen (fit for the helm and lead), and paid at the rate of 24s. a month net; ordinary seamen receiving 19s. as before; groomets (landsmen), 14s. 3d.; and boys 9s. 6d., after the deductions for Chatham chest, the chaplain, and surgeon. A regulation was made for the supply of *medical comforts, at the State's expense*, to sick and wounded on board ship, to the extent of £5 per 100 men, every six months.

The Protectorate affords our medical naval history no new data, as Cromwell soon exacted humiliating terms of peace immediately on his assumption of supreme authority: the naval power of Spain was speedily subdued by Blake, who died of scurvy on his return to England in 1657, and Dunkirk was taken from them in 1658. To the medical affairs subsequent to this, allusion has been already made as a sequel to the resolutions of Parliament in 1652.

Probably at no period of naval history has the service been more popular than it was towards the end of the Commonwealth and during the Protectorate, when our successes over the Dutch and Spaniards were obtained as the primary and immediate result of the liberal votes and resolutions of the Parliament in 1652, after the defeat of the great Admiral Blake, who then led our fleets to certain victory, the consequence of which cheered the hearts of sailors in a speedy distribution of enormous sums of prize-money, obtained by the capture of richly laden Dutch convoys from the East Indies, and of Spanish galleons laden with the treasures of Mexico and Peru.

Surgeons were not then impressed for the naval service; and, in attaining to that desirable end, we recognise, step by step, the pit out of which the surgical branch of the profession was dug by monarchs and statesmen, whose primary object was to supply fleets and armies with those who would attend to the wants of men wounded in the wars.

At the Restoration, A.D. 1660, the entire administration of naval affairs had reached a fresh standpoint, and in no particular more remarkably than in those which appertained to the care of the sick and wounded, many ancient practices being laid aside, many reforms having been established, and new principles asserted and recognised, which it took another century to carry out in their fulness.

I shall pause here, hoping to return to the subject at an early date, and fearing that I may have trespassed on the forbearance of a patient audience.

THE TREATMENT OF SYPHILIS.

By JONATHAN HUTCHINSON, F.R.C.S.,

Senior Surgeon to the London Hospital, and to the Hospital for Skin-Diseases.

I have much pleasure in making such reply as I can to the questions put by "A Liverpool Associate".

In the first place, I would state that the object of my recent paper was rather to attract attention to the evidence in favour of the permanent efficacy of the mercurial treatment of syphilis in its early stages, than to advocate any special mode of its use. I was, however, led almost necessarily, in order to sustain my argument, to insist on the necessity for a long course, and, as a means in order to the practicability of long administration, on the avoidance of doses likely to cause salivation. I had to contend also that the antidotal power of the drug is in no degree of relationship to its full physiological influence; and that the best cures are often those made most quietly. Now, these principles being kept in view, I do not know that there is much to be added as to detail. Begin early; continue long; do not salivate—such would be my rules. I have no strong preference for one kind of mercurial preparation over another; but, as it is convenient to become familiar with one, I have in my own practice of late years almost restricted myself to grey powder. I prescribe it usually in pill, in doses of from one to three grains three times a day, and often in combination with Dover's powder. It is only seldom that an unlooked-for salivation occurs, and it is equally rare to have any trouble with the bowels. Most of my patients continue throughout at their ordinary occupations. A strong reason for preferring to give pills, instead of using inunction or the bath, is, that it is often essential to avoid confinement to the house, and also to run no risk of attracting the attention of the family. Inunction, which is still in general use over the continent, and is without rival at Aix-la-Chapelle, is a more or less dirty method; can scarcely be concealed from servants; and further, with our English ointment, is very prone to irritate the skin and bring out eczema. As I do not believe that it has any real advantages to compensate for these drawbacks, I never resort to it. The vapour-bath, as proposed by Langston Parker and modified by Mr. Lee, I have the fullest faith in, and have seen excellent results from it in certain intractable cases. It is, however, troublesome, more or less expensive, cannot well be used secretly, and, for all ordinary purposes, it is not in the least necessary. The grey powder does all that could possibly be wished. I must add to this, that I am always particular to use mercury sedulously to the local manifestations of the disease. The chancre is to be soaked with black wash; and to the skin-eruption an ointment of the ammonio-chloride is almost always applied. If the throat become sore, a gargle of black wash or of the bichloride is usually prescribed.

With regard to the dose, it ought to be sufficient to produce decided effect on the disease. If it be given for an indurated chancre, the hardness ought to begin to diminish within a week. The quantity required in order to effect this will be found, as every one knows, to vary very much in different individuals. A few patients will be met with who appear to resist mercury in a most extraordinary manner, in whom it neither destroys the syphilis nor affects the constitution. As a rough rule, I always expect to have to give more mercury to dark complexioned patients than to others.

The correspondent asks "if some preparations are more adapted to certain stages of the disease—say primary or secondary." In reply, I do not know of any special adaptation of this kind, but find the one I have mentioned the most convenient in all. The bichloride, which at one time I used to give largely in the later forms of secondary disease, I now rarely prescribe, having become more and more convinced that it is the mercury which is wanted, and not any special preparation of it; and that what is to be aimed at is mainly to choose that form least likely to irritate.

We now come to that part of the letter which concerns the difficult question as to the precise position of the iodide of potassium. Whether this salt is antidotal or not, it is very difficult to say; but I think we may take it as proved, that it is at best very feeble as an antagonist against the early stages of syphilis. It cannot make the indurated chancre disappear; and I think it does not usually shorten the duration of the secondary rash. A main object of my paper was to protest against its delusive employment in these stages, and to urge that it is false to our patients' interest to permit it to stand in competition with mercury, so far as they are concerned. Even in the case of the most feeble and cachectic patients, it is, I think, a mistake to resort to it, to the exclusion of mercury. But there is much respecting its powers which is yet to be made out. The rapidity and certainty with which it will cure some forms of tertiary disease are very wonderful; and from the inveteracy which these used to assume prior to its introduction, we may, I think, safely infer that the mercurial methods then in vogue were not successful. Of late years, mercury has been but very rarely tried for tertiary disease; and I for one may freely confess that I am not in possession of any large number of facts respecting it. Whether or not it might in certain cases cure more permanently than the iodide, I have no means of knowing; whilst that it would prove prejudicial in many, is, I think, highly probable. Now, if the theory which I have advanced as regards the distinction between the secondary and tertiary maladies be true—that the former are due to blood-changes, and the latter to those of tissue—it possibly follows that we ought not to expect anything of the nature of prevention from the remedies which we use against the latter. It is enough if they cause the local inflammation to cease, and not possible that they should alter the constitution of the solid tissues, built up as they have been years ago from a tainted blood. My impression is, that this conjectural view is supported by clinical experience, and that we do not find any benefit from continuing the iodide after the local cure has been completed. I think this answers the last query put to me; but, if there be any points upon which my explanation may be considered not sufficiently explicit, I will gladly make a further attempt.

CASES WHERE DEATH HAS FOLLOWED THE INJECTION OF THE PERCHLORIDE OF IRON INTO THE UTERUS TO ARREST *POST PARTUM* HÆMORRHAGE.

By T. SNOW BECK, M.D.Lond., F.R.S.

In a review, published in the *Edinburgh Medical Review* for the present month, of Dr. R. Barnes's work, *A Clinical History of the Medical and Surgical Diseases of Women*, it is said, "he (Dr. Barnes) has the manner of a schoolmaster towards all those who differ from him. He is always laying down principles and theories;" and, if I might complete the picture, I would add, "and himself constantly violating the principles he lays down." Dr. Barnes's "clinical experience" is also characterised in the same review as "an example of fireside, not bedside, description," the "fireside descriptions," it may be added, being so frequently inaccurate, that they amount to descriptions the contrary to the facts. Different examples of these "fireside" inaccuracies occur in Dr. Barnes's recent communications; but I will only advert to two of them. I have never said that I "had seen death from septicæmia following the injection of the perchloride of iron into the uterus to arrest *post partum* hæmorrhage," though a case of this affection after injection with the perchloride of iron is reported by P. B. Giles, junior, in the *Obstetrical Journal*, No. vii, p. 442. But I have said that the symptoms observed in the fatal cases which have followed the injection of the perchloride of iron to arrest *post partum* hæmorrhage, greatly resemble the symptoms attending puerperal septicæmia, but differ from them in being apparently even more fatal, and, so far as we at present know, in there not being any means by which the fatal termination can be averted.

With reference to the charge of "persistently evading the plain duty incumbent upon us all to set forth the facts from which alone scientific conclusions can be drawn," I would merely state the following facts. In September 1872, I forwarded to the secretary of the Obstetrical Society, Dr. W. S. Playfair, some of the following cases, with a commentary. After a few weeks, I was informed that the president, Dr. Braxton Hicks, considered the paper to be of a "controversial character," and, as the statements contained in it differed from those which Dr. Barnes had previously made on the same subject, the paper could not be allowed to be read. After the experience I had previously had, this announcement did not surprise me; and I decided to print these cases, with others, in a separate form; the papers which have appeared in the *Obstetrical Journal* being portions taken from the manuscript which I drew up with this intention. However, it was found impossible to exclude the subject altogether from the Society, and the case which occurred in the practice of Dr. Heywood Smith was, after considerable difficulty, admitted and read; but all expression of opinion contrary to the views of Dr. Barnes and Dr. Braxton Hicks was endeavoured to be suppressed by noisy clamour. At this meeting, the uterus and appendages were placed before the Society; drawings of the appearances they presented were made and shown; Dr. Barnes was present, and might have satisfied himself as to the accuracy of the drawings, and the description of the appearances in the preparation; but he never examined the uterus and appendages submitted to the Society. This preparation, with others, also remained in my house for months, were seen by some of the Fellows of the Society, and might have been seen by all. Truly, it is said, "there are none so blind as those who won't see."

The following cases were drawn up for publication in the present form. They are given in considerable, perhaps tedious, detail; but, as the facts they demonstrate have been, and probably may continue to be, much disputed, I have thought it better to give them in full.

CASE I.—A. C., aged 30 years, was admitted into the British Lying-in Hospital, under Dr. Heywood Smith, at 2.30 A.M. on January 26th, 1872, in labour with her fourth child. Her previous history, as far as could be gathered from her friends, was, that she had been twice married; during her first marriage, she had two children, besides two miscarriages, with both of which latter she had severe floodings; during the second marriage, she had also had two miscarriages, with severe loss at each, that with the last being so serious that she was obliged to keep her bed for four months. Her health between the pregnancies was reported to have been pretty good.

January 26th. She was delivered naturally by a pupil midwife, at 4.20 P.M., of a male living child, weighing eight pounds fourteen ounces, after a labour of twelve hours' duration. The placenta came away easily twenty-five minutes after the birth of the child, with not more than the usual loss of blood.

January 28th. She was previously doing well; the lochia natural, without offensive odour; the milk came yesterday afternoon. About 3 A.M., she awoke with a severe pain at the hypogastrium, and from this time the lochia were rather scanty; the bowels not open.

February 4th. Tenth day. Three days ago, she was moved downstairs in a chair, but had not been out of bed before or since. Yesterday morning, some hæmorrhage occurred, with slight pain, and, this morning, she passed several clots; nothing had occurred to account for this bleeding; pulse 76; tongue clean; the orifice of the uterus patent as far as the inner os, and bleeding. She was ordered thirty grains of ergot of rye every four hours.

February 5th. Eleventh day. The orifice of the uterus was not so patent; it lay high up, and backwards. She had very little pain from taking the ergot of rye. Bleeding continued yesterday till the evening, and commenced again this morning. The uterus was injected with one part of liquor ferri perchloridi, and eight parts of water, with Higginson's syringe, and a long elastic tube was passed into the uterus.

February 10th. Sixteenth day. The uterus was again injected in the same manner as before, with liquor ferri perchloridi and water. I believe the bleeding had never actually ceased; and, though it was much lessened, still some discharge of blood continued.

February 14th. Twentieth day. Bleeding returned on the night of the 11th, and the uterus was again injected on the 12th with one part of liquor ferri perchloridi and four parts of water. It was again injected to-day with equal parts of liquor ferri perchloridi and water. No bad symptom had followed any of these injections; no pain; appetite and spirits good; she slept well.

February 15th. Twenty-first day. The uterus was again injected at 11 A.M. with strong liquor ferri perchloridi, using the intrauterine syringe, which holds about half an ounce, but only about two drachms were injected. Very severe and sharp pain at the lower part of the stomach directly followed, and, from this time till the evening, she rolled about in the bed with severe pain. She said she "felt as if something had been torn out of her." Poultices were applied to the hypogastrium, but the pain was not relieved till the evening; she was violently sick; no bleeding occurred after this injection. The colour of the blood was bright red, not dark; latterly, the bleeding ceased after each injection, and recurred again a little before it was repeated; it was a continuous oozing, but never amounted to a flooding.

February 17th. Twenty-third day. Noon.—Pulse 140, full, weak; tongue dry at sides; she was feeling very weak; in no pain; there was a slight coloured discharge; she was ordered cinchona, ammonia, and opium. 11 P.M.—Pulse 160; temperature 104.3; respiration 32; tongue dry in the centre, moist at the sides; abdomen distended; she vomited everything; had been delirious this afternoon and evening; no bleeding *per vaginam*, but a brown and offensive discharge. Hydrocyanic acid with carbonate of soda were prescribed for the sickness, also one minim of tincture of aconite every half-hour.

February 18th. Twenty-fourth day. 11 A.M.—Pulse 148; temperature 104.1; respiration 24; tongue moister; abdomen distended; she was not in so much pain, and had not been sick after the second dose of the hydrocyanic acid mixture. 10 P.M.—Pulse 140; temperature 103; respiration 24; abdomen softer; she had had seven or eight full evacuations from the bowels, passed urine, and slept a little; she had been free from sickness all day, till now.

February 19th. Twenty-fifth day. 3.15 P.M.—Pulse 168; temperature 105.4; tongue darkish; she took her food well; the bowels had acted; motions not relaxed; there was occasionally great dyspnœa; no pain; she had cough, and expectorated froth; there was kicking of the bed-clothes. 11 P.M.—She was in a cold sweat, sinking.

February 20th. Twenty-sixth day. 10 A.M.—Pulse 152; temperature 105.1; respiration 52; tongue moister and cleaner; abdomen softer; no pain; she slept in the night; had eight ounces of brandy in the night. 10.15 P.M.—Pulse 160; temperature 103; respiration 48; tongue dry in the middle, and moist at the sides. She had ten ounces of brandy, one pint of ale, a little meat and beef-tea.

February 21st. Twenty-seventh day. Pulse 144; temperature 99.4; respiration 36; tongue moister; she had been very delirious and violent; did not sleep. 11 P.M.—Pulse 140; temperature 101.2; respiration 44; tongue moist; she had not been sick since morning; right eyelid swollen; urine bright coloured; diarrhœa since 2.30 P.M.

February 22nd. She died at 8 A.M., the twenty-eighth day after the confinement, and the seventh day after the supervention of the symptoms.

The uterus was large, measuring about five inches long by four inches broad, the walls being about three-quarters of an inch in thickness. The peritoneal covering was smooth and glistening; the tissue soft, but not unnaturally so, and on both the anterior and posterior surfaces, between the median line and each side, marked by longitudinal discolorations of a black leaden hue, which evidently indicated the course of large sinuses in the substance. On each side, the large veins in the middle of the venous plexuses, which occupy this situation, and extend down to the upper part of the vagina, were filled and distended with black grumous material, which stained the inner coat and the inner portion of the middle coat of the vessels black; but this staining did not extend to the cellular tissue surrounding the veins. The coats were otherwise natural, being neither thickened nor injected. On making a section through the posterior wall, the uterine tissue was perfectly healthy. Several sinuses of various sizes were divided and found filled with opaque, rather thick, perfectly black material, having more resemblance to thick writing ink than anything else. The delicate tissue lining the inner surface of the sinuses was stained black, but the contractile tissue surrounding these canals was perfectly healthy, and of the natural colour. At several points on the section of the uterine walls, the uterine arteries projected from the cut surfaces. On two longitudinal sections being made into the walls of the uterus on the posterior surface, and midway between the central line and each lateral margin, many sinuses, of various sizes, were cut across, and all were filled with a similar black material found in the other sinuses and veins, and yielded abundant evidence of iron by chemical tests. As in the other sinuses, the inner tissue was stained black, but the surrounding contractile tissue was quite healthy, and of the natural colour. The black material evidently was not coagulated blood, but it closely resembled the black slightly mucous fluid on the inner surface of the organ. The inner surface of the uterus was covered with a very dark, almost black, slightly mucous fluid, and, at the junction of the upper third with the lower two-thirds, an oval excavation on the anterior surface was seen, five-eighths of an inch long by four-eighths of an inch broad, and full one-eighth of an inch deep. This was filled with a soft material stained perfectly ink-black, the edges being sharp yet slightly rounded, and, at the right side of this excavation, attached at the upper and outer corner, was a rounded soft mass about the size of a flattened filbert, which, when the cut surfaces of the uterus were brought together, appeared accurately to fill the excavated space. This mass, when subsequently examined with the microscope, showed distinctly various placental tufts, and was attached at its upper and outer corner by a broadish band of soft uterine tissue. After gently washing the surface with a stream of water, it presented the usual soft, reticulated appearance of the uterus after parturition; was of a dark, mottled, reddish-black colour, and, on the anterior surfaces surrounding the excavation previously mentioned, the tissue was fuller, softer, and slightly raised above the surrounding surface, thus marking the previous position of the placenta. This raised portion measured one inch and five-eighths by one inch and two-eighths, and, over the whole of its extent, numerous openings were seen filled with black material similar to that found in the divided sinuses and in the veins at the sides of the uterus. These openings varied considerably in size, some being of the size of a crow-quill, others only small dots, the larger being situated over the centre, the latter chiefly around the circumference. Towards the lower part of the anterior inner surface, three or four worm-eaten-looking patches existed, having in their centre a softer tissue, which appeared similar to the soft tissue in the centre of the larger excavation, and to be the result of a similar morbid process. The softer tissue from the centre of the larger excavation consisted principally of contractile fibre-cells of various sizes—either isolated, in bundles of a few together, or in small striæ or bands, many stained black, and most truncated at each extremity, but none presenting any remains of the usual fatty degeneration—these groups of fibre-cells being mixed up with much granular matter, round and oval corpuscles, and numerous flat corpuscles of varying dimensions; the granular matter and round and oval corpuscles being only partially stained black. The softer tissue from the worm-eaten portions consisted of much granular matter in amorphous tissue, numerous round and oval corpuscles, many fat globules, and some modified columnar epithelium. Three large open orifices of sinuses existed within the larger excavation, and several smaller ones surrounded the margins, all filled with similar ink-black material. Three arteries of considerable size also projected from the surface of the same excavation—one to the extent of a quarter of an inch—all of the same calibre throughout, the ends being broken off, and the canals free and unobstructed. Over the centre of the portion which marked the seat of the placenta, many white points were noticed, after careful examination under water with a lens, which, on being raised with the sharp point of a needle, could be drawn out from the surface, and seen to be the broken ends of small arteries. Some of the ends of the arteries thus raised were cut off and examined with the microscope, in a menstruum of glycerine and acetic acid, and in all those so examined the walls of the artery were thin and translucent, and directly surrounded by soft uterine tissue, the cut ends being shown by the sharp edges caused by the scissors, the broken off ends by being slightly corrugated, with the edges slightly rounded; but, in all, the canal was perfectly free and unobstructed. Some of the arteries on the section through the walls of the uterus were also braced down to the inner surface, where they ended in broken off extremities similar to those at the seat of the placenta, only they were considerably smaller in size. The more the uterus was examined, the more the conviction was forced upon the mind that the larger central excavation was in some way depending upon the pressure of the placenta, which remained attached to the upper portion of the uterine cavity. The excavation appeared to be precisely at the points where this piece of placenta would press upon when the cut surfaces of the walls were brought together, and it was just the size of this portion of placenta. But the worm-eaten portions lower down, on the inner surface, would seem to indicate that some morbid action had been also going on at those parts independent of any pressure. It is not improbable that the same morbid action had been present at the seat of the larger excavation, and that, in consequence of this, the pressure of the piece of placenta had produced more effect than it would have done had the surface of the uterus been perfectly healthy. However this may be, the tissues which immediately surrounded the larger excavation were very slightly, if at all, altered from the healthy structure. The ovaries and Fallopian tubes were quite healthy.

CASE II.—Mrs. S. A. was confined in her third labour on March 14th, 1872. She was twenty-nine years of age, rather tall, of fair complexion, well made, a healthy young woman. Her first confinement was natural; the second with twins, after which she was weak and ill for some time. She was very well during the last pregnancy. She was taken with pains about 9 A.M., and during the day they were of "not much account". The waters broke about 11 P.M., after which the pains became stronger, and the child was born about 8 A.M. A good deal of blood was lost, but "thought not more than was usual". The placenta was withdrawn about twenty minutes after the birth of the child, by drawing upon the cord and pressure from the hand of the medical attendant upon the abdomen; it was rather large and some clots came away at the time. A binder was applied, but about a quarter of an hour or so afterwards she remarked that "there seemed to be a good deal of something coming away". On examination, it was found that a good deal of bright red-coloured blood was flowing away. Pressure was now made by the medical attendant on the uterus; a dose of ergot of rye, with some brandy and water was given; cloths dipped in cold water were afterwards applied to the vulva. The hæmorrhage continued; the patient looked pale, and said she felt very faint. Another dose of ergot was now given, with some more brandy and water; the patient was turned upon her back, and strong pressure continued. The hæmorrhage, "though not so much, still continued". Some strong solution of perchloride of iron having been procured, was mixed with six parts of water, an elastic tube well passed into the uterus, and rather more than half-a-pint of the perchloride mixture injected with a small Higginson's syringe. The hæmorrhage now stopped; the patient revived; the binder was reapplied; and everything considered "very comfortable". The two following days she was very well; but on the morning of the third she complained of a pain at the right side of the abdomen, which was now observed to be rather large. A dose of castor-oil was given; and ten grains of Dover's powder at bedtime. The following day, the fourth, she was better; she had slept very well during the night; was enabled to nurse the baby; took nourishment very well; the abdomen was perhaps increased in size; the pain rather less. The next day, the fifth, she was not so well; felt inwardly ill; the abdomen was more swollen; the pain was greater when she was moved in bed; pulse very quick, about 120, and small; there was "a good deal" of lochial discharge of a dark brown colour, but not offensive. The Dover's powder was repeated at bedtime. She slept pretty well during the night; and next day, the sixth, was dosing a good deal. After this, one day she appeared a little better; the next not so well. The abdomen increased in size, and became more tender to pressure; she was restless, and talked in her sleep; still took nourishment pretty well; the pulse continued very quick; skin rather dry; the bowels were moved several times, the motions being very loose and very black.

I saw her on March 28th, the fourteenth day after her confinement. She was lying on the back with the knees drawn up, the arms extended from the body. Her complexion was not muddy; the eye was only slightly dimmed. She had a flush on each cheek; was in no pain as she lay upon the back, but was obliged to keep the arms extended, as it made her uncomfortable when they were not in this position. The upper part of the arms was swollen, and tender when pressed. The abdomen was much swollen, uniform; the percussion-note was tympanitic, particularly over the small intestines. Her breath was rather short; she had some cough, which she had before her confinement; she did not notice any expectoration. The tongue was coated with white fur. She was very thirsty; did not care to eat; had been sick two or three times. The bowels were moved twice or thrice a day, very loose, said to be "quite of a black colour". She frequently passed wind from the bowels, not offensive. As to her urine, she did not know. The skin was slightly hot, dry; pulse 130, small, with slight wiry feel. She had no pain in the head; wished to be left alone; dosed a good deal, and, when dosing, muttered and wandered a good deal; sometimes she awoke up and seemed quite lost. A good deal of brandy and some port wine had been given, with beef-tea and gruel frequently during the day.

I suggested scruple doses of sulphite of lime, with some chloric ether and aromatics; with bags of M'Dougal's carbolic powder to be placed in the bed. I expressed the belief that the perchloride had been taken up into the system, and that death would result.

I saw her again on March 31st, the seventeenth day. She had continued to become worse. She was lying on the back, with the knees drawn up and the arms extended; she slipped down in the bed. The face was slightly flushed; skin warm and dry; the abdomen perhaps a little more swollen; when it was pressed, she cried out "Oh, dear!" She was lying in a dosing state, with much talking and wandering; was roused with difficulty, and then appeared for a time lost; sometimes she did not appear to know those around her. She took little nourishment; drank the brandy and water and beef-tea when given to her. Pulse 140, very small, somewhat wiry; breathing short, quick, with frequent sighing. Several very loose, quite black, motions were passed into the bed. A good deal of urine passed, and also into the bed.

She continued much in the same state, and during the night of April 5th, the twenty-second day, appeared to be in a deep sleep, but it was found that she was dead.

Post Mortem Examination.—The examination of the body was made in the afternoon of the second day, about thirty-six hours after death. The body was well developed, with a moderate amount of fat; some port-wine-coloured fluid issued from the mouth. There was no appearance of decomposition. The abdomen was large, prominent, tympanitic. The arms were swollen, the superficial veins very distinct near the chest, the swelling extending somewhat up both sides of the neck. The intestines were much distended with flatus; the coats were rather thin, apparently healthy. There was no unpleasant odour from the flatus when it escaped. The stomach was rather large; it contained some port-wine-coloured liquid. There was a good deal of congestion in the omentum, of a dark brown red colour; little or no congestion of the peritoneum. About a pint of brownish coloured fluid was found in the peritoneal cavity; no effusion of lymph anywhere. The uterus lay in the cavity of the pelvis, large and doughy. The uterus was removed for further examination; and, on dividing the veins at each side, some thin dark brown coloured blood escaped. The liver and kidneys were apparently healthy. There was some emphysema at the upper part of both lungs, otherwise they were healthy. There was not any particular congestion at the lower part; no fluid in the pleura. The heart was apparently healthy. There was some dark brown coloured, partially coagulated, blood in the right auricle and ventricle.

The uterus was large and doughy; it measured about five inches in length, four inches and a half across the fundus; the walls were nearly one inch in thickness. There was no injection of the peritoneum; the surface, perhaps, was not so glistening as usual; it had no lymph, or other exudation, upon it. The fimbriated extremities, and also portions of the Fallopian tubes, were of deep brown colour, from great congestion of the small vessels; the veins in the neighbourhood were of a dark brown colour, and much congested; some black coloured fluid could be pressed out of the divided veins at each side of the uterus. The body of the uterus, both anteriorly and posteriorly, was marked with leaden-coloured streaks beneath the peritoneum, passing obliquely outwards and downwards. On section of the posterior wall, several open sinuses were divided, which contained ink-black coloured fluid about the consistence of milk. The inner surface was covered with a deep brown blackish, slightly mucous, secretion, which, when washed away with a stream of water, left the tissue at the inner surface of a mottled deep brown, mixed with a blacker colour. The usual reticulated appearance of the inner layer of the contractile tissue was observed beneath this coloured layer. When placed under water, the soft tissue at the inner surface had lost nearly all the shaggy appearance it has soon after the separation of the membranes and the placenta. The former situation of the placenta was marked, as usual, by the soft tissue being thicker and in greater abundance at this part than at the other portions of the surface. Studded over the inner surface, especially at the seat of the placenta, and directly surrounding it, were numerous larger and smaller round black spots, which, on closer examination, were found to be the open extremities of the uterine sinuses, containing an ink-black coloured fluid somewhat thicker than milk. On examination with a rather strong watchmaker's eye-glass, the situation of the placenta was seen studded with white points, which, on being transfixed with the fine point of a needle, could be drawn out a short distance, and were found to be the extremities of the utero-placental arteries. Several of these arteries were traced, and found to be immediately adherent to the tissues of the uterus; their orifices were open, their canals quite free; no trace of any coagulum were found in them. Incisions made into the walls of the uterus at and near the seat of the placenta divided several sinuses, all containing more or less of ink-black fluid similar to that previously described. Incisions through the peritoneum, across the leaden-coloured streaks, divided large sinuses filled with similar ink-black fluid. The inner surface of the sinuses was slightly stained black, but in none of them was there any appearance of coagula; at the lower part of the inner surface, some blood had been extravasated into the tissues. The orifice had a somewhat ragged appearance, but not the least evidence of any laceration. The ovaries were quite healthy; the portion of the vagina removed was also healthy.

[*To be continued.*]

PYÆMIA IN HOSPITAL AND PRIVATE PRACTICE.

By T. HOLMES, M.A., F.R.C.S.,
Surgeon to St. George's Hospital.

IN defending the term "hospitalism", which he has adopted from Sir J. Simpson, Mr. Erichsen naturally quotes the example of the hospital at Lincoln as showing that pyæmia may prevail in a hospital while the town is free from the disease. I was not aware that any one had ever doubted this, or that it could be necessary to invent a new term for so very old a fact. I would merely observe by the way, that the fact, if admitted, that pyæmia was prevalent in a hospital at one particular time while not prevalent in the town, does not prove that at another time it might not be absent from the hospital while prevailing in the town. It does not, in fact, prove that the disease is in any proper sense a hospital disease, and still less if the hospital be known to be faulty in construction. Every one knows and must admit that, as a hospital is intended for the treatment of considerable numbers of the graver cases of injury and disease, the results of errors in the construction of such places are likely to be of a very serious nature. This consideration was little attended to in old times (and the greater part of the Lincoln Hospital was built about a century ago), and hence many of our older hospitals are very defective in construction; and for many of them, I have no doubt, entire demolition and reconstruction would be necessary, if it were proposed to use them for the purpose of treating cases of serious injury or operation in anything like the proportion in which such cases are found in our great metropolitan hospitals. The defective construction of the hospital in question has led to an unhealthy condition, on which I dwelt many years ago in the joint report on the hospitals of the United Kingdom (*Sixth Report of the Medical Officer to the Privy Council for* 1863, p. 655), written by Dr. Bristowe and myself. I have there pointed out obvious and confessed defects of construction and of drainage, which had produced previous outbreaks of erysipelas, phagedæna, and pyæmia, in one of which it became necessary to close the hospital for some months. Improvements were made in the drainage, the wards were altered and enlarged, and other minor alterations were made; but it has been found impossible to remedy the original faults in the construction of the hospital. Last year, Dr. Bristowe was requested to visit the place, and to make a thorough examination of the hospital and its site; and, in consequence of that examination, recommended the entire reconstruction of the building. Sir J. Paget and Mr. Erichsen, while at different times they were attending to a professional summons to the town, were asked to look at the hospital, and also gave their opinions, though necessarily more hastily; and Captain Douglas Galton also surveyed the building, and gave suggestions for its alteration or partial reconstruction. The surgeons who had practised in the hospital, and whose operating practice appears now to be considerably more active than it would have been when the hospital was constructed, were unanimous in recommending the entire reconstruction of the building, which, indeed, was obviously unfit for the purposes of an active surgical hospital, and, in fact, was probably never intended for such purposes. The governors of the hospital came to the very sensible conclusion that, as they had already spent a good deal of money in alterations without curing the mischief, as the alterations which Captain Douglas Galton or those which Mr. Erichsen suggested were very costly, and their result appeared uncertain, they would build an entirely new hospital. I give them all honour for their spirited conduct; but I do not see the bearing of the above history on the general question of the propriety of treating acute surgical cases in hospitals, which is the real question raised by the word "hospitalism". Every reader of Sir J. Simpson knows this; and it was in order to raise this question that the word was invented. If Mr. Erichsen mean to continue the use of the word in order to impress on the mind of the profession the important but surely familiar truth that care ought to be used in the construction and management of hospitals in which acute disease is treated, my only objection would be to the confusion thus inevitably produced in the public mind, and to the unfair prejudice so created against all hospitals, whether properly constructed or otherwise. The fact that many of our smaller and older country hospitals are not fitted for the reception of acute cases, at least in any considerable number, and that they are liable to be visited by fatal outbreaks of septic (or, as we then called them, "secondary") diseases, is fully dwelt on in the Report above alluded to (see p. 547 and other places). It used at that time to be very generally believed that such "septic" affections were confined, or almost entirely confined, to the hospitals of large cities. I hope the Report in question did something towards dispelling this delusion, which rested a good deal on hearsay, and a good deal on a misapprehension of the significance of death-rates. An attempt is now being made to enforce the doctrine that septic diseases are confined, or almost confined, to hospital practice. As this is notoriously untrue of erysipelas, which every one meets with in private practice, it is not likely to be true with respect to the closely allied disease, pyæmia. Mr. Prescott Hewett's paper at the Clinical Society was hardly required in order to show the fact that pyæmia is met with in private; but it raised the very interesting question, whether there is really much difference in the relative frequency of the occurrence, more than the difference in the proportion of cases likely to lead to pyæmia would account for.

Mr. Erichsen assumes with much confidence that pyæmia was absent from the town of Lincoln while the hospital was, as he terms it, "pyæmia-stricken"; but he adduces no proof of the fact. A casual observation even from so respectable an authority as one of the surgeons of the hospital, that "he had never met with a case", is surely no serious proof. Many deaths from pyæmia occur which are only recognisable as such on *post mortem* examination. I need hardly remind readers of this JOURNAL of the details of my late lamented colleague Dr. Fuller's death. Then, again, the number of deaths from pyæmia is but small absolutely; and, though such cases may not have occurred in one surgeon's practice, they may in another. In the Lincoln Hospital, I am not aware that the number of cases of pyæmia occurring in the recent outbreak has been given; but I find in my account of the hospital in 1863, that during the previous three years, out of a total of sixty-four deaths in the hospital, five only were attributed to pyæmia. How easily might not a corresponding number of deaths (not, I repeat, necessarily the same number, for the causes of pyæmia are more rife in hospitals) have occurred in private unobserved or unverified? Struck by the disastrous termination which pyæmia often produces, and that in cases to which they have given special attention, surgeons are rather apt to exaggerate its real frequency. We have shown in the Report above referred to (p. 554), that the total number of deaths from pyæmia in three large London hospitals—viz., Guy's, St. Thomas's, and St. George's—where, as a rule, every case is examined after death, and the *post mortem* examination is carefully reduced to writing, was, during a specified period, 0.115 per cent. of the cases admitted, or 1.23 per cent. of the total number of deaths; that the deaths from pyæmia, as compared to the deaths from all causes tabulated by us, were in London hospitals 1.7 per cent., and in country hospitals 3.4 per cent. And we have shown also that a certain (and not a very small) proportion of these deaths from pyæmia occur in persons who are admitted suffering from the disease. This was proved to be the case in six deaths out of fifty recorded in one table from metropolitan hospitals, and might very likely have been so in other cases as well. In fact, every one who has attended the medical and surgical practice of hospitals knows that cases are occasionally admitted with pyæmia from apparently trivial causes; and in private practice many such are, as I believe, vaguely diagnosed as "fever" or under some other designation, and are buried unexamined. Are we to believe with Mr. Erichsen that, although pyæmia occurs in private from the slighter and less probable causes, yet those operations which so much more commonly produce pyæmia in hospitals never do so in private practice? It would at least take somewhat more cogent proof than has yet been offered before we could accept so strange a doctrine.

The above considerations express, as well as I can put them in a brief space, my reasons for dissenting strongly from the introduction into our surgical literature of the new term "hospitalism", and for protesting still more strongly against the doctrine which that new term is intended to convey—namely, that there is a specific unhealthiness generated in hospitals from which cases in private practice are exempt. Whenever this doctrine has been advanced, and has been challenged, its defenders have always resorted to the same line of argument as that to which Mr. Erichsen has recently been driven; *i.e.*, they have spoken vaguely about the prevalence of secondary or septic diseases in hospitals, have adduced the example of some hospital or hospitals in which definite errors of construction or of management have led to definite bad results, have assumed that nothing of the sort takes place in private practice, and then have triumphantly asked whether their case is not proved. We reply, undoubtedly not; because, if the argument were reduced to a syllogistic form, it would be found that the minor proposition is a pure assumption. Every one knows that pyæmia is unhappily prevalent in hospitals, though every one does not know how small the proportion of cases really is. Every one also is now beginning to know that pyæmia occurs moderately frequently in private, although the cases which we usually see accompanied by pyæmia in hospital practice are much more rare in private. But no one knows, even approximately, in what proportion of cases pyæmia occurs in private—and until that is known it is not right to argue, as Mr. Erichsen does, as if pyæmia had been proved to be absent from private practice. On the contrary, the more alive we are to the symptoms, and the more we know of the history of cases in private, the more frequent do we find this disease to be.

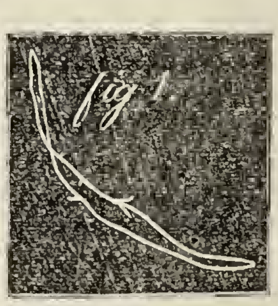
I am very sorry to trespass so much on the space of the JOURNAL, and still more sorry to challenge the teaching of so eminent a surgeon as Mr. Erichsen; but the matter is a very important one, and, when we hear a hospital-surgeon speaking of stamping out pyæmia by applying the pickaxe to our hospitals, as the cattle-plague was stamped out by using the poleaxe on the infected beasts, I think other hospital-surgeons may be excused for saying that nothing in their experience, and nothing which has been published in the experience of others, justifies language so calculated to mislead the public as to the condition of the hospitals in which we practise, and as to the results of the treatment of cases in them at the present day.

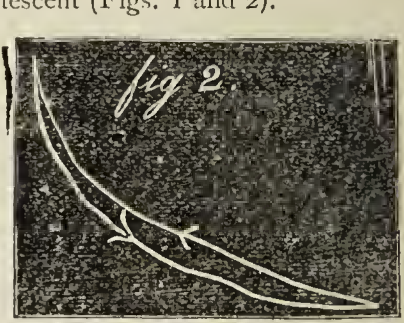
ON THE GRAPHICAL REPRESENTATION OF THE MOVEMENTS OF THE CHEST-WALL IN RESPIRATION.*

By ARTHUR RANSOME, M.D., M.A., Manchester.

A STETHOGRAPH has been constructed which gives an accurate tracing of the course described by any point on the chest-wall, in the forward and upward directions—*i.e.*, in the vertical plane at right angles to the anterior surface of the chest. With this instrument, many tracings have been made both in health and disease. The following, chiefly from the anterior ends of the third ribs, are selected as specimens of the results obtained, and to illustrate the conclusions drawn from them. It has been observed:

1. That the anterior end of the rib takes a different course in its ascent from that of its expiratory descent (Figs. 1 and 2).





2. That in most cases the uppermost line is that of inspiration.

3. That this course is liable to variation in consequence of the action of the will (Figs. 3 and 4).

4. That in the action of coughing, after the inspiratory stroke, there is a slight forward bulging of the rib, perhaps from the compression of the air in the lungs by the action of the diaphragm, then a downward fall for a space of about 0.2 inch, and afterwards an almost horizontal in-drawing of the rib (Fig. 6), quite unlike anything that could be produced by the simple angular movement of the rib.

5. That in *sneezing*, the course of the rib is similar to that taken in the act of coughing, except that there is no forward bulging at the commencement of expiration (Fig. 7); and in the latter part of its course the rib only drops about 0.15 inch for 0.8 inch of in-drawing.

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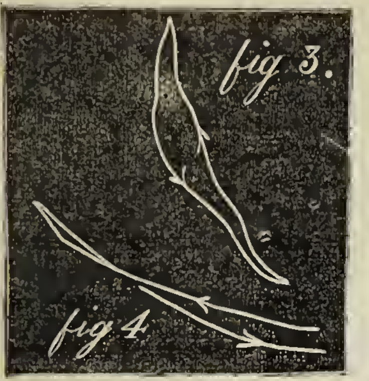
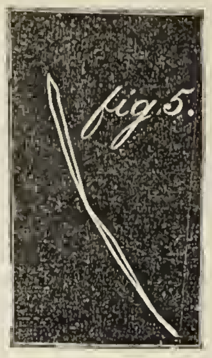
* Read before the Manchester Literary and Philosophical Society.

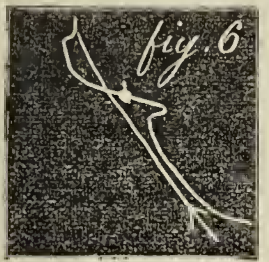
6. That in the dead subject, the movement of the end of the ribs, when simply raised and depressed (Fig. 5), approximates to a segment of a circle.

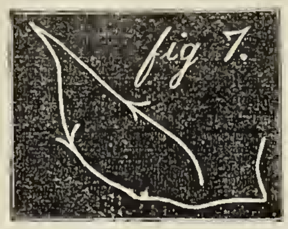
7. That as age advances, there is an approach to the form of curve traced by the unyielding rib, and the upward and downward strokes are more nearly alike.





From the above facts, it follows that the horizontal in-drawing of the rib, in the spasmodic actions of coughing and sneezing, is impossible without an inbending of the rib itself, and that the variations in healthy breathing are chiefly to be ascribed to the influence of the muscles of forced expiration, which produce more or less bending of the rib during their action.





In disease, a comparative feebleness of the respiratory track is to be noticed; and the want of elasticity of the chest is evidenced by the tendency to similarity in the upward and downward course of the ribs.

In acute phthisis there is a degree of tremulousness in the tracings, and in pleurisy is seen the effect of adhesions in the very small extent of forward push on the affected side.

The tracing of the cough of phthisis is, however, similar in its form to that of the healthy chest (Fig. 5), though much smaller and more feeble.

OBSTETRIC MEMORANDA.

TREATMENT OF *POST PARTUM* HÆMORRHAGE.

VIII.

ADDITIONAL interest is gathered to this important subject as the numbers of the JOURNAL roll on. The varied details of treatment brought to bear upon this class of cases cannot fail to give a sum total of experience which may be referred to with mingled feelings of confidence in the resources of our art, and estimation of the willingness of Nature to respond to treatment diversified and various in individual hands.

I will first briefly allude to the *post partum* form of hæmorrhage, and add my appreciation of the valuable and definite paper of Dr. Braxton Hicks. The patients of lying-in charities he states to be most exposed to the dangers of *post partum* hæmorrhage—I think certainly most liable to *fatal* hæmorrhage—since illicit pregnancies, depression of mind, and badly nourished conditions, decidedly conduce in a great measure to this state. I have found, however, that, in point of frequency, hæmorrhage is more prone to occur in superior ranks, in those who have led lives of indolence and luxury—pampered; and that it is often met with in those susceptible to the influence of pain, and nervously irritable and excitable.

There is one condition of hæmorrhage not previously alluded to which I have at times met with—namely, the escape of a colourless discharge, more or less profuse, and extremely apt to pass unnoticed. The feel of this discharge to the fingers is soft and velvety—very different from that of water or urine; it is insidious in its appearance, but inevitably leads to the same results as those of the loss of pure blood. In these instances I have always found small clots in the uterine cavity, generally closely connected with the surface from which the placenta is detached. The relations of the maternal parts of the placenta have been larger than usual, and the blood appears to be strained through the meshes of this part, allowing the extruded portion to be devoid of colour. This may go on with the uterus apparently contracted, and is often unattended to until it produces symptoms, particularly in those cases left to the observation of the nurse instead of the practitioner.

The alternate relaxation and contraction of the uterus without loss of bulk appears to me to be associated more frequently than any other condition with *post partum* hæmorrhage—not profuse, but protracted, and requiring the most anxious supervision and attention. I have seen four deaths from hæmorrhage shortly after delivery; in two there had been placenta prævia, in one firmly adherent placenta, in the remaining one persistent inertia. I am impressed with the force of Dr. Hicks's observation, that "it is generally those who never faint that die"—a fact I have witnessed on repeated occasions, for in none of the above-mentioned four instances did the patient faint; indeed, I have been accustomed to look upon fainting as an indication favourable than otherwise in extreme cases, and have resisted the assiduity of friends to arouse the patient by too vigorous and excited means.

I cannot substantiate from my own practice the opinions strongly expressed by Dr. Gream, as to the free and unlimited use of brandy in *post partum* hæmorrhage: it is a popular remedy, but inconsistent with modern teaching as to its action and value. Large quantities, I am assured, deaden sensibility, and therefore lessen the irritability we are desirous of producing to ensure contraction. In other cases, by increasing the rapidity of the circulation, it tends to keep up the flow of blood through the uterus; and though in some instances it may apparently tide over a danger, yet in the majority, when pushed to such an extent, it does more harm than good. The confusion of intellect, the loss of sensibility, mask the signs we should be most anxious to distinguish; and the incapability of such large quantities being assimilated is shown by the stomach not tolerating it when conscious of its presence, or, as Dr. Gream says, the "moment vitality is restored". It is true that, under these conditions, large quantities may be borne with impunity, but smaller doses are, I think, more calculated to do good, since there must be a limit to the quantity passing into the system, which can hardly be gauged by cramming into the stomach so much as it will hold. The very aversion to it by the stomach and its rejection is a means of good, and has been acted upon by the proposal of some to treat hæmorrhage of this nature by ipecacuanha and emetics.

Next to the complete emptying of the uterus, I am inclined to place reliance upon the combined pressure of the hands from within and without. Mere irritation will not always suffice; but the internal hand closed, and the external one expanded firmly over it, give a greater degree of command in urgent cases than any other method I know. Ice is not always to be obtained, but cold water injected into the uterus I resort to as the next plan. The subcutaneous injection of a watery solution of ergot, according to the formulæ of Beaujean or Sivideski, is worthy of trial, and may readily be included in the small armamentarium necessary.

The preparatory full dose of the liquid extract or infusion of ergot I have always given in suspicious cases, marked by irregular action, laxity of tissues, and enfeeblement of general powers, especially avoiding the too rapid emptying of the uterus, taking care not to leave it for an instant with my hand. Sir James Simpson used to mention a custom among some savage tribes—whether founded on fact or not I cannot tell—where, on the approach of labour, a stake was driven into the ground and a long rope attached to it; the distal end of this rope was wound round the patient's body, and she herself gradually turned round so as to be brought nearer to the stake as the labour progressed, thus ensuring an efficient following up of the uterus upon the descending child. The hand, or firm even binder, may be used with advantage for this purpose, as the pains become more developed in lingering cases; but the trusting to the bandage after labour is completed is a fallacious and delusive method of reliance against hæmorrhage.

The anticipation during pregnancy of after-hæmorrhage is best effected by diverting the attention from it in the mind of the patient, by correcting deviations of health and spanæmic conditions of blood, and attending to hygienic and sanitary surroundings. I advise sleeping on a mattress, daily affusion with cold water, avoidance of fatigue, and, above all, the preservation of an equal and undisturbed mental equilibrium.

EDWARD MALINS, M.D., Honorary Medical Officer
Birmingham Lying-in Charity.

IX.

I have used the perchloride of iron by injection, in about half-a-dozen cases out of a total of more than 900, and have had no ill effects from its use, but, on the contrary, I am convinced that it has been the means of saving life; I dare not go to a case without it.

I am sure Dr. Dabbs will allow me to correct him in his statement in the JOURNAL of February 14th, that drawing out the nipples in *post par-*

tum hæmorrhage is a remedy "untried and unthought upon". My college friend, Dr. Lumley Earle, who lately died at Birmingham, not only advocated this plan, but in his book on *Flooding after Delivery*, he strongly urges it.

Herbert M. Morgan, L.R.C.P., M.R.C.S., Lichfield.

X.

As I have good reason for believing that I was the first practitioner, in this country, who used perchloride of iron in *post partum* hæmorrhage, permit me to say a word or two of mine on the subject. Perchloride of iron may be said to be on its trial; it is, therefore, best on all hands to have the matter freely ventilated. But I would seriously counsel those who speak or write on the point at issue, to treat it clinically rather than theoretically, but, in any case, temperately. No amount of asperity can alter the effect of the remedy, for better or for worse; whilst indulgence in even seemingly hard words is ever a hindrance to fair controversy. Abuse of the remedy may, unquestionably, be fraught with danger. Its use, very possibly, has occasionally its risks; but these, I am of opinion, are reducible to a minimum by strict adherence to the rules laid down by Dr. Barnes, in his work on *Obstetric Operations*. Were it as dangerous as some would fain persuade us, a score or more of healthy women, who are daily walking about this neighbourhood, ought long since to have been laid in their graves, whereas it happens that they have been snatched from the jaws of death, and restored to their husbands and families.

Deeply sensible, therefore, of the importance of arriving at a correct verdict, I venture to suggest that it would be a good plan if the leading medical journals would kindly consent to place their columns at the disposal of every one who uses the remedy, in so far as to record the condition of the patient, the mode of use, and the issue. These items might be readily picked up by the Obstetrical Society, and, with very little trouble, would form a valuable table of results; whilst, to obstetricians I would say—

1. Do not use the perchloride needlessly; and, on the other hand,
2. Do not let your patient drift into a dying state, ere you apply the remedy.
3. Be careful to exercise the precautions laid down by its promoters.
4. Be honest and exact in recording and forwarding your cases.

You may not, perhaps, save every patient; but you will be most unfortunate if you lose as many in a long practice, as Dr. Snow Beck enumerates in his paper of January 3rd last.

Probably every man has a *tendre* for his own bantling; but I can truthfully say I am quite willing that mine should be treated strictly according to its merits; and, to that end, I make no apology for asking both journalists and practitioners to act on my suggestion.

Hugh Norris, South Petherton.

SURGICAL MEMORANDA.

AMPUTATIONS IN RAILWAY SMASHES.

If Dr. Inman would have the kindness to take the trouble to read my lectures before criticising them, he would not fall into so curious an error as that which he commits in the Journal of February 21st.

The "sweeping assertion", as he is pleased to term it, which I made, was to the effect that, so far as my own experience and the record of published cases was concerned, I knew of no instance in which amputation in the *upper* third of the thigh, or at the *hip-joint*, for a railway smash, had succeeded in the adult. He answers this by relating a successful case of double amputation below the knee and in the *lower* third of the thigh, and another of resection of the elbow for splintering of the bones. I have never "asserted" that such operations as these have not succeeded. There are many cases of success on record, and I have often performed the operations successfully myself. But what have they to do with primary amputation at the hip-joint or through the *upper* third of the thigh?

John Eric Erichsen.

THERAPEUTIC MEMORANDA.

CROTON CHLORAL HYDRATE.

A lady, married, aged 50, of rheumatic diathesis, was suddenly seized with sciatica on the right side, traceable to sitting on a wet cushion in a carriage. The pain was most severe. Two grains of croton chloral hydrate, with enough extractum anthemidis to make a pill, were given. Half an hour after taking the pill, the pain had ceased; there was a very slight return afterwards. With the beneficial effect of the croton chloral hydrate, there was "some confusion of head, and near objects appeared distant." She had no pain the following day until the evening; then a sharp attack occurred. Half a pill was given at once, and in twenty-five minutes the pain was gone. She had "slight confusion of head; no alteration of vision." There has been no recurrence of sciatica since. The first attack occurred fourteen days ago.

R. W. Falconer, M.D., Bath.

THE USE OF COCA.

Dr. Sieveking has drawn attention to "coca" as a therapeutic agent in the last number of the Journal, and says that he "never had the good fortune to meet any medical man who had a personal acquaintance with it". He adds, that he has obtained a chest of it, of which samples may be had. Several years ago I got possession of a quantity of the leaves, and experimented both on myself and on others. We chewed the leaves by themselves and with lime, as practised by the Indians very freely, and in my own case I drank strong infusions of them, but without any appreciable effects; I therefore came to the conclusion that the drug suffered from the sea-voyage, and have endeavoured, but hitherto in vain, to obtain a supply in hermetically closed tin vessels. Possibly the properties of the coca now in the hands of Mr. Squire may be unimpaired. I agree with Dr. Sieveking in thinking that coca is likely to prove a "very valuable restorative" drug, and I should expect it to be useful in that form of dyspepsia attended by the excretion of urea in excess, and also in certain forms of diabetes.

Arthur Leared, M.D.

CLINICAL MEMORANDA.

RUPTURE OF HEALING ULCER OF THE STOMACH.

H. R., a domestic servant, came under my care in July 1873. She was then aged 17, anæmic, and of an unhealthy general condition. She complained of loss of appetite; a burning pain in the left epigastrium, increased by the ingestion of food; with headache, constipation, etc. Under treatment, her condition improved, and she soon dispensed with my services. From that period up to February 14th, 1874, she occasionally suffered from indigestion, but never sought medical advice.

On the latter date, she rose apparently in her usual health, and went about her household duties until dinner-time—1 P.M. This meal was of the ordinary character, and was shared by another domestic. Shortly after dinner, the patient complained of great pain in the epigastrium, which continued to increase during the afternoon. Upon learning her condition, her master gave her some brandy and water, which was rejected by the stomach, along with other matters. The vomiting continued during the evening, and the patient went early to bed. Her fellow-domestic, who occupied the same room, reported that, soon after going to bed, the symptoms ceased, and the patient became tranquil. She spoke several times during the night, but made no complaints. In the morning, the patient was found to be in a fainting condition, and a messenger was despatched to me. An unsuccessful attempt was made to administer some brandy, and, before I had had time to arrive, the patient died.

Upon examining the body, I found the pupils widely dilated, and the abdomen distended with flatus. Having obtained permission from the friends, I examined the body seven hours *post mortem*. The thoracic viscera were healthy. Upon incising the peritoneum from the pubes upwards, an enormous quantity of gas escaped, the walls of the abdomen correspondingly sinking to the natural level. The greater and lesser intestines were not distended with flatus. The entire surface of the bowels was bathed in fluid of a greenish-yellow colour, which contained a quantity of thick curdled flocculent masses. Some fluid of the same character lay in the cavity of the pelvis. Upon examining the great omentum, I perceived some of this fluid issuing from an outlet at a point overlying the anterior surface of the stomach, one inch below the superior border, and three inches from the pylorus. The membrane was adherent to the viscus at this point. It required but little force to separate the adhesions, when a round aperture appeared, leading into the interior of the stomach. This aperture admitted the little finger; the walls of the stomach for a radius of half an inch from the circumference of the opening being indurated, but exhibiting no trace of existing or recent inflammatory action. At a point directly posterior to this opening, I found another, of less diameter, closely adherent to the posterior layer of the lesser omentum. In this one, the coats of the stomach were pierced; but the orifice was plugged by an indurated mass of plastic lymph, which firmly bound it to the lesser omentum. In this case, also, there was no trace of existing or recent inflammatory action.

As I had promised the friends of the patient not to remove any portion of the body, I was obliged to content myself with a very hasty survey, and could not obtain a preparation of what I believe to be a very rare condition. I am aware that collapse and death do occur from an ulcer penetrating the coats of the stomach; but in this case the lesions were evidently of old standing, and nature had made a wonderful attempt at cure. I think it probable that the efforts of retching had broken down the adhesions, and so caused the contents of the stomach to be extravasated, with a rapidly fatal result.

C. MOSS CAMPBELL, M.D., Staunton.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF ATRESIA OF THE VAGINA WITH RETENTION OF THE CATAMENIAL FLUID.

(Under the care of Dr. GREENHALGH.)

[Reported by Dr. HOPE.]

MARY H., aged 19, a domestic servant, was admitted into St. Bartholomew's Hospital on October 24th, 1873, with the following history. She stated that she was one of seven in a family—two brothers and four sisters; and I learnt from the girl's mother that nothing had ever been wrong with any of her other daughters. She went to service, when 11 years old, as a nurse-girl, and remained in her first situation for nine months, during which time she enjoyed very good health. After this, she became a general servant on board one of the coast-guard stations, where she remained three years, and enjoyed good health throughout. After leaving this situation, she again took to nursing, in the family of a lady at Margate, and remained in her service ever since.

In May last, she became ill, and suffered much from giddiness, pain in the back, and weight about the pelvis, and a feeling that she could not continue to follow her ordinary avocation. At this time, she had a complete stoppage of her urine, and suffered great pain; so that she was obliged to have it drawn off. This retention of urine recurred after the interval of a month; more recently it had been more frequent, and quite lately it had occurred almost every day. She had slept well all along, and her appetite was good.

On admission, her aspect was bright and cheerful; the complexion clear, with delicate colour; she slept well; tongue clean; pulse quiet, but feeble; the bowels were reported to be regular; her appetite was good, and she was free from pain; but there was a total inability to pass her urine. Her circulation was habitually languid, and she suffered much from cold hands and feet. On physical examination, the abdomen was found natural and free from pain or tenderness, and no tumour could be detected in the hypogastric region. The pubes was covered with hair, and the external genitals were apparently well formed; but, where the vagina should be, there was simply a depression or short *cul-de-sac* formed by a membrane, which completely occluded the vaginal canal. No firm substance could be felt behind this membrane; but, when the finger was placed against it, and, at the same time, pressure was made on the hypogastrium, there was a considerable bulging forward and an obscure sense of fluctuation. The catheter in the bladder, and the finger *per rectum*, indicated that there was a considerable substance between, and the finger and catheter could not be made to meet in any degree, the latter seeming to go upwards in a marked manner. A dense irregular mass could be felt *per rectum*, encroaching considerably on its space.

In Dr. Greenhalgh's absence, Mr. Thomas Smith saw the case with me, and, in consultation with him, it was thought advisable to make a small puncture by means of a fine aspirator needle. This was done under chloroform, and about half an ounce of thick treacly fluid escaped. The wound was then closed with collodion.

November 8th. The following day, she was feeling very well. She had passed a good night, and there was no constitutional disturbance of any kind. Pulse 80.

November 9th. There was some slight tenderness over the uterine region. The tongue was a little spotted. Pulse 92.

November 11th. Mr. Smith introduced a long fine trocar, and, by means of an exhausting syringe, drew off about three ounces of the same sort of fluid, which was perfectly inodorous.

November 12th. All was quite right. A common enema was given.

November 14th. Towards evening, she felt feverish. Temperature 101. The pulse was quick, and she had some slight shivering, with pain and tenderness across the lower part of the abdomen. A morphia draught and poultice were ordered.

November 15th. She passed an uncomfortable night. The bowels had acted since the enema. The tongue was furred; the pulse quick; the face flushed. On placing the hand upon the abdomen, a hard swelling could be felt in the hypogastric region, irregular in form, and extending up to the umbilicus; this was clearly due to muscular contraction and flatus, as the bladder was found to contain very little urine.

November 16th. To-day, as there was considerable constitutional disturbance, Mr. Smith made a small opening in the membrane, and introduced a gum elastic catheter, and drew off sixteen ounces of dark, thick offensive fluid. After this, the abdomen was carefully bandaged and the catheter tied in. Condy's fluid was ordered to be freely injected through the catheter.

November 17th. She had passed an easier night, and there had been a free discharge through the catheter each time the plug had been withdrawn. Pulse 100. Her general state was good, and the bowels had acted from medicine.

November 18th. The discharge was still free and very offensive. The vagina was freely syringed out with Condy's fluid, at short intervals, by the nurse in charge.

November 19th. There was considerably less discharge, and she seemed quite comfortable.

November 22nd. The discharge had almost ceased; some slight flaky matter obstructed the catheter. The catheter was changed.

November 25th. The discharge had ceased. Mr. Smith enlarged the opening, upwards and downwards, so as to allow the passage of the index-finger, and stitched the two edges of mucous membrane together. The vagina beyond was very capacious, but the uterus could not be reached. Syringing was continued.

November 29th.—She was convalescent.

December 11th. The opening was wide enough to admit the forefinger. The uterus could not be felt *per vaginam*, and the examination gave pain; but *per rectum*, along with hypogastric pressure, it could with difficulty be reached. Her general health was very good. She left the hospital quite well after a few days.

CLINICAL REMARKS BY DR. HOPE.—The above case is a well-marked instance of atresia, due to the presence of an imperforate hymen, behind which the pent up fluid was retained. It is one of the simplest and more common varieties of this affection. The term *atresia* is applied to all cases of absence or closure of the vagina. The graver forms are those in which the vagina is converted into a solid cord, in some variable portion of its length, or where membranous bands of a cellular or cellulo-fibrous character cross in different directions. The situation of the atresia may be quite low down, or at the middle or upper part of the canal. The membranes which occlude the vagina are, however, variable in character. They may be extremely lax and non-resistant, or so tense that it is even difficult in some cases to determine the absolute thickness of the tissue constituting the obstruction.

The diagnosis in this case was rendered quite easy by the obvious bulging forward of the membrane when firm pressure was made upon the hypogastrium; there was also the sensation of fluid when the finger was pressed against the membrane. The catheter, when passed, went in an upward direction, and there existed a dense mass between it and the finger *per rectum*, where a hard irregular swelling could be felt pressing on the bowel. How far the uterus may have been involved it was difficult to determine, as it could not be reached *per rectum*, owing to the extreme distension of the vagina.

The cause of the ailment, as is often the case, had been overlooked at first; the symptoms of menstruation had clearly been apparent for weeks previously. There were the usual uneasy sensations of weariness and uneasiness, increasing in intensity each month, but no discharge of blood; and the health of the patient, which had before been good, suddenly became disordered without any obvious reason. Obstinate constipation ensued, along with difficulty in passing urine, which at length ended in complete retention of urine, necessitating the daily use of the catheter—symptoms very common in such cases, and clearly the result of pressure upon the rectum and bladder. The treatment of such cases is of the greatest clinical interest, as a sudden evacuation of retained menstrual blood is always attended with danger, and may prove fatal, owing to the liability there is of purulent absorption, septicæmia, or the setting up of peritoneal mischief. As an instance of this, I will quote briefly the following interesting case, which was admitted into St. George's Hospital on December 15th, 1866, under the care of the late Dr. Page, with the following history.

Jane ——, aged 14, six weeks before admission, had been operated upon, as an out-patient of one of the London hospitals, for imperforate hymen, and had walked home after the operation. In three weeks, she was seized with shivering and sickness; the motions were reported healthy, and she was delirious at night. On admission, she was flushed and very feverish; the pulse was rapid; the skin very hot. There was a little discharge from the vagina; the tongue was red, but not furred, and had a few elevated papillæ; the urine was thick and albuminous. She was very restless and delirious at night. The temperature was extremely high (104 degs. at midday). The stools were watery and dark. She became rapidly worse, very restless, with slight headache at night; and this state was continued during the morning time. The veins of the extremities were very much marked; the blood was very easily pressed out, but the vessels were much distended. The skin was remarkably pungent; pulse very rapid (160). She began to pass blood by the anus on the 20th. Inspirations were very rapid. Harsh superficial *râles* were heard all over the lungs. The belly was tympanitic. She was freely stimulated, but died comatose on the 22nd.

On examination, it was found that both lungs were engorged and œdematous at their posterior and inferior parts, and there was a secondary abscess in the lower part of the inferior lobe of the left lung. The kidneys were large, and the cones much injected. The cortical substance was pale, and rather more extensive than natural. The capsules were adherent to the surfaces of the organs. At the lower part of the small intestine, and about six inches above the ileo-cæcal valve, the mucous membrane, and coats of the intestine generally, were greatly congested; here also a number of small circular ulcers were found. Some of the ulcers extended through the coats of the intestine to the peritoneum; in others, the mucous membrane was destroyed, and a mass of cheesy deposit exposed, to which, in many cases, fæces adhered. The ulcers had remarkably sharp-cut edges in most cases. Peyer's patches were found unenlarged, on examining the upper portion of the intestines. The mesenteric glands corresponding to the ulcerated part of the intestine were enlarged and congested, and some contained a deposit of cheesy material. The fundus uteri was congested, and a small quantity of muco-purulent fluid was found in its cavity. One or two patches of ecchymosis were found under the vaginal mucous membrane. The brain was congested at the surface, but otherwise firm and natural.

For the reasons above stated, it is most essential that the fluid should be evacuated slowly, in order that the distended parts may recover their tone, and that there should be no admission of air so as to occasion decomposition of the retained blood. With this view, the aspirator was made use of, as with it such a risk is less likely to occur. In this instance, however, it failed, and, on the sixth day after the first operation, constitutional disturbance of such a marked character was set up, that it became absolutely necessary to get rid of the offensive and noxious fluid as soon as possible, and to neutralise its poisonous influence by the careful and assiduous use of some deodorising or antiseptic fluid. The Condy's fluid answered admirably, though a weak solution of carbolic acid or the sulpho-carbolate of zinc might have been substituted. This was persisted in till all trace of fœtor had passed.

As to the time at which the operation should be performed for the relief of atresia; if deferred too long, there is always risk during the period of menstrual activity of some such catastrophe as rupture of the Fallopian tubes, or even of the uterus itself, pelvic hæmatocele, etc.

The opening ultimately made by Mr. Smith was sufficiently large to admit of the escape of the catamenial fluid at a subsequent period, and care was taken that it should not be too large; but the aperture produced gave a small oval circumference, which fairly resembled the natural orifice of the hymen.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.

RECENT PENETRATING WOUND OF THE RIGHT EYE: LOSS OF SIGHT: OLD TRAUMATIC CATARACT OF THE LEFT EYE: RESTORATION OF SIGHT IN THE LEFT EYE BY LINEAR EXTRACTION OF THE CATARACT.

(Under the care of Mr. SPENCER WATSON).

A NAVVY, aged 25, applied in August, 1873, three days after receiving a penetrating wound of the right eye, with prolapse of the iris upwards, and effusion of blood into the vitreous space, and loss of all sight except a mere perception of light. Treatment by the internal administration of iodide of potassium and inunction of mercury did little or nothing towards restoring sight, though the effusion in the vitreous body became less prominent and lost its red colour, changing from blood-red to a pale buff. No details of the fundus, however, could be obtained; and sight remained nearly as before. The left eye had been almost useless to him ever since seven years of age, when he received a blow in it; he had since only been able to distinguish the fingers of a hand held between him and the light, though unable to count them. The pupil was completely obstructed by a dense membrane, covered in parts with uveal pigment, and at others having a chalky white colour. The pupil was easily dilatable, and, when dilated, was perfectly round and not tied down by adhesions. On October 3, 1873, ether was administered by Mr. Mc Hardy; and, a curved cataract needle being introduced, the membranous cataract was freely detached from its circumferential attachments, and set loose in the pupillary area and anterior chamber. A broad needle was then introduced three lines from the corneal margin, and an iris forceps then passed in. The capsule was seized and withdrawn entire without difficulty or accident. Vision improved from the time of the operation; and, on January 6th, 1874, he could read No. 4 of Jäger's test-types with a lens of four inches' focal length, and No. 30 of Snellen's, at twenty feet, with a lens of five inches' focal length.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, FEBRUARY 10TH, 1874.

A. WHYTE BARCLAY, M.D., Vice-President, in the Chair.

NOTE ON CHOLERA. BY J. R. N. HENNESSEY, F.R.A.S., AND G. G. MACLAREN, M.D., INDIA.

THE authors of the paper first described the geographical position of the town of Dehra between the Sivalik and Himalaya Mountains, the parts of it occupied by the native population (under the medical care of Dr. Maclaren), and the civil station where the Europeans resided. The meteorological observatory of Mr. Hennessey lay midway in the district along which the main road from the low country passes to the sanatorium of Mussoorie. The first case of cholera that occurred in the summer of 1872 was that of a student passing through Dehra on his way to Mussoorie, where he died on July 8th. The first case in a resident of Dehra, who had not been in the way of infection except as residing near the main road along which the student passed, occurred on the 12th of the same month. Three days later, other patients presented themselves for treatment, and the disease progressed till September. Its course was indicated in a table of curves, which was shown at the meeting. One special case was related of a poor Eurasian family living near the main road, most of whom died from their obstinacy in returning to the infected house after removal. Though near to Dehra, and in uninterrupted communication with it, Mussoorie and Landour on the ridge of the hills enjoyed almost complete immunity from the attack. The diagram referred to consisted of curves showing the number of attacks each day, the daily deaths and recoveries, and the ultimate number of deaths and recoveries among each day's admissions. On comparing these curves with the meteorological register of the Observatory, no corresponding fluctuations were discovered (a complete calm having prevailed), except in the "elastic force of vapour," the curve of which had a singular coincidence with the sudden rises and falls of the other curves, rising with the recoveries as marked in them. The authors referred to their diagram as indicating that the curve of cholera attacks rapidly rises to a maximum, and then falls as rapidly or descends gradually to zero; and also as accounting for the fact that any so-called specific discovered when the tide is ebbing may prove useless when applied while the curve is rising in a succeeding epidemic. After alluding to some spectroscopic experiments on cholera evacuations, the authors summarised a few facts connected with the question of infection in favour of the choleraic poison having no vitality, and of an imported cholera patient having no power to infect others except in the presence of the required atmospheric conditions.

ON THE TREATMENT OF RICKETY DEFORMITIES OF THE LEGS BY OPERATION. BY HOWARD MARSH, F.R.C.S.

The author gave an account of four cases of rickety deformity of the legs which he had treated by operation. In two of them, the curvature was outwards, in one outwards and forwards, and in one almost directly forwards. In the first three cases, a tendon-knife was passed down to the tibia, where the concavity of the curve was greatest, and the periosteum was divided transversely. A fine saw was next introduced, and the bone partially divided, and then, by a somewhat suddenly applied force, snapped across; the fibula was either bent or broken, and in one of the operations the tendo Achillis was cut. In the two cases in which the curvature was outwards, the legs are now straight; in the boy whose curvature was outwards and forwards, and in whom the treatment was interrupted by an attack of scarlet fever, the deformity, although much diminished, is not wholly removed. In none of the patients was the operation followed by any serious symptom, and, except in the boy who had scarlet fever, convalescence was complete in about a month. In him it was complete in about six weeks. In the fourth case, in which the bones of the legs were curved almost directly forwards, and in which the deformity was so extreme that the boy could walk only a few steps at a time, a wedge of bone was taken out of the tibia with a chain saw, the tendo Achillis was cut, and the fibula broken in one leg, and cut with bone forceps in the other. These operations, which were performed, the one on April 8th, the other on October 4th, 1871, were not followed by any dangerous symptoms, but small discs of bone became necrosed and were slowly separated from the cut ends of the tibia. Union was firm in one leg in three months; in the other, in which it was much delayed by the tedious separation of the necrosed portions of bone, in six months. The legs were now straight, and the boy walked without impediment. The paper was illustrated by photographs and casts of the limbs before operation, and the cases were shown.

Mr. William Adams said the first three cases reported were excellent examples of a surgical operation recently introduced. The result obtained was exceedingly good. Subcutaneous division of the bone appeared to be more applicable to children than the open wound and compound fracture in the fourth case. The former was easily performed, and free from any danger. He thought that but few cases would require to be treated by removing a wedge of the tibia and dividing the fibula. He saw Mr. Little perform the operation six years ago upon a rickety adult, aged 23. The operation was severe, the treatment tedious, but the result was very satisfactory. The cutting through the dense ivory tissue was very difficult. Analogous operations on other bones had been followed by good results. In the case of a child with a bent femur, he had cut through the bone subcutaneously, and straightened it. In the four cases reported, the rickets was almost limited to the lower extremities. The fact that the femora of the boy in the fourth case had straightened whilst under treatment, was interesting. There was a disposition to this spontaneous straightening; but long continued recumbency for one or two years was extremely useful, especially in girls, thus avoiding severe pelvic deformity.—Dr. Hare asked if, in the cases reported, the legs might have been straightened without an operation. He had seen many bad cases do well with recumbency and the use of splints.—Dr. Drysdale asked what was the earliest age at which Mr. Marsh had operated. He thought that much might be done by recumbency and the use of splints before the age of four or five.—Mr. Mac Cormac asked Mr. Marsh what means he had of judging the best age for operating. The use of the chisel for cutting through the bone was objected to in the paper, as likely to be more dangerous and difficult than that of the saw. He thought the chisel might be used with more freedom and less difficulty than the chain-saw. It was much used abroad.—Mr. Thomas Smith thought that the method of operation in the first three cases was better than that in the last. He thought it might be better to chisel half through the bone and then break it. By removing a wedge-shaped piece, the bone was placed in a good position; but, if necrosis always followed, it would not be the best mode of operating.—Mr. Gay asked if other treatment had been tried before operating, such as the use of splints, rest, cod-liver oil, etc. When other treatment had failed, the operation might be performed. It should not, however, be employed promiscuously.—Mr. Warrington Haward said that if the bones were bending and the deformity increasing, rest and recumbency would do good; but if the bones were hardened, then an operation were justifiable. Both the subcutaneous division of the bone and the removal of a wedge-shaped piece were compound fractures, and ran the course of such. Every care should be taken for the rapid healing of the wound, and antiseptics should be employed. A mere deformity hardly justified the procedure, but if the child walked with great inconvenience and the deformity went on increasing, he thought it best to operate.—Mr. Willett said that when the deformity was permanent and the bone hard, it was useless to expect improvement from the application of splints or medicine, and then the operation was useful. The yielding of the bone usually took place at one point, and if the operation were performed there, the apparent curvature disappeared.—Mr. Howard Marsh said that he agreed with Mr. Adams's remark, that the subcutaneous operation was the better for children; but in the fourth case the deformity was angular, and required a piece of bone to be removed. He agreed that before operation recumbency and splints should be used; and he believed in the tendency to spontaneous straightening with subsequent growth. But it was very difficult to keep a child of the poor at rest so long a time as two years, or even six months. As to the age, the larger operation was performed on a child, aged 7. He had had no experience of the use of the chisel in cutting through the bone, but would use it if an opportunity occurred. He thought the necrosis of the end of the bone in the fourth case resulted from the application of perchloride of iron to the bleeding point: the necrosis was very limited.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, FEBRUARY 3RD, 1874.

SIR WILLIAM JENNER, Bart., M.D., F.R.S., in the Chair.

Ununited Fracture of the Femur.—Mr. Butlin exhibited a case of ununited fracture of the femur, occurring in a woman, aged 51. The fracture was oblique, about five inches above the knee. A Liston's long splint and a perineal band were adjusted. At the end of six weeks, union had not taken place. It was put up again, and subsequently on an inclined plane, with a weight attached to the leg. Shortening, to the extent of two or two and a quarter inches, was present. At the end of six months, the lower end of the upper fragment of the femur was resected, and two steel pegs were inserted, these being replaced at the end of a month by two ordinary gimlets. The patient lost ground; the temperature increased; and, on January 31st, the limb was amputated. The points of interest were, the condition of the holes in which the gimlets were inserted, and the state of the knee-joint. In spite of the absorption that had taken place round the pegs, new bone had been deposited; the pegs, however, failed to keep the end of the bones quiet, and for this reason the operation had failed. There had been no history or symptoms of the disease of the knee-joint; and yet, well-marked fibrous ankylosis, as well as ulceration existed, probably from the extension and rest for so long a period as four or five months.—The President inquired whether the patient had been lame before the accident, whether any pressure had been applied to the joint, and when the weight was adjusted.—Mr. Butlin replied that no intentional pressure to the knee-joint had been used. It was five months after the accident that the weights were employed.

Intraorbital Growth.—Mr. Brudenell Carter exhibited an intraorbital growth of uncertain character, removed from a youth, aged 17. The sight of the right eye had been defective as long as the patient could remember. In June last, it was very misty, and for the last two or three months he had been quite blind with that eye, and it had become red and painful. The conjunctiva was congested, the pupil dilated, and the ball of the eye hard and painful. On December 10th, the eye was removed. It was a question whether it was not a form of caseous degeneration.—Referred.

Villous Tumour of the Rectum.—Mr. Gowlland related the history of three cases; the specimens and several drawings being exhibited. He had seen five cases in seventeen years. The first occurred in a man, aged 62, otherwise healthy, who thought he suffered from bleeding piles. The hæmorrhage ceased, but something protruded from the anus and gradually increased in size. It did not bleed, was not accompanied by much pain, but there was a mucous discharge and irritability of the bowel. When seen, the tumour was of the size of a fist, protruding from the anus, and bringing down with it four or five inches of the bowel. It presented a velvety vascular appearance. A ligature was placed round what might be termed the pedicle, and the growth was removed, without the aid of chloroform. He made a good recovery, and left the hospital in a month. A year afterwards, he continued well; there were no remains of the hardness. The second case occurred in a woman, aged 65, who had suffered from protrusion of the bowel for twelve or fourteen months. The hæmorrhage was at first slight, but not profuse, as occasionally met with in villous tumours. There was a constant sort of tenesmus, but only mucus was passed, occasionally tinged with blood. The growth was removed, and the patient made a good recovery. The third case was that of a man, who had been operated on eleven years previously for the same disease. He had suffered for three or four years from slight diarrhœa and discharge from the bowel. Six weeks before admission, there had been pain, hæmorrhage, and difficulty in returning the tumour. There had been no symptoms after the first operation, in 1862, until twelve months since. Four months ago, there was protrusion with severe hæmorrhage and a difficulty in returning it, with a constant desire to defæcate, and the passage of a sero-sanguinolent discharge; as much as a quart being passed in twenty-four hours. Mr. Gowlland referred to two other cases. One occurred in an elderly woman, supposed to be suffering from a mulberry fungus of a malignant character, who had been sent out of hospital as incurable. Another case was that of a patient, aged 31, who stated that it commenced as a pile or polypus when he was only sixteen years old. It bled for two or three years, and was removed when he was nineteen years old, but returned. Other attempts at operation had been made; and twelve years since it was removed by ligature.—The President remarked that, where villous growths occurred in the bladder, they were generally very numerous, and composed of fibrous tissue, loops of vessels, and epithelium on their surface. It spoke well for our advanced pathology, when in one case recorded the patient had been sent out as incurable.—Mr. Marsh related the particulars of a case of a young woman, where a malignant growth protruded from the anus. Colotomy was performed, which relieved the symptoms, but the tumour increased, and the patient died seven or eight months afterwards. In reply to the PRESIDENT, he stated that there were no secondary deposits, but it was of very rapid formation.—Mr. HENRY ARNOTT observed that this was a point of great interest. Mr. Quain called them innocuous villous tumours, as there were no secondary deposits and the glands were not involved. Rokitansky says that the glands were occasionally involved; and, from their proneness to occasion hæmorrhage, they must be regarded as malignant. Mr. Arnott had seen Sir William Fergusson remove one thirteen years ago, as large as a cricket-ball, but there was no cancer in connection with the growth when carefully examined. There was a case now in St. Thomas's Hospital, of a young woman, aged 25, where Mr. Arnott had opened the colon for cancerous stricture of the rectum; there was great induration of the surrounding tissues, and the lumbar glands were involved; ascites to the level of the umbilicus was also present. Another point of interest was the resemblance of these growths to fungus hæmatodes of the uterus, or bleeding cancer so-called, where Dr. Snow Beck had stated there was no cancer, although it followed the course of cancer as regards infiltration of neighbouring tissues and deposition in other parts of the body.—The PRESIDENT thought the constitutional condition and general state of the patient would throw light upon the nature of the case.

Sarcomatous Growths from the Vagina, Bladder, and Uterus of a Child Two Years Old.—Mr. HOWARD MARSH exhibited a specimen where the mucous membrane was the seat of a new growth. In the bladder, there was a small surface covered with wart-like elevations, irregular nodular masses with short thick pedicles; in other parts, superficially resembling the commissures of the brain, with tortuous deep fissures. In the vagina, it was chiefly the anterior wall that was affected, with pedunculated club-shaped masses and flattened villous-like processes. Under the microscope, they were seen to consist of rounded lymph-like cells in a homogenous matrix. The child had suffered from the disease for twelve months. At first, there were bladdery projections from the vulva, noticed by the mother; some had been removed by a surgeon. The urine escaped involuntarily, and there had been much pain present. Death ensued eighteen months from the commencement of the growths. There were no secondary deposits. It was a case of great rarity; he knew of but three others.—The PRESIDENT thought there were some points in the case resembling those of villous growths.—Mr. MARSH stated that it bled slightly, but was not very vascular.—Referred.

Grouse-Disease.—Dr. CRISP showed the tape-worm (*Tænia calva*) of the grouse (*Tetrao Scoticus*), prepared in the following manner. The worm was laid upon a piece of glass; then gradually dried; over this another piece of glass of the same size was placed; the edges were cemented so as to exclude the air; by this means the form of the parasite was far better seen than when preserved in spirits or in Goadby's solution. He also showed a strongylus, not before described, from the cæcal appendages of the willow-grouse (*T. Saliceti*), and believed that strongyli would be found in the cæca of the ptarmigan, black cock, capercailzie, and others of the Tetraonidæ. Respecting the so-called "grouse-disease," he came to the conclusion that, looking to the great abundance of entozoa in various animals, as in hares, rabbits, seals, porpoises, sun-fish, salmon, trout, and many others; and, looking also to the great abundance of tape-worms and strongyli in grouse, apparently in good health and in good condition, it was more than probable that there was another deleterious cause in operation (fungoid or otherwise) with which we were not at present acquainted, and that, before arriving at accurate conclusions, a more methodical, scientific, and comprehensive investigation must be made. He had examined the viscera of forty-eight grouse. The liver was dark-coloured and softened, there was thickening of the cæca, and abundant epithelium. The cæcal appendages were enormous, being of greater length than the intestinal canal. Of six birds examined in 1873, all had strongyli in the cæca, and all had tapeworms in the intestine. Of twelve healthy birds, seven contained tapeworms. In seventeen others, only two were free from tapeworm and strongyli. In some, the intestines were blocked up by tapeworms, and yet the birds were healthy.—In reply to the PRESIDENT's question, whether parasites were as abundant during the worst years of the epidemic, Dr. CRISP stated that the strongylus was not discovered by Dr. Cobbold until last year. Tapeworms were very common at all seasons.—Mr. TOWNSEND thought the killing off all the hawks had something to do with the greater prevalence of the disease on the Scotch moors. They killed the weak birds, and prevented the spread of the disease. He had examined numbers of grouse in Egypt during the past winter, and had never found parasites.—The PRESIDENT remarked that tapeworms might exist in individuals, and their presence not even be suspected; whereas, in others, epilepsy might occur from their presence, or the general health suffer materially.—Dr. R. FARQUHARSON thought that the evidence was not sufficient to show that the strongyli were the cause of the disease, as they were as frequent in healthy as in diseased birds. He regarded it more as an epidemic like cholera, with a tendency to return every seven years. There was the same uncertainty in the territories attacked. On one moor, nearly all the birds would die; and on another contiguous moor, separated only by a small burn, there would be no disease. The birds rapidly emaciated. They were generally found near the burns, leading one to infer that the disease was of a feverish nature, and probably contagious.—The PRESIDENT remarked that Dr. Crisp's mode of putting up specimens between glass slides was infinitely better than any he had seen before.—Dr. CRISP remarked that the eggs never matured in the grouse. There must be some intermediate habitat for the parasites.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, FEBRUARY 4TH, 1874.

E. J. TILT, M.D., President, in the Chair.

The Late Dr. Phillips.—The PRESIDENT, before proceeding with the business of the evening, alluded feelingly to the loss the Society had sustained by the death of its late Secretary, Dr. J. J. Phillips. Dr. Edis had been appointed by the Council to the vacancy thus caused.

Distorted Hodge's Pessary.—Dr. J. C. HAYES exhibited a distorted Hodge's pessary that had been worn continuously by a patient for five years without being removed. During the last three months, it had caused discomfort. On examination, the anterior extremity was found to have ulcerated into the vagina, and was encircled by a firm transverse band, which had to be divided by the bistoury before the pessary could be removed. He thought that all patients wearing pessaries should submit themselves for examination from time to time.—Dr. EDIS mentioned a case that occurred to him, where one end of a Hodge's pessary had completely buried itself in the posterior wall of the vagina. Instead, however, of cutting the band, he divided the pessary, and thus extracted it—a safer plan, he thought, than dividing the band when this was broad or thick.—Dr. BARNES referred to similar cases recorded in his book, and quite agreed in the necessity of examining all patients wearing pessaries, at least once in every three months.—Dr. PLAYFAIR, Dr. ROUTH, and Dr. WYNN WILLIAMS also spoke of the advisability of watching patients whilst wearing pessaries.

Tubal Pregnancy.—Mr. SIDNEY TURNER showed a specimen of tubal pregnancy occurring in a woman, aged 35. She had miscarried once previously at the third month, and had advanced about two months in pregnancy when, whilst out walking, she was suddenly seized with pain in the hypogastrium, and was conveyed home in a cab. Mr. Turner saw her shortly afterwards. She was then in a state of collapse, very blanched, cold, and pulseless, but perfectly sensible. He made a vaginal examination, but found nothing beyond an uterus slightly increased in size. There was no hæmorrhage *per vaginam*, nor any bulging in Douglas's pouch. From the suddenness of the attack, and the very anæmic appearance of the patient, he thought there was a rupture of an extrauterine fœtation. Perfect rest was enjoined; but, fifteen hours after the onset, she suddenly jumped out of bed, and immediate fatal syncope was the result. At the necropsy, thirty-six hours after death, the peritoneum was found to be filled with about three quarts of blood in a semi-coagulated state. The uterus was slightly enlarged, but contained no blood, although the Fallopian tube was pervious along its entire length. The right Fallopian tube was distended in its middle part to the size of a small egg, and here rupture had occurred. There was a well-marked Graafian vesicle in the right ovary, and adhesions between the ovary and uterus had taken place showing previous inflammatory mischief. The uterine cavity was filled by the deciduous membrane, which was not separated, but could easily be detached.—Dr. ROUTH asked whether the idea of an exploratory incision had been at all entertained. The sickness and arrest of menstruation had led early to a suspicion of pregnancy. He would like to know whether full examination had been made to put this by rectal, vaginal, and stethoscopic investigation, besides the other signs of gestation. The question of perforation of the stomach or intestines (typhoid) had been raised, but neither appeared to have been seriously considered as present.—Dr. SAVAGE inquired what circumstances led to the idea that it was not an instance of tubal pregnancy. In regard to Dr. Routh's suggestion as to the advisability of an exploratory incision, even when the patient was *in articulo mortis*, Dr. Savage hoped no one would be induced to hazard one under such circumstances, since the discredit of killing the patient would fall, and rightly too, on the practitioner. He wished also to call attention to the loose attachment of the remarkably well developed decidua. It could be easily detached, leaving, to all appearance, unchanged the internal surface of the uterus.—Dr. HAYES, Dr. HEYWOOD SMITH, Dr.

Barnes, Dr. Wynn Williams, and Dr. Madge also took part in the discussion.

Difficult Labour from Contracted Pelvis.—Dr. A. B. Steele (Liverpool) read a paper on two cases of dystocia from contracted pelvis. In the first case, forceps and version had been resorted to six times in six separate labours, with a fatal result to the child in each instance. In the seventh labour, Siebold's forceps were tried, but failed to deliver the head. Version was performed, and a living child extracted. In both instances, the induction of premature labour had been suggested, but was not permitted.—Dr. Braxton Hicks remarked upon the advantage of resorting to version in place of employing the forceps.

Puerperal Thrombosis.—Dr. Playfair read a paper on puerperal thrombosis. He pointed out that, on account of its tangible symptoms, the attention of the profession had been chiefly limited to one only of the manifestations of this disease—phlegmasia dolens. He discussed at considerable length the analogies between this and thrombotic affections in other parts of the body, especially in the heart and pulmonary arteries, and brought forward many arguments to prove their essential identity. He also considered the question of spontaneous thrombosis and embolism in the pulmonary arteries, arguing, in opposition to the views of Virchow and other writers, that the former was a possible though rare affection. The anatomical conditions accompanying peripheral thrombosis, and central thrombosis and embolism, were also discussed. The author then considered the possibility of eventual recovery after pulmonary obstruction, bringing forward several illustrative cases, and concluded by discussing the treatment.—Dr. Barnes inquired whether the clot had been noticed to be present on the same side to which the placenta was attached. He related a case in which the application of six leeches to the cardiac region had produced marked relief, the patient ultimately recovering.—Dr. Francis Tayler thought there were three points worthy of notice. 1. It appeared that the patients were suddenly found to be at the point of death before any danger had been apprehended. 2. In those cases which were examined after death, a firm laminated clot was discovered, evidently not of very recent formation. 3. In those cases in which a stethoscopic examination was able to be made, some abnornal sound was discovered at the base of the heart. He would suggest, therefore, that if the heart sounds were subjected to examination during the puerperal period, either as a matter of routine, or at any rate more generally than they usually are, in all cases, or at least in those in which thrombosis is prone to occur, as after hæmorrhage, the danger might in some cases be foreseen, and by suitable treatment be lessened or averted. He related a case where fatal embolism occurred on the eighth day—no suspicion of the danger having presented itself, although a firm laminated clot was found after death in the pulmonary artery.—Dr. J. C. Hayes agreed with Dr. Barnes, that it was impossible to do justice to such a valuable paper in a hurried discussion. He was quite at one with Dr. Playfair, that thrombosis had a wider application than was commonly given to it, as a cause of disease, and of sudden death, in puerperal women. He looked upon plegmasia dolens and *ante mortem* plugging of the pulmonary artery as dependent upon the same conditions, the clots being produced by the changes wrought in the blood by the pregnant state, or its accidents such as flooding, septicæmia, etc. Inflammatory or other changes in the coats of the veins were not necessary to induce clotting, indeed, in most, if not in all, cases, he believed such changes were caused secondarily. Dr. Playfair had not mentioned the sudden paralysis, with or without loss of consciousness, occurring frequently during, or immediately after, parturition. Was this not produced in most instances by thrombosis of the cerebral arteries? It was incorrect to suppose that plugging the pulmonary artery was always brought about by a septic state of the blood. He narrated an instance of a young lady in excellent health, who died from embolism shortly after she had heartily enjoyed herself at a large dance. The case was seen and diagnosed by Dr. George Johnson during life.—Dr. Routh referred to Dr. B. W. Richardson's researches on this subject, which had not been alluded to by Dr. Playfair. The blood to circulate must be alkaline; but it was possible that in many of these diseases, accompanied by blood-poisoning, the blood, without being exactly acid, might be less alkaline than normal; or the very increased temperature, usually observed in the early period of these cases, might, in a measure, expel the free ammonia in the blood, and so facilitate the deposition of fibrin. Whilst it was clear that the ammonia was not the sole cause of the solution of the blood, it was a powerful contributing agent to this end. Dr. Richardson had shown that the administration of ammonia in doses varying from ten to twenty drops of the liquor, in sweetened milk, every hour or every half hour, had a powerful effect in preventing the formation of clot, and in some cases in dissolving it when formed. The liquor ammoniæ had a great advantage over the carbonate or alkalies generally. These weakened greatly the already exhausted patient, and their elimination was not so rapid. The administration of the liquor might be pushed to complete disintegration almost of the blood-corpuscles, and yet the suspension of the remedy was almost immediately followed by their reproduction, so that no permanent harm was done. Doubtless, its volatility contributed in some measure to its rapid elimination. The usefulness of this remedy in phlegmasia dolens, however, as well as in the more serious cases of clot in the heart was at once obvious from the results obtained. Dr. Routh mentioned three cases in which, from the symptoms, no doubt existed as to the presence of clot in the heart, benefited by the use of ammonia.—Dr. Savage thought it was impossible to discuss fairly a paper of such length in the short time at disposal. However excellent such long papers might be, they had the disadvantage of taxing the attention; so much so, that the train of reasoning connecting the beginning with the end was lost sight of. Thrombosis and embolism, he imagined, had long ago been completely worked out. Would it be too much to expect that Dr. Playfair would, as a favour, point out wherein he considered his views novel or peculiar? He proposed that the discussion be adjourned till the next meeting.—Dr. Chambers having seconded this, it was resolved by the Society to adjourn the discussion.—Dr. Playfair stated that Dr. Richardson himself, as well as everyone else, had long given up the theory of coagulation of the blood depending on want of alkalinity. Ammonia might be useful as a diffusible stimulant, but in no other way.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, December 13th, 1873.

Robert D. Lyons, M.D., President, and subsequently Sir Dominic Corrigan, Bart., M.D., in the Chair.

Disease of Knee-Joint.—Mr. William Stokes showed a specimen of ulceration of the cartilage of the knee-joint. A lady, of delicate habit, aged 27, was exposed to severe cold and wetting towards the close of July. Symptoms of simple acute synositis of the right knee-joint soon presented themselves. The lady refused to obey the orders of her medical attendants, and in a few weeks the joint had become globular, with an elastic semi-doughy feel; it was the seat of most excruciating starting pains, and intensely sensitive on pressure. The leg was flexed to the fullest degree on the thigh. The patient's debilitated state precluded the possibility of performing resection with any hope of success; and, accordingly, after an illness of eight weeks' duration, amputation by rectangular flap was performed through the thigh. Contained in the joint were some small clots of blood, and a sero-sanguineous fluid. There was extensive destruction of cartilage, especially over the external condyle of the femur, in which situation, also, the bone was eroded and softened. The patella was a mere shell of bone, all trace of cartilage having disappeared from its posterior aspect. A very favourable recovery followed.

Aneurism of the Abdominal Aorta cured by Position.—Mr. Tufnell showed a specimen from the body of a Liverpool shipwright, aged 31. [The case was the same as that referred to as No. 1, in the Report of the Royal Medical and Chirurgical Society, in the Journal of December 27th, 1873.]

Cancer of Liver, and Passage of Gall-Stones.—Dr. Quinlan showed the liver and neighbouring viscera of a woman, who was admitted to St. Vincent's Hospital, early in November, with moderate jaundice. A hard tumour, which was diagnosed to be of a cancerous nature, was felt in front of the liver, and symptoms of the passage of a gall-stone shortly supervened. The right foot and leg swelled, and the glands in the groin enlarged. The urine was albuminous, and gave spectroscopic and other biliary reactions. She died on December 7th, apparently of asthenia. Yellow serum, containing bile, was found in the abdominal cavity. The liver presented masses of cancerous deposit. The gall-bladder contained numerous facetted calculi, and the duct was embedded in a mass of malignant deposit. Its opening into the duodenum was four times the normal size, owing (seemingly) to the frequent passage through it of gall-stones.

Perforation of the Ileum in Enteric Fever: Fæcal Extravasation.—Dr. A. W. Foot showed the diseased portions of the small intestines of a man, aged 40, who died on the sixth day of an attack of acute peritonitis, and on the sixteenth day from the initial rigor of the fever. He took 30 grains of extract of opium during the five days after the attack of peritonitis; it greatly relieved his pain, without disturbing his head. Two perforations were found within four inches of each other, at the lower end of the ileum, and copious extravasation within the abdominal cavity of bright yellow fæcal fluid. There were several Peyerian ulcers, in less advanced grades of disease. The patient was not brought to hospital till the evening of the day on which perforation had taken place. The accident occurred while he was getting into bed.

Lesions of Enteric Fever: Fatal Hæmorrhage.—Dr. A. W. **Foot** exhibited the diseased portion of the ileum of a boy, aged 16, who died of hæmorrhage from the bowels on the sixteenth day of enteric fever. He was brought to hospital on the ninth day, and was then passing blood; he had also lethargy and rigidity of the shoulder and elbow-joints, and the tongue, when protruded, was left outside the mouth until put back. The last three feet of the ileum were a sheet of ulceration; the hæmorrhage seemed to have come principally from one large patch, two inches in diameter, about six inches above the ileo-cæcal valve. The lower part of the ileum, the cæcum, and ascending colon were filled with blood, partly fluid, and partly coagulated.

Amputation of Hand for Deformity by Esmarch's Method.—Dr. W. T. **Stoker** showed the hand of a woman, aged 33, an epileptic. He had it removed by Esmarch's bloodless method, for deformity resulting from a burn received in one of her fits.

Intestinal Lesions of Enteric Fever.—Dr. **Nixon** exhibited the ileum, etc., of a boy, aged 17, who died on the twelfth day of enteric fever, without spots. The parietal peritoneum was injected, but there was no extravasation of fæcal matter; the ileum was almost occluded by enlarged mesenteric glands, and a peculiar mass of typhous infiltration was found about the ileo-cæcal valve. The intestinal ulcers were, in some instances, passing into sphacelus. In the absence of any perforation, it was clear that the peritonitis had arisen from the extension of inflammation from the base of the ulcers to the serous membrane.

SURGICAL SOCIETY OF IRELAND.

Friday, December 12th, 1873.

William Colles, M.B., in the Chair.

Strumous Disease of the Knee-Joint.—Dr. W. I. **Wheeler** showed the leg of a girl, aged 9, which he had amputated for this affection, by the rectangular flap operation. The patient was put under the influence of ether, which induced rather troublesome nausea. Five sinuses were found in the vicinity of the joint. The tibia was dislocated backwards, and the limb was strongly flexed upon the thigh. There was ulceration and partial destruction of the anterior crucial ligament, while a portion of the semilunar cartilage had disappeared, the remnant being granular and disorganised.

Rupture of the Lungs and Heart, with other Injuries.—Mr. **Wharton** said that a man had become "jammed in" between two vehicles in the street. He was brought to the Meath Hospital dead. There was extreme and general emphysema; the six upper ribs on the left side were depressed, and both clavicles were dislocated at the sternal end. A transverse fracture ran through the lower part of the sternum. The cavity of the left thorax was filled with blood, the pericardium was lacerated, and a rent, which could admit the index finger, existed in the walls of the right cardiac ventricle. The left lung was much torn, and its apex and base were both engorged with blood. The wounded viscera and parts were exhibited.

The Antiseptic Catgut Ligature as a Cure for Popliteal Aneurism.—Dr. **Morgan** narrated the following case. A woman, aged 43, was admitted to hospital, with a swelling behind the knee, which presented the signs of popliteal aneurism. Rest was tried for ten days, but without success. Compression was then persevered in for several weeks, also ineffectually. About the first week in July, 1873, the tumour, which had appeared in the preceding February, began to soften. On July 25th, the patient being under the influence of ether, a catgut ligature was applied round the femoral artery in Scarpa's triangle, and the wound was brought together by means of four carbolised sutures. There was no suppuration. The patient took sulphocarbolate of soda internally. At the present date the tumour had almost vanished, the limb was three-quarters of an inch less than the other in circumference, and there was slight flexion.—Mr. H. **Tyrrell** detailed a case of popliteal aneurism in a middle-aged man. It appeared in September, 1872, and remained in abeyance until November 1st, when it began to increase, and on the 11th, the area of pulsation was six inches. Iron and digitalis were administered, and digital and instrumental pressure was applied, and afterwards ice, but all ultimately failed. On February 3d, 1873, Mr. Tyrrell tied the femoral artery with a carbolised double catgut ligature. A perfect cure ensued.—Dr. **Mapother** believed we had, in this procedure, an easy means of curing aneurism where compression failed. He could not agree with Bellingham that the blood coagulated layer by layer in an aneurismal sac. The rapidity of the cure, where the femoral artery was tied, pointed to an almost instantaneous coagulation of the blood in the sac *en masse.*—Mr. **Tufnell**, while advocating the trial of rest and position, said that the rapid cure was, if possible, to be brought about by the employment of complete compression. Where this method failed, however, gradual coagulation (after Bellingham), was to be sought for.—Mr. **Wharton** asked whether the pressure had been kept up both by day and night in the cases related by Messrs. Morgan and Tyrrell, and what were all the methods employed to allay pain. He was himself accustomed to intermit the application of pressure at night.—Mr. E. **Hamilton** had seen aneurismal tumours become solid, and afterwards soften again. The state of the patient's health was a very important factor in the treatment of aneurism. If pressure were too long kept up, the health might suffer, and irritation and annoyance tend to defeat the object of the treatment. In all cases, the patient should be first carefully prepared by tonics, nourishing food, and good air, before compression was employed.—Mr. F. T. **Porter** believed that the blood in an aneurismal sac could coagulate in laminæ. That such was the case was proved by the *post mortem* appearances in many examples of aotic aneurism.—The **Chairman** asked Dr. Morgan whether he had known the catgut ligature to be absorbed too quickly, leading to subsequent increase in the aneurismal swelling. He also mentioned an instance of recovery in a patient who left hospital far too soon, and walked about the country.—Mr. **Walsh** asked in what position the pressure was applied, for, if below the springing of the profunda artery, there might be communication between this vessel and the tumour.—Dr. **Morgan** had kept up pressure both day and night; he had not known the ligature to be absorbed before it had effected its purpose. The pressure was applied at as high a level as possible.

Intrarectal Speculum.—Dr. **Macnamara** exhibited several specula and instruments used for the examination of the part of the rectum just within the anus. They were either dilating or solid in principle, and those in the former class had all the common fault of causing dilatation of the sphincter, and consequently intense pain. He excepted the endoscope, which was more adapted for exploring the higher or more remote portion of the rectum. Very analogous instruments to those now in use for dilating the rectum had been described and figured in a work by Scultetus, 206 years ago. The most satisfactory speculum was that devised by the late Mr. Abraham Colles, on the principle of the simple gorget. But it, too, had its drawbacks. Dr. Macnamara proposed to use, as the homologue of the index finger, a simple cylinder, incomplete on one side, to which a convenient handle was fitted, and into which a levelled plug, accurately adapted to the bore, could be inserted. By moving the handle, any portion of the circumference of the gut could be inspected. In offering the instrument to the notice of the meeting, he could only say—

> "Si quid novisti rectius istis,
> Candidus imperti; si non, his utere mecum."

Mr. E. **Hamilton** employed the small end of Marion Sims' duck-bill speculum for the purpose of examining the rectum.—Mr. **Richardson** said Dr. Macnamara's instrument was the same in principle as Mr. Quain's speculum, made by Weiss.—Dr. **Morgan** referred to the question of introducing the whole hand into the rectum, under certain circumstances, as recently practised in France.—Dr. **Macnamara** having replied, the Society adjourned.

COLUMN FOR THE CURIOUS.

Seventy Years Ago: A Cure for Prolapsus Recti.—An eminent literary man forwards us the following cutting from an old newspaper. High Court of Admiralty, Old Bailey, May 28th, 1802. Before Sir William Scott, Lord Alvanley, Mr. Justice Grose, and the Bench of Civilians. Mr. John Shuttleworth, master of the ship *Hercules*, was tried for the murder of William Archer, a boy serving on board the said ship, by excessive chastisement, on the high seas, off the coast of South Georgia, on the 3rd of November last. Evidence was given by an eye-witness. It appeared that "the boy Archer had a complaint which rendered him very offensive to the crew; his intestines descended frequently, and their contents were discharged in whatever situation he happened to be. Complaints were made to Captain Shuttleworth, and, in order to make the boy more attentive to his cleanliness, he ordered him to be flogged by the second mate." The boy had received two dozen lashes, but on the mate's representation that "he had laughed at this punishment," Shuttleworth had him next day tied to the capstern, and with his own hands flogged him, at intervals, for an hour and a half. The boy received at least five dozen lashes, and more than four dozen were never given to a full-grown man. The boy died on the fourth day afterwards. "It appeared, however, that he did not die in consequence of these floggings, and the captain was acquitted."

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

Subscriptions to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. Francis Fowke, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, FEBRUARY 28TH, 1874.

THE PUBLIC HEALTH ACT AND ITS ADMINISTRATORS.

Articles have recently appeared in one of our contemporaries, condemning Mr. Stansfeld's policy of administration, and the misdoings of his inspectors, as being the sole cause of the failure of the sanitary legislation of 1871 and 1872; at the same time pointing out Sir C. B. Adderley and Mr. F. S. Powell as the most desirable successors to Mr. Stansfeld and Mr. Hibbert, in the administration of those acts.

While heartily endorsing the exposure of the *fiasco* resulting from the last Public Health Act, it must be remembered that the main lines of organisation, as to both authorities and officers, were laid down by the Royal Sanitary Commission, and have been all along pertinaciously defended by Sir C. Adderley and Mr. Powell, who, as virtual leaders of that Commission, insisted on the independent authorisation, for sanitary purposes, of every small local board, every town council, even of the smallest borough, and every extra-urban bit of a parochial union, in the kingdom.

It was the Sanitary Commission who first proposed that each of these authorities should be fully empowered and directed to appoint its own health-officer. Mr. Stansfeld, indeed, made the great mistake of adopting, in the main, the measure of the Commission; though he somewhat improved it by striking out "Special Drainage Districts" from the absurd medley of "Urban" authorities, proposed by the Commission.

Parliament, under Mr. Stansfeld's direction, having not only empowered, but also unhappily compelled each of these authorities to appoint its officers, almost without any conditions as to qualifications or tenure of office, without any plan of official co-operation, without any superior authority to combine districts and boards for certain objects, what could Mr. Stansfeld's inspectors have done, had they been the ablest administrators in the world, but say to the various local authorities who, they fancied, ought to be included within a more reasonable area of administration than any provided by the Act, "We advise you all to combine and to make such and such arrangements?" This they did, as we know, in numerous instances, sometimes unwisely, and generally on different principles; but whether wisely or not, in no single instance, that we are aware of, did *all* the local authorities within the area recommended, consent to cede their legal right of separate appointment. The result was inevitable. Whether Adderley or Stansfeld, Conservative or Liberal, were in office, under the present law, the legalised unconditional autonomy of nearly two thousand districts cannot be successfully resisted by any central authority.

The error, as our Joint Committee at first pointed out, was the authorisation of badly contrived authorities, of at least two kinds, in impracticable areas of sanitary administration. To this wretched machinery, constituted by the Public Health Act, the origin of the present muddle, Sir C. Adderley and Mr. Powell are pledged, and in respect to it we fear they are hopeless.

It is true that Sir Michael Hicks Beach, Dr. Lyon Playfair, and others, who understood the question much better, would have amended the Bill and its machinery, had not the leaders of the two great parties combined to prevent such amendment, and to force through Parliament a miserable pretence of sanitary legislation.

Real sanitary reformers ought now to lose no time in clearing the public view, so that this vexed and misunderstood question might be rationally dealt with. The demand should be, first, that a well-informed Boundary Commission be appointed, to devise a general adjustment of the areas of counties, boroughs, and unions, so that something like conformity of principle and practice might be the result, and that the evils of conflicting jurisdiction might be redressed; next, concurrently with this, should be carried on the codification of the Sanitary Law, now an intricate maze of contradictory legislation; and then, the way having been cleared for effective legislation, a Bill for the Amendment of the Public Health Act should be introduced, empowering the central authority to combine districts and to improve and *unify* local authorities in the reformed areas, so that existing sanitary laws might be more wisely administered, further necessary regulations be safely enacted, and a proper health-officer system become possible. However desirable, in themselves, might be the advanced sanitary provisions which Sir C. Adderley proposes to add to the Public Health Act, they would now have to be administered by the present incompetent, duplex, and ill-constituted authorities, in the present unworkable areas.

To expect such boards to carry out a good sanitary system would be unreasonable; to compel them to do so would be impossible. Great as were the faults of the late Administration, to blame them for not performing impossibilities under an Act which created those impossibilities and is in itself the source of their many blunders, is neither fair nor philosophical.

We urge these views the more strongly, because the present is a very critical juncture, when the mind of sanitary reformers ought to be known. We may recollect that the same sanguine anticipations, now professed of Sir C. Adderley and his party, were, two or three years ago, as loudly announced of Mr. Stansfeld and his coadjutors. We hope that the appointment of Mr. Sclater-Booth to the Presidency of the Local Government Board may prove of good augury to the cause of sanitary administration.

THE FUTURE OF THE ARMY MEDICAL DEPARTMENT.

The growing unpopularity of the Army Medical Department has been well shown again this week by the paucity of candidates for the recent vacancies. As we had occasion to observe when the last examination took place, competition can hardly be said to exist, when the number of appointments exceeds that of the applicants; and in conversation with students at the different medical schools, we have been struck by the clear appreciation they possess of the present unsatisfactory state of affairs. Whether Mr. Cardwell intended to yield eventually to popular opinion, we shall probably never be in a position to know; but, we understand, he defends his line of conduct by asserting that it was adopted in accordance with the recommendations of the Army Medical Department itself. No doubt, his disappointment, on seeing the failure of his plans, must be great; and all the more so, because they contained the essence of much that was good and progressive. But it would appear that one of the chief causes of the late unexpected collapse in Liberal politics, has been the carrying out of good measures in a harsh and uncompromising way. Every sudden change involves discomfort and shock to some section of vested interests; and, although these rude blows may be materially softened by a little sympathy and tact in the management of minor details, we fail to see that, in many of the great measures for which we must undoubtedly thank the late Government, has any attempt been made to conciliate sufferers.

The abrupt manner in which the regimental system was recently destroyed must be within the memory of all; the irritating restrictions respecting forage and other points remain in full operation, and we are unable to hear that the promised compensation has yet been awarded in any single case.

It is hardly possible to estimate the disorganising effect produced by all this uncertainty and change; and any trifling savings effected by the late unfortunate Warrant can never counterbalance the universal grumbling and dissatisfaction which now prevail. And the question of economy unlifts the curtain a little and lets us peep behind the scenes. In every public office, and more especially those nominally governed by political chiefs, the real power rests in the hands of one or two leading clerks, who pull the strings from the background, free from the restraining influences of responsibility or unpopularity. To detect any trifling excrescence to which the pruning knife may be applied, and to economise and pare with rigid hand, is their special delight; and, with the mastery of details which their position ensures, there is no difficulty in persuading their temporary masters to swallow the bait. Hence, we are surprised from time to time by the appearance of so-called improvements, which could never have been devised by anyone breathing the free external air and familiar with the public working of Departments.

It has always surprised us, that the responsible minister can be persuaded to endorse these; and the reason, no doubt, is to be found in the enormous difficulties thrown in the way of a chief suddenly placed at the head of a complicated department.

That some influence of this sort has been at work in army medica matters, we cannot doubt; for it is hardly possible to believe that the rulers in Whitehall Yard really suggested many of the obnoxious points lately under discussion. We rather prefer to suggest that their influence has been altogether ignored, and that to the practised scissors of War Office clerks we owe the gradual severing of the Army Medical Department from the confidence of the profession. It will now become a matter of serious consideration to the present Secretary of State for War, what can be done to restore confidence and a more healthy state of feeling. Without interfering with the great principles which underlay Mr. Cardwell's schemes, much good may be effected by reverting to the main provisions of the far famed Warrant of 1858. This document, which has been justly styled the Magna Charta of the Department, was introduced by General Peel under a former Conservative administration; and we know that army medical officers will hail with satisfaction any modification of the harassing changes which have occurred since that date.

THE TRANSFUSION OF BLOOD OF DIFFERENT KINDS OF ANIMALS.

Dr. Landois of Greifswald has been led by the recent proposal to employ transfusion of the blood of animals in the human subject, to investigate anew the results of transfusion with the blood of various species of animals. An account of his researches, and a statement of the conclusions at which he has arrived, are given in the Berlin *Centralblatt* for December 13th and 20th.

The animals used for experiment were the dog, the rabbit, the sheep, and the frog. Into the dog were transfused the blood of the sheep, of the cat, of the guinea-pig, of man, the frog, the calf, and the pigeon; into the rabbit, that of the hare, sheep, calf, and man; and the blood of man into the sheep. A special series of experiments was made with frogs, which were injected with the blood of the dog, rabbit, sheep, man, calf, guinea-pig, pigeon, and pike. The blood of the *rana temporaria* was also injected into the *rana esculenta*.

Dr. Landois finds that the blood of mammalia, when injected into the vascular system of the frog, rapidly undergoes change, a breaking up of the blood-corpuscles commencing in the course of a few minutes. The plainest examples of this were obtained when the *rana esculenta* was injected with 0.5 to 0.8 cubic *centimètres* of defibrinated mammalian blood, and a toe of the animal, having been cut off immediately after the operation, and placed in Pacini's preservative solution, was examined at brief intervals. At first, the mammalian blood-cells were present in abundance; but, after intervals of time varying with different animals, none or but a very few scattered ones could be seen. The intervals were, for the blood of the rabbit, 3 to 5 minutes; for the guinea-pig's blood, 20 minutes; for sheep's blood, 20 to 25 minutes; for human blood, 30 minutes; for calf's blood, 35 minutes; and for dog's blood, an hour. When pike's blood was injected, the interval was 36 minutes; and for pigeon's blood, it was 80 minutes. As the blood-corpuscles were dissolved in the frog's blood, the hæmoglobin ought to be found in the blood of the frog on which the experiment was made; and, in fact, the serum was of a red colour like sealing-wax, and the presence of hæmoglobin could be proved, and its quantity determined. The serum of the frog's blood retains this red colour for some time—*e. g.*, a week after injection of the blood of man, or of the rabbit or pigeon—but usually becomes clearer from day to day, until it has regained its normal colour.

The hæmoglobin dissolved in the blood-plasma of the frog is partly excreted, especially by the urine, which contains hæmoglobin and albumen. After the injection of calf's blood, the urine was albuminous on the eighth day; and on the seventh day after the injection of human blood, the urine gave evidence of blood. The injection into one species of frog of the blood of another species, whether containing fibrine or defibrinated, was not, as a rule, followed by albuminuria.

The changes undergone by the blood-cells of the animals mentioned when in contact with frog's blood were further examined by mixing, under the microscope, frog's blood or serum with fresh or defibrinated blood from other animals. The breaking up of the blood-corpuscles is most readily observed in serum, and takes place in the following manner. The blood-cells first frequently become dentated, and manifest lively molecular movements; they then become perfectly globular and apparently smaller. Then they become paler and paler, until at last nothing but the stroma is left; and finally this also disappears from sight. The serum at the same time becomes red. The stromata of the corpuscles frequently become aggregated together into masses, and, in the circulation, may produce embolism and consecutive inflammatory symptoms. On this point, Dr. Landois remarks that he is inclined to attribute the paralysis of the lower limbs, and the signs of impaired and destroyed function in the nervous centres, which he has not unfrequently observed to follow the injection of mammalian blood into the frog, to the formation of these embola; but further researches on this point are required.

He finds that fibrine may be formed from the dissolved mammalian blood-cells. If a few drops of perfectly defibrised rabbit's blood be introduced into a few cubic *centimètres* of frog's serum, the mixture in a few minutes has a red colour, and a deposit of fibrine floats in it. He remarks also that, by using the curarised frog, the changes may be observed in the web, the mesentery, the lungs, and in the urinary bladder.

In order to ascertain whether the red corpuscles of the frog were acted on, Dr. Landois injected frogs with mammalian serum freed as far as possible from red corpuscles. When dog's serum was used, the urine was bloody for several days, and gave evidence of albumen up to the seventh day. After the injection of moderate quantities of human or sheep's serum, albumen only was found in the urine.

In passing to the results of experiments on mammalia, Dr. Landois states the following two facts as calculated to throw some light on the effects of transfusing the blood of different kinds of animals.

A. The blood-serum of many mammalia dissolves the blood-corpuscles of other mammalia. The serum of the dog is the most active, while that of the rabbit is very weak in this respect.

B. There is a great difference in the degree of resistance which the blood-corpuscles of mammalia present to the action of the serum of other animals. The corpuscles of the rabbit are readily broken up, while those of the cat and dog manifest a remarkable degree of resistance. The mode in which the solution takes place is similar to what occurs in frog's blood, and may be traced under the microscope. The solution goes on more rapidly at blood-heat than at a lower temperature.

The following are the principal results at which Dr. Landois has arrived.

1. As has already been partly shown by earlier observers, the blood-corpuscles of one species of mammalia are broken up in the blood of another species; and this occurs whether the blood injected be defibrinated or not.

2. The destruction of the corpuscles is in proportion to the rapidity

with which they are dissolved in the serum of the recipient animal. For instance, rabbit's blood breaks up in a few minutes when injected into the dog. If the transfused corpuscles be readily distinguishable by their size from those of the animal operated on, the rate of solution can easily be traced under the microscope.

3. The dissolved constituents of the blood-cells are partly excreted, principally by the urine, and in less abundance, and not constantly, by the intestines, uterus, bronchia, and serous cavities. A certain quantity of the dissolved material may be assimilated in the body of the recipient. There may be no appearance of blood in the excretions when small quantities of blood are transfused, and especially when its solution takes place slowly.

4. The transfusion of the blood of different species may, under certain circumstances, have a favourable influence, in so far as (*a*) it supplies nutritive material to the recipient, (*b*) supplies the oxygen of the dissolved blood-cells and of the blood-fluid to the recipient, and (*c*) improves the mechanical conditions of the circulation.

5. The beginning and end of the excretion of blood by the urine voluntarily passed by the animal naturally present some variations. Hæmoglobin and albumen are found in the urine in an hour and three-quarters or two hours and a half after injection; the excretion comes to an end in twelve hours, sometimes later. In this respect, an influence is exercised by the quantity and kind of the transfused blood, and by the manner in which the functions of the vascular system are performed.

6. When the blood of an animal of another genus is transfused, the blood-cells of the recipient, if readily soluble in the fluid of the injected blood, may be broken up. Herein lies the danger in experiments in transfusion in rabbits, whose blood-corpuscles are readily soluble.

7. In animals whose blood-cells are easily soluble, *e. g.* rabbits, the injection of a large quantity of various kinds of serum, as of the dog, of man, of the pig, sheep, or cat, produces very threatening symptoms in proportion to the quantity used—increased frequency of respiration, often to a high degree, dyspnœa, convulsions, and even death or asphyxia. On examination of the blood in these cases, all the stages of solution of the red corpuscles may frequently be observed, as well as redness of the serum, and hæmoglobin and albumen in the urine.

8. Animals with resistent blood-cells, such as the dog, do not present these changes when injected with the serum, *e. g.*, of the ram, ox, or pig. The serum is elaborated before it can act on or dissolve the blood-cells.

9. When copious transfusion of blood into animals is followed by rapid solution of the corpuscles either of the blood of the recipient or of that injected, coagula are often observed to be rapidly formed of the fibrin of the dissolved cells, which may produce death. In many kinds of blood, also, when mixed with the blood or the serum of other species, the blood-corpuscles are seen to run together into masses; and these masses, when transfusion is made into the venous system, may block up the pulmonary capillaries and give rise to very formidable symptoms.

Dr. Landois remarks, in conclusion, that the dangers attending transfusion vary very much according to the animal operated on. He has made but few experiments on the transfusion of the blood of closely allied animals; and remarks that numerous experiments, with various modifications, are required for the solution of the questions that await an answer.

THE GENERAL MEDICAL COUNCIL.

ONE of the most satisfactory acts of Mr. Lowe as a member of the late Government, in so far as the medical profession are concerned, was the favourable consideration which he gave to the claims of the General Medical Council to be assisted by the Government in obtaining a suitable habitation. When Mr. Lowe left the Treasury, some difficulties arose in completing his intentions. We are happy, however, to be able to state that arrangements have now been completed which will put the General Medical Council in possession of the buildings which we have before pointed out as being very suitable for the purpose. They are those formerly occupied by the College of Chemistry in Oxford Street near the Harewood Gate. This house is spacious and centrally situated. It will require considerable removal and change in its fittings. These will be carried out by the Board of Works, in accordance with the views of the Council; and the house will then be taken possession of by the Council, who will have a lease of it on satisfactory terms. The whole arrangements are not quite so liberal as those which Mr. Lowe proposed; but they are far from being oppressive, and, on the whole, are such as the Council may feel satisfied to have obtained, after the formidable difficulties recently interposed.

Mr. F. J. Marshall has been appointed Resident Registrar to St. Mary's Hospital, *vice* Mr. Knott, who has succeeded Dr. Reginald Stocker as Medical Tutor.

Dr. Galabin, whose appointment as Assistant Obstetric Physician to Guy's Hospital we last week mentioned, has since been appointed Assistant-Physician to the Children's Hospital, Great Ormond Street, to fill the vacancy caused by the lamented death of Dr. John Murray.

Dr. G. Vivian Poore has announced his intention of giving a course of lectures and demonstrations on Electro-therapeutics for practitioners and senior students, at Charing Cross Hospital. We feel sure there are many who will be glad to avail themselves of the opportunity of acquiring a thorough practical knowledge of this important subject, which deserves more attention than is usually accorded to it.

Mr. George Field has been appointed Aural Surgeon at St. Mary's Hospital, Paddington, in the place of the late Mr. Allen. Mr. Field is an old pupil of the hospital, and had acted for some time as assistant in the aural department. He was a pupil of Mr. Hart in the aural department of St. Mary's Hospital, and also of Mr. Hinton of Guy's Hospital, from both of whom he held excellent recommendations, which his future career in the practice of his specialty will no doubt justify.

CHARGE OF MANSLAUGHTER AGAINST A SURGEON.

Mr. Alexander C. M'Leod, who was accused of the manslaughter of his wife by giving an overdose of morphia, has been tried before Mr. Justice Denman, and, we are happy to state, acquitted.

THE BORDER COUNTIES.

WE learn with pleasure that a large number of members of the profession in the border counties of Scotland have signified their intention to join the Cumberland and Westmorland Branch. In consequence, it is proposed to alter the name of the Branch to that of "Border Counties Branch".

DISCUSSION ON CANCER AT THE PATHOLOGICAL SOCIETY.

THE following are the main points for discussion, as suggested by Mr. Campbell De Morgan, at the next meeting. The question proposed is "The Relations of Cancer to the Organism generally, and to other Morbid Growths". The histology of the disease will be only considered for the purpose of definition. The treatment will not be entered upon unless for the purpose of illustration. The opinions generally held on the nature of cancer will be stated; viz., that it is a blood-disease; that it is a constitutional disease; that it is a local disease; that both local and general conditions, or local and blood, are necessary for its development. The view proposed to be maintained is, that the disease, while presenting certain special characters, does not differ essentially in its mode of origin from many or most other morbid growths; that there is no evidence of the disease being caused by or dependent on a special condition of either the solid or fluid portions of the blood; that, while the actual growth is local in its origin, there may be, and possibly always is, an antecedent condition of the part or of the system which favours its production; that possibly the germs of the disease may be present from the earliest periods of development; that, before a tumour is formed, we have no reason to suspect the occurrence of the disease unless some local condition be present, which we recognise as often preceding the development of cancer; that, when a tumour is formed, we can explain its spread and recurrence without reference to an antecedent diseased condition of either the fluids or the solids of the body; that the structure of cancer specially favours this recurrence, but that most morbid growths show more or less of the same tendency, and some to as great or greater extent than cancer itself; that, if a special state of the blood be a factor in the formation of cancer, we must also believe it to be so in most or all other tumours; that development of local disease may be determined by an antecedent condition of the system, as seen in the simplest form of tumour or warts, *e.g.*, and may be merely in obedience to the same law which governs the development of the bodily and mental conditions of the individual; that the fact of retrogression of cancer, while it gives a hope that in discovering its cause we may find a remedy for the disease, does not prove a blood-origin of the disease any more than would a local degeneration of a natural tissue. This, too, is borne out by the fact sometimes seen of retrogression of cancer in one part, while in other parts active growth goes on.

THE ROKITANSKY FESTIVAL.

THE Academy of Sciences in Vienna was, on Thursday the 19th instant, the scene of an interesting demonstration in honour of one of the most eminent cultivators of medical science that the Austrian empire has ever possessed. On that day, Professor Rokitansky completed his seventieth year; and the event was celebrated by a public meeting, at which congratulations and honours were offered by numerous scientific bodies, and in the evening by a banquet. The first public mark of esteem for his services which Rokitansky received on that day, was his investiture by the Emperor with the Cross of Commander of the Order of Leopold. King Victor Emmanuel also sent him the Cross of a Grand Officer of the Order of the House of Italy. At 11 A.M., the proceedings of the public meeting commenced. The large hall of the Academy was full in every part; and among those present were the Minister-President, Prince Auersperg, several members of the Austrian ministry, the *Statthalter* of Vienna, Baron von Conrad, and the burgomaster, Dr. Felder. Ritter von Schmerling, in opening the proceedings, spoke of Rokitansky as one "who had never been wanting in the struggles for liberty and progress, for the honour and glory of Austria, and whose labours had secured for Austria an equal position with other states in the field of intellectual competition". He was succeeded by Professor Langer, the Dean of the Faculty of Medicine in the University, who delivered an address, in which he reviewed the condition of medical doctrine for a century before Rokitansky began to teach pathological anatomy; and referred especially to the development of the science of pathology, and the difficulties with which Rokitansky had at first to contend. Rokitansky, he said, by his knowledge, penetration, and energy, had succeeded in once again planting the landmark of progress in the Vienna school. At the end of Professor Langer's address, a bust of Rokitansky, crowned with laurel and surrounded by exotic plants, was unveiled, amidst much cheering; after which, an appropriate song was sung by the choral union of the Academy. The next proceeding was the reception of thirty-four deputations, who presented congratulations and honours, from various civic and scientific bodies. Among them were the civic authorities of Vienna and of Gratz, who presented the diplomas of honorary citizenship of their respective cities—that of Gratz being given in recognition of the part which Rokitansky had taken in the institution of the medical faculty in the University. The Academy of Sciences, of which Rokitansky is President, presented, by the hands of Professor von Arneth, an album containing photographs of the members. The University of Vienna, through its Rector Magnificus, Professor Vahlen, presented a congratulatory address engrossed on parchment; the Universities of Prague, Cracow, Pesth, Gratz, Innsbruck, and Klausenburg, sent by the hands of their representatives honorary diplomas and congratulatory addresses. Among the other public bodies represented on the occasion, were, the Military Medical Service, the Supreme Council of Health, and the Councils of Health of Lower Austria, Hungary, and Moravia; the Medical Societies of Vienna, Berlin, and Constantinople; the Pathological Society of London (represented by Dr. Beigel); and the hospitals of Vienna. These numerous marks of esteem were acknowledged by Rokitansky, who, in referring to his reception as a citizen of Vienna, said with much feeling that "in Vienna he had found a second home; here he had founded a family, and here had laboured with his best powers for the development of science and the welfare of his fellow-citizens". The banquet, which took place at 6 P.M. in the dining hall of the Academy, was attended by about 240 guests. At the principal table, besides the members of the ministry and deputations who had taken part in the proceedings of the morning, were Frau Rokitansky and the wives of two of Rokitansky's sons. The health of the Emperor having been proposed by Prince Colloredo, that of the principal guest was proposed by the Minister von Stremayr, and responded to amid much applause. At half-past 8 o'clock, a torch-light procession of students assembled in front of the dining hall. The proceedings of the day were brought to a close about 10 P.M.

PROFESSOR ROKITANSKY.

THE *Wiener Medizinische Wochenschrift* gives a sketch of the life of Professor Rokitansky, whose seventieth birthday was celebrated with much splendour last week. He was born at Königgrätz in Bohemia in 1804, and passed his examination for the degree of Doctor in Vienna in 1827. From 1829 to 1832, with the exception of acting during a part of 1831 as a cholera-doctor in Galicia, he was for most of the time assistant to the late Professor Wagner, on whose death in 1832 he was provisionally appointed Prosector and Curator of Pathological Anatomy. In 1838 his appointment was confirmed, in recognition of his valuable labours. He began to lecture, as Professor of Pathology, in 1834. In 1840-1, he commenced the publication of his great work on Pathological Anatomy, which was not completed till 1855. He was Dean of the Medical College of Professors in Vienna in 1849, 1856, and 1859, and Rector Magnificus of the University in 1852. Since 1869, he has been President of the Academy of Sciences. In 1867, he was summoned as a member for life to the Austrian Senate. In 1834, he married a lady of high intellectual talent, scientific attainment, and great energy—qualities which have not been without their influence on the history of his life. He has four sons, of whom one, Hans, is one of the principal performers in the Vienna Opera; another, Victor, is professor of singing in the Vienna Conservatorium; and the other two, Dr. Karl and Dr. Prokop Rokitansky, are in practice in Vienna.

THE TEMPLE OF LUCINA.

FROM the correspondence in our columns between eminent members of the Obstetrical Society of London, it would seem that the question of admitting duly qualified women as fellows of the Obstetrical Society of London is likely to be debated with some interest at the general meeting of the society next week, *à propos* of the nomination of Mrs. Garrett Anderson for election. Whatever may be the decision, the nomination-paper will always have something of historical interest, as belonging to the opening of an episode in modern social history of no small importance. It runs thus: "Elizabeth Garrett Anderson, L.S.A.London, M.D.Paris, being desirous of becoming a Fellow of the Obstetrical Society of London, we, the undersigned, do, from our personal knowledge, recommend her as well qualified to promote the objects of the society.—Edward John Tilt, Robert Barnes, J. Hall Davis, Henry Oldham, J. Braxton Hicks, W. S. Playfair, W. O. Priestley, Graily Hewitt, J. H. Aveling, T. Spencer Wells, C. H. F. Routh, Jonathan Hutchinson." Thus, the application of the first female graduate of medicine to be admitted to some of the privileges of scientific intercourse is supported by the President of the Obstetrical Society, and by the obstetric physicians of Guy's, King's College, St. Thomas's, University, Middlesex, and other hospitals. Those who think that women ought to be allowed to train their intelligence to public as well as to private offices of usefulness to their own sex, will see with satisfaction names of so much distinction as are most of those appended to the statement endorsing Mrs. Garrett Anderson's qualification to promote the objects of the Obstetrical Society. But it is none the less likely that there will be a battle-royal; and, on whichever side the greater numbers will be found, the way to the ballot-box will not be made easy. Mrs. Anderson will not find her admission to this society so easy as ladies have done to the Zoological and Botanical Societies, or as Mrs. Somerville did to the Astronomical Society. The way to medicine is less easy than to the stars. The temple of Lucina is likely to be guarded most jealously against a woman, since men happen at present to be the priests in possession.

THE NEW MEDICAL BARONET.

THE selection of Dr. Burrows, President of the Royal College of Physicians, for a baronetcy, has long been anticipated by the profession as a distinction justly due to his high character, professional eminence, and great services in a succession of important public offices. Some disappointment is felt that a similar recognition of not less eminent deserts has not been extended to Dr. Stokes, Regius Professor of Medicine in the University of Dublin, and for many years the distinguished head of the profession in Ireland.

THE SANITARY QUESTION.

THE appointments in the new Government with which the medical profession are especially concerned are those of the Local Government Board. Mr. Sclater-Booth and Mr. C. S. Read are both known as men of good administrative capacity, and have the advantage of not being pledged to the evil precedents which Mr. Stansfeld has followed. There is some hope, therefore, that they may be induced to study independently the necessities of sanitary administration, and to remedy the initial errors by which he has involved the country in its present sanitary muddle. Mr. Stansfeld's adherence to the errors of the Sanitary Commission did much to discredit his party with the medical profession, and threw the great weight of medical influence into the Conservative scale during the late elections, for it was impossible that they should not feel indignant at the mischief which he perpetrated. It may be hoped that the new minister will study the question with independence and vigour.

A SUGGESTION AS TO NURSING.

TO-DAY the question will be decided as to how far the general body of Governors of King's College Hospital approve of the proceedings of their Committee of Management in respect to the nurses of St. John's House. We still hope that, by mutual concessions, these unfortunate differences may be satisfactorily and permanently adjusted, and trust that the members of the Court will set themselves calmly to ascertain the best means of promoting the efficiency of the hospital and the comfort of the patients, rather than to define the strict interpretation of a hitherto ignored Act of Parliament, or the exact limits of the Secretary's prerogative. But, while the Governors are setting their house, or hospital, in order, there is another point to which we should like to call their attention. The resident staff of King's College Hospital consists of a house-surgeon, a house-physician, and an accoucheur; these gentlemen, whose posts are, of course, honorary, and whose stay in the hospital is limited to six months, are responsible for the due performance of the special business of the establishment. They are, no doubt, capable, so far as their duty to their patients is concerned; they are generally zealous, but they are necessarily inexperienced, and often deficient, in administrative ability. The consequence is, that the Secretary has always an excuse for interfering with the medical arrangements of the hospital; is, perhaps, obliged to do so, to a certain extent; and, as the result of this, come all the evils of double authority and divided responsibility. At other hospitals, there is a salaried officer, called resident assistant physician, resident medical officer, or resident registrar, who is selected not less on account of his experience in administration than for his professional ability; he must have previously held some resident post, and is appointed for not less than two years. In a small hospital like King's College, this officer might perform, or superintend, the duties of registrar, as is the case at St. Mary's, or his services might be made available for the clinical instruction of the junior students. Most certainly, a permanent medical superintendent saves a hospital far more than the small salary paid him, not only in the smooth and uniform working of the establishment which he ensures, but by the efficient control which his professional knowledge enables him to exercise over the supply and consumption of medical and surgical stores. We are strongly of opinion that the present state of things would never have come to pass had there been such an officer at King's College Hospital.

THE SICK AND WOUNDED OF THE ASHANTEE EXPEDITION.

THE news from the Cape Coast gives serious interest to the letters of our special correspondents with the Ashantee expedition. Our latest letters are dated the 26th and 27th January respectively. It will be seen that, contrary to some more favourable statements which have been published, there was already there a great deal of sickness. Our own correspondent, under date of 26th January, writes:

> I am sorry to say that at present there is a great amount of sickness amongst the European troops, who suffer principally from affections of the stomach and bowels. The news of the health of the men, from the various encampments between this and Coomassie, is far from cheering. There are upwards of 160, I am told, sick on board the *Victor Emmanuel*. On shore, there are six officers sick at Connor's Hill Hospital, eight European soldiers, and ten men of the 2nd West Indian Regiment; and in the Garrison Hospital about fifteen men.

Another letter from a very reliable source, dated Cape Coast, January 27th, gives a still more unpleasing view of the situation.

> There is now a surprising amount of sickness here, and the tendency appears to be for it to increase. Dysentery of the scorbutic type, with early dejections of pure blood, and bilious remittent fevers of a rather severe character, are the two forms of disease which, either separately or in conjunction, prostrate the European soldiers. The sick are now filling the hospitals to overflowing.

Hot days, cold nights, damp chilly mornings, horrible accumulations of filth, and milky water loaded with animalcules and animal matter, are of evil effect upon healthy men; and, as the past letters of our correspondents have shown, notwithstanding the extraordinary energy and success with which sanitary measures have been carried out, and the care with which food-supplies and filtered water have been provided at the stations, the only safe way of dealing with the sick and wounded has been found to be to remove them as speedily as possible from the evil influences of the climate and soil of this coast. There is, however, a good supply of medical officers and a fair supply of medical comforts at the various posts. Sir Garnet Wolseley's last despatch, moreover, is cheering as to the general health of his staff, so that there is every reason to think that the sick and wounded of this gallant force will be well cared for.

CHEAP MEAT-SUPPLY.

AS recently mentioned in the BRITISH MEDICAL JOURNAL, some gentlemen interested in the question of a cheap supply of nutritious food to the working classes, have formed themselves into a company, under the name of the Colonial and Foreign Meat-Supply Company, and last week invited a number of medical men and others to a luncheon given at the Cannon Street Hotel, in order to test the quality of the meat and poultry imported from Transylvania, in which province a depôt has been established by the company. The distinguishing feature of the undertaking is that, instead of the meat being overcooked and sodden, as is too often the case with tinned meat, it is brought over perfectly fresh, being preserved by means of ice surrounding it on every side, but not permitted to touch it. Geese, turkeys, and fowls, are also preserved in a similar manner; and both these and the mutton, which formed the basis of the luncheon, were killed a month previously, so that the question of the possibility of preserving uncooked meat seems to be solved. The fowls were particularly good, and few, if any, would have suspected that they had not been been purchased in Leadenhall Market in the ordinary way. As to the mutton, it would hardly be fair to compare it with South Down; but, as compared with the Australian tinned meat, which with all its defects has had a considerable success, it is immensely superior. If the company can, as they state, supply an almost unlimited amount of this meat and poultry in London, at prices such as fourpence halfpenny a pound for mutton, one shilling each for fowls, and two shillings and sixpence for geese and turkeys, they will confer an immense boon on the working classes of the country.

THE MANAGEMENT OF INFANTS.

THE Registrar-General has given instructions to Mr. Buzzard, Superintendent-Registrar of St. James', Westminster, to allow the Registrars of Births, in that parish, to give to every person who registers the birth of a child, a copy of Dr. Lankester's "Plain Rules for the Management of Infants". These rules have been drawn up by Dr. Lankester, under the conviction that a large amount of death is due to a want of knowledge on the part of mothers as to how to manage them whilst they are infants. The action on the part of the Vestry of St. James's, Westminster, in printing these "Rules" for distribution in their parish, is undoubtedly a step in the right direction; and there can be no doubt that, if all other parishes in the kingdom would do the same, it would be the means of disseminating a large amount of valuable information, and of saving the lives of thousands of children. Copies of the pamphlet can be procured at the Vestry Hall, and at Hardwicke's, 192, Piccadilly.

SOCIAL PERILS.

IF the onward progress of civilisation introduces many new pleasures, it has certainly increased the dangers by which we are surrounded. Although a quiet walk along the streets does not yet equal the perils of a railway journey, the feeble or timid are certainly exposed to serious risks at every crossing, and might, perhaps, be recommended to consult their safety by remaining quietly at home. But, even here, it will be seen by the experience of the last few days, that security is not absolute. A rude shock was recently given to a harmless set of people, assembled at a party in a fashionable house near Hyde Park, by the sudden falling down of the floor in one of the principal rooms. The joists on which the boards were secured having been most imperfectly affixed to brackets, gave way under the weight of the guests; and about twenty persons of both sexes were precipitated headlong into the kitchen. The cook, who was at that moment engaged in his preparations for supper, escaped certain death by being stationed beneath that end of the floor which remained *in situ*; and the general company luckily sustained no further injury than cuts, bruises, and spoiled dresses. But we advert to this incident, which is being much talked of, for the purpose of protesting against the scandalously careless way in which modern building is too often done, and the introduction of a source of danger more direct, if less general, than the insidious evils resulting from deficient drainage and sanitary arrangement.

THE WEST HADDON TRAGEDY.

AT a general meeting of the Birmingham and Midland Counties Branch, held on February 12th, 1874, at Birmingham, Furneaux Jordan, Esq., President, in the chair, and fifty-two members and visitors being present, it was resolved "that the best thanks of this meeting be given to the editor of the BRITISH MEDICAL JOURNAL, for his able and outspoken criticism of the evidence in the West Haddon case". This important endorsement of the grave condemnation which it was our duty to pronounce of the course pursued by Mr. J. E. D. Rodgers at this inquest, may serve to remind the authorities of the London Hospital School that they also have a duty to perform in this matter. The weighty authority of the most eminent medical jurists pronounced the evidence which Mr. Rodgers gave on that occasion to be utterly without justification, and so much at variance with scientific facts, and with the duty of a medico-legal witness, as to constitute a grave scandal. We shall not speak of the terrible consequences of Mr. Rodgers's course at the inquest, but we must speak of his subsequent and present attitude. He has allowed the judgment of the profession to go by default. Now, Mr. Rodgers is the teacher of medical jurisprudence and toxicology at the London Hospital School of Medicine. The Council of that College owes it to itself and to its students, that the professor of so important a subject should not remain quiet under such condemnation without some explanation or statement of his reasons for a course which had consequences so fatal. What an example is this to his students! What authority can attach to the teachings of a professor guilty of so flagrant a breach of the rules which must guide a medical witness, and who has made statements so astounding, incorrect, and having such fatal consesequences, without since seeking to withdraw or to palliate them? The reputation of a school is involved in the reputation and conduct of its staff, and it will be difficult to feel that the Council of the London Hospital School of Medicine has fulfilled its duty, until it has taken some public notice of the circumstances to which the above resolution of the Birmingham Branch of our Association relate.

AN ANNUITY FUND FOR AGED NURSES.

APROPOS of the nursing question, referred to elsewhere in our columns, we have received from Lady Bloomfield a circular, advocating a scheme of pensions for worn-out trained nurses, which, we are afraid, we must characterise as rather well-meant than well-planned. Proposed annuitants are "to pay £15, or one year's annuity to the fund", whether in one sum or by periodical instalments is not stated, and are "to furnish good testimonials from either the governors of hospitals or the heads of nursing institutions, testifying to their capacity and good conduct during twenty years' service". Lady Bloomfield must have greater faith than we possess in the value of testimonials, if she believes that this condition will suffice to excude improper applicants; whilst we fear it would arouse just a sufficient feeling of uncertainty to prevent many nurses from parting with the preliminary £15. We would suggest as a far preferable plan, that Lady Bloomfield should invite contributions from nurses to a provident fund, from which a certain pension should be guaranteed according to the amount of the payments made, and these might then be advantageously supplemented by bonuses for length of service and good character. The appeal says, "it is a melancholy fact that, after a life of usefulness and self-denial, many nurses end their days in the workhouse". We do not dispute the last assertion, but we should refer the fact to causes of which Lady Bloomfield makes no mention, viz., to extravagance in dress on the part of young nurses, and to indulgence in drink by the elder; we believe that no efficient nurse need come to poverty except through premature failure of health. We would also inform Lady Bloomfield that, at all the older hospitals, pensions are given to nurses after twenty years' service, though unfortunately the number who thus become eligible is very small. If the scheme can be modified in the direction we have indicated, we shall heartily wish it success; as it stands, it must fail from want of co-operation from those whom it is intended to benefit.

THE SOHO HOSPITAL FOR WOMEN.

IT is generally reported that the principal members of the medical and surgical staff of the Women's Hospital, Soho Square, are disposed to resign office on professional grounds. The Committee, of which Dr. Protheroe Smith is a member, have at this hospital very unusual and despotic powers, being not only an executive but also a legislative body. In the exercise of this latter power, and following on certain remonstrances of the staff concerning matters of ward management, the Committee have, in spite of protest, passed a law to which they require the existing staff to submit, that the officers of the medical and surgical staff shall annually go out of office and offer themselves for re-election. This is a monstrous and degrading proposition, since it virtually converts the medical and surgical staff into temporary instruments and servants at pleasure of the small oligarchy constituting the Committee. The abuses to which such a monstrous system of government is open, and its gross impropriety, will be at once apparent to thinking and experienced persons. It is a position to which no physician or surgeon of repute should, we think, submit. It is not surprising, therefore. that Dr. Meadows, Dr. Scott, Dr. Edis, Dr. Squarey, Mr. Christopher Heath, and Mr. Edgelow, have considered the question of retiring from their offices, leaving the field to Dr. Protheroe Smith, and his son Dr. Heywood Smith. Dr. Protheroe Smith, who is one of the Committee who have passed this degrading rule, had, we believe, previously secured his own position by arranging for himself an absolutely permanent tenure of office. The contrast between this and the terms which he has assisted to impose upon his colleagues is so striking, that it must be hoped that he has some explanation to offer which may modify the very ugly look of the part which he appears to take in this transaction. It is hardly possible that any reputable or self-respecting medical men will be found to accept these offices if vacated for such excellent professional reasons, or to submit to be servants at will of the dynasty thus established in Soho. For the credit of the profession, we hope that none will be found. Under circumstances not altogether dissimilar at the Royal Orthopædic Hospital, the governors have learnt to feel that the officers of a hospital cannot with impunity be insulted. Mr. Brodhurst, crowned senior surgeon by a *coup d'état*, in which he has protested that he was not a conspirator, but of which, by remaining in office, he has become the accomplice after the act, remains, we believe, in glorious loneliness in the desert created around him. The example can hardly be inspiriting to the two Dr. Smiths, *père et fils*, but possibly they may see reason to alter their course in the matter, and may even prevail on the Committee to change their mind.

AN OLD STUDENT.

The German periodicals announce the death from cholera, on January 25th, of Franz Xavier Albrecht, the oldest student in the University of Munich. He matriculated in 1817, and his attendance on classes extended over no less a period than fifty-two years.

RETIREMENT OF DR. HYRTL.

Dr. Hyrtl, the well known professor of anatomy in the University of Vienna, is about to retire from the post, which he has long and worthily occupied. The Emperor of Austria has ordered the expression of his recognition of the valuable services which Dr. Hyrtl has conferred on science to be conveyed to him.

MEDICAL MEETINGS AND DEBATES.

The coming week is likely to be one of many discussions. To-night (Friday) we have the third debate on pyæmia at the Clinical Society of London. On Monday evening, the annual general meeting of the Royal Medical and Chirurgical Society will be held. On Tuesday evening a debate on cancer will be opened at the Pathological Society; and, on the same evening, we believe, a meeting of the Harveian Society will be held, at which the question will be discussed whether Mr. Harry Lobb, of advertising and hypogastric celebrity, ought to be allowed to remain a member of that society. On Wednesday, there will be a debate at the Obstetrical Society of London, on the question of the admission of female members to that society, raised by the candidature of Mrs. Elizabeth Garrett Anderson, M.D.; and to-day (Friday) the governors of King's College Hospital will meet to consider the questions at issue between the council of the hospital and the authorities of St. John's House. At some at least of these meetings, the debates are likely to wax warm.

A PUBLIC MEDICAL OFFICERS' ASSOCIATION IN ITALY.

It is proposed to hold a congress of the district medical officers (*medici condotti*) of Italy, with the view of promoting professional interests; and a provisional committee has been formed. The suggestion is due to Dr. Casati, editor of the *Raccoglitore Medico*. *L'Imparziale*, in expressing its wishes for the success of the undertaking, hopes that the new Association will act in concert with the already existing Italian Medical Association, and that the two bodies will agree, in the general interests of the profession, on the legislative amendments which it is desirable to introduce into the sanitary code and district medical administration.

IRELAND.

On the 21st instant, the students of the Adelaide Hospital, Dublin, presented Mr. Albert Walsh, one of the surgeons to that institution, with a beautifully illuminated address of congratulation on the occasion of his marriage.

Dr. John Hughes has been appointed Visiting Physician to the Central Criminal Lunatic Asylum, Dundrum, in the place of Dr. Robert Law, whose term of office has expired, and whose failing health prevented him from retaining the appointment. Dr. Hughes is senior physician to the Mater Misericordiæ Hospital, Dublin.

REPORT
ON
THE NURSING ARRANGEMENTS OF THE LONDON HOSPITALS.

BY OUR SPECIAL COMMISSIONER.

I.

The recent dissensions at King's College Hospital have again brought into prominence a question which has, for the last twenty years at least, been an almost constant source of trouble and anxiety to those who take an active part in the management of our hospitals; viz., how best to obtain and keep up an adequate and efficient staff of nurses—a question, too, which is of scarcely less importance to our profession than to the public in general, since on its proper solution depends in great part the quality of the supply of sick nurses available for private cases.

Several careful inquiries into the statistics of the subject have been made during the last few years. We may mention a Report by Dr. Gibb of the Newcastle Infirmary, and another, by Mr. Fowke, presented to the Committee of the Birmingham Hospital, both drawn up in 1868. The valuable *Report on Hospital Expenditure*, by Mr. Wilkinson, the Secretary of St. Mary's Hospital, London, was published about the same time; and although his inquiries were not confined to the nursing department, they form a useful supplement to the preceding. Since 1868, however, many changes have taken place; the wages of nurses, for instance, which were then rising, have still further increased. The most recent paper on the subject with which we are acquainted is a "Report on the Nursing Arrangements of Guy's Hospital", by Dr. Steele, contained in the *Guy's Hospital Reports*, 1871, vol. xvi; from this we have derived much valuable information.

The subject of hospital nursing is, however, a complicated and difficult one, as, indeed, is clearly shown by the years which have been spent and the numerous experiments which have been made in trying to elucidate it. To go fully into it would necessitate an array of figures and details which would be tedious to all who are not specially interested in the question. We shall, therefore, confine ourselves in this paper to a short account of the improved systems which have been introduced during the last few years, comparing briefly their relative cost and efficiency, and shall conclude with a reference to the closely dependent question of the supply of nurses for private practice.

But in order to enable our readers to appreciate the changes which have been recently introduced, we must recall to their recollection the state of things which existed in all hospitals twenty years ago, and in many of the London and most of the provincial hospitals within the last ten years. Of course, the system varied a little at different places, but, so far as we know, only in details. We will describe the nursing arrangements of one of the metropolitan institutions as a sample.

The nurses were divided into three classes—head-nurses, nurses proper, and under-nurses. Such under-nurse was engaged at a salary of £10 a year; on becoming full nurse she received £16, and £1 additional each year afterwards, until the salary reached £24; if she were then promoted to be head-nurse, the rise continued in the same manner up to £30 *per annum*. There were no uniform dresses in those days. Each sister and nurse received, in addition to her wages, *eight shillings a week* instead of board. They cooked and ate their meals in the ward-kitchen or scullery; and if the sister happened to be partial to red-herrings for breakfast, onion-stew for dinner, or toasted cheese for supper, the consequent state of the ward may be imagined. The assistant-nurses had to do all the scrubbing and cleaning of the ward, and to cook for the other nurses and themselves, as well as to help in waiting on the patients. After a short spell of this, which would now be called scrubbers' work, they were generally put upon night-duty. The night-nurse came on duty at 10 P.M., and took her supper in the ward; in the morning, after assisting in the bed-making and dressing, she was supposed to take an hour's walk —a duty often shirked—returning by 11.30, to help to serve the dinners and to clear away afterwards. She was dismissed to bed nominally at 1 P.M. These were the hours of duty of the night-nurses at the Westminster Hospital until within the last two years. Occasionally, after finishing her work, she had leave of absence for the afternoon or evening, but came on duty as usual at night, being up on these occasions for nearly forty hours at a stretch. She continued to perform these duties for some months, or even a year or two, until she was promoted to be full nurse.

At the head of the establishment was the matron, who had been perhaps a nurse herself, or else housekeeper to some influential governor; generally a stout lady with an authoritative voice and a wonderful cap. Her mode of maintaining discipline was somewhat rough, and not always very effectual. The head-nurses, at all events, were practically independent of her in their own wards, and showed their allegiance chiefly by close imitation of the matron's head-dresses.

At the majority of the London hospitals, a "Lady Superintendent of Nurses," or "Sister in Charge," now relieves the professional matron, of former days, of the greater part of her duties; these are now confined to the supervision of the kitchen and housekeeping departments, charge of linen, stores, etc. So, also, the old head-nurse has been, in many places, replaced by a neatly dressed "Sister." At some hospitals, the "Sisters" are well-educated ladies, as at King's College and Charing Cross Hospitals, nursed by the Sisters of St. John's House; at University College Hospital, nursed by the Sisters of All Saints' House; and at St. Thomas's Hospital, nursed by the Nightingale Sisters. At others, *e.g.*, St. George's and the Middlesex Hospitals, the Sisters, though not ladies, are mostly chosen from a somewhat higher social class than the nurses, and the latter are only exceptionally and rarely promoted to the post. At a few hospitals the old plan still prevails, and the nurses are still promoted as vacancies arise. There is no doubt that the chance of promotion acts as an inducement to retain good nurses longer in the service of the hospital; on the other hand, the same object may be almost as well gained by increasing the salary in proportion to length of service; and it not unfrequently happens that, after promotion, an uneducated woman becomes conceited and dictatorial, and thus an excellent nurse may make a very bad sister. But as the subject of the advantages and disadvantages of lady-nursing is one of the vexed questions of the day, we will pass it by for the present, and speak of it more at length afterwards.

Under the old system, the post of night-nurse was always considered inferior to that of day-nurse, and a lower salary was attached; thus, at Guy's Hospital, a few years ago, the day-nurses received £30 a year, with partial board, the night-nurses only £26; now, this is very properly reversed, and they receive £20 and £22 10s. respectively, with full board. The plan of having a separate staff for night work is, however, still in force at several of the London hospitals, *e.g.*, at St. Mary's, St. George's, and the London. At St. George's, as at Guy's, the night-nurses are chosen from among the steadiest and most experienced of the whole body of nurses, and receive somewhat higher wages—£20 to £22 *per annum*, instead of £18 to £20. The reasons commonly given for thus keeping two distinct sets of nurses are, first, that few women are able to sleep comfortably during the day, except after long-continued practice; and, secondly, that there are many nurses who work very well under the constant supervision of the sister and officers, but could not be equally well trusted to act on their own responsibility at night. Undoubtedly, nursing during the night does involve the greater individual responsibility, and it seems impossible to defend the practice, still, we believe, in operation in some provincial hospitals, of employing partially trained women, at low wages, on such duty: there is always the risk, either that patients may be neglected, or that the rest of those who are occupied during the day may be unnecessarily disturbed; and, as a certain amount of odium is attached to the latter proceeding, the other alternative is most frequently chosen. The plan is also unfair to the nurse herself, since she has fewer opportunities of learning the duties of her profession; and when, at last, she is promoted to day duty, her estimate of her own knowledge is apt to be in advance of the reality, and she is often both ignorant, and intolerant of correction. On the other hand, as the duties during the night are generally of a less active character than those of the day, a nurse, who has been long on night duty, is apt to become slow and "rusty" in many ways, and frequently also becomes untidy in her dress. On the whole, we are inclined to think that the plan of giving every nurse alternate spells of night and day work is preferable; and, if they do not change their duty oftener than once in a month or six weeks, the difficulty of sleeping in the day is soon got over. Most certainly, probationers should be exempt from night duty, for the reasons above stated; but we are sorry to say that even this is not the case at all hospitals. St. Bartholomew's Hospital had, till recently, a system peculiar to itself; to each ward, containing, on an average, twenty-four beds, three nurses and a sister were allotted; each of the nurses had to sit up every third night, in addition to her day duty; thus she was on duty about fifty hours out of every seventy-two, and on every third day for nearly thirty hours continuously. Now, each nurse has one week of night, and then two of day duty. At two or three hospitals—*e.g.*, St. George's and Middlesex—there is a permanent night superintendent, whose duty it is to visit the wards frequently during the night, and to take general charge of the night nurses; this is an excellent arrangement, provided it is not used as an excuse for the employment of inferior nurses, but there is considerable difficulty in getting women of the requisite ability and experience to take the post.

The old plan of giving board wages to the nurse is now nearly extinct. It was wasteful both of time and money; unless strict supervision were exercised, it led to most injudicious attempts at economy on the part of the nurses, to peculations from the patients' diets, and was the cause of frequent quarrels. It still lingers in a modified form at St. Bartholomew's; the sisters there have still to provide the greater part of their food, whilst the nurses receive uncooked rations of meat, flour, vegetables, etc. Of the nurses in each ward, one is called the "ward," and the other the "kitchen," nurse; the duty of the latter is to cook for the sister, her colleagues, and herself, as well as to cook the chops, fish, and potatoes, for her patients.

At the other London hospitals, the sisters and nurses now take their meals together, generally in three relays, one being composed of the night, and the other two of the day nurses. Meeting thus frequently at the same table diminishes to a great extent the quarrels and jealousies which were common under the comparative isolation of the old system. At most of the London hospitals, the nurses have now been relieved of the work of scrubbing the floors, by the employment of a staff of non-resident "scrubbers;" at Guy's, however, the assistant nurses still perform this duty. Nurses greatly appreciate this exemption, and the substitution of unskilled for skilled labour might be supposed to be economical. The objection is, that the coming and going of an inferior and often necessitous class of women, affords opportunities for the smuggling of forbidden articles into the building, and of hospital property out of it; this, however, can be prevented by strict supervision, and practically little difficulty is met with in obtaining the services of honest and respectable women, who are glad to work in the hospital for a few hours daily, on very moderate terms. At St. George's and a few other hospitals, the scrubbers, or ward-maids, wash up after meals, and relieve the nurses of everything but the actual management of the patients.

The inquiry into the amount of wages now paid, is rendered rather puzzling by the numerous differences in matters of detail; scarcely any two hospitals make exactly the same arrangements with the nurses they engage. A table of the wages paid *in cash* at the different institutions shows some considerable variations; thus, at the Middlesex and some other hospitals, the nurses receive £18 for the first year, and £2 additional for each subsequent year up to £24; at St Thomas's, they begin at £23, and rise to £25; but, in the first case, they receive two dresses and are provided with all necessaries; in the other, they receive but one dress, and pay for their own sugar, tea, and washing. At most hospitals the sisters receive from £30 to £35 a year, with two or three dresses and full board; at St. Thomas's, they receive from £35 to £45 with one dress, and pay for their own tea, sugar, and washing. At St. Bartholomew's, the sisters get from £65 to £75 *per annum*, with dresses, but furnish their own rooms and provide their own board.. At Guy's, the nurses receive three dresses, but butter is an extra.

Allowing for these differences, the present rate of wages may be stated as—for head-nurses or sisters, £30 *per annum*, rising to £35; for ordinary nurses, £18 *per annum*, rising to £22 or £24, with, in each case, two or three dresses and full board in addition, or an equivalent in money.

The pay of probationers varies rather more; some hospitals giving at the rate of only £10 a year, others £12, and some £16 a year, in addition to dresses, washing, and full board; but, as the probation is only for a limited period—six to twelve months—after which full nurses' wages are paid, this difference is not of much importance.

Having now given a detailed sketch of the most important changes in the nursing arrangements which have been introduced at the principal London hospitals during the past few years, we will, in another paper, consider briefly the relative cost and efficiency of the different systems which have been tried, before proceeding to touch upon the question of the best mode of augmenting the supply of good nurses for hospital and for private practice.

Dr. Henry James Domville, C.B., Deputy-Inspector-General of Hospitals and Fleets, has been appointed to succeed Dr. T. R. Pickthorn as Senior Naval Medical Officer at Port Royal Hospital, Jamaica, and is under orders to leave England for his destination on the 16th of March.

THE ASHANTEE EXPEDITION.

[FROM A SPECIAL CORRESPONDENT.]

Cape Coast Castle, January 26th, 1874.

It has been said "some are born with a silver spoon, others with a wooden ladle." I will not trouble you with a record of the various circumstances that induce reflections such as the above—you can imagine them; but I am inclined to believe that many of us, in this benighted and notoriously unhealthy spot of the world, despise the fates (should they be despised) that cast our lots, even for a short service, on this inhospitable, hunger-stricken West Coast of Africa.

The lassitude, the heavy hours of languor induced by the hot, moist, and oppressive climate, prevent one from writing in that buoyant spirit common in temperate regions; and consequently my remarks will probably appear flat and without the addition of the pepper and salt. One hardly knows where to begin in a place where so much can be said and yet so little of interest is going on now. I have been residing here since the 14th instant, and have made many excursions into the country to see what there was to be seen. The bush, about ten feet high, is so thick that, unless the well-beaten paths be kept, no progress can be made.

The first thing that strikes one, going out into the country, is the great scarcity of birds, animals, etc. One sees some pretty butterflies and other insects, and small birds with beautiful plumage, it is true; but not in any number. Lizards are the most plentiful, and abound everywhere. There is a species of vulture (turkey-buzzard) occasionally seen, with a frightened look, and evidently a late arrival in the country. The botany appears extensive, but there are no large trees about Cape Coast. The most important that I observed were the wild indigo, castor-oil plant, cotton tree, plantain, cocoa-nut palm, stramonium, etc.

The town of Cape Coast is built on somewhat elevated ground, and runs east and west, parallel to the beach; and is surrounded by low hills to the north of these points, rising from 100 to 500 feet high. In some parts of the town, and along the beach, granite rocks are seen to crop up; but the hills are principally composed of disintegrated granite and red clay. The valleys are filled with sand, gravel, clay, and vegetable matter—washed down from the hills.

The water-supply in general is very bad. Rain-water is collected from the roofs of the houses, and stored in tanks in the castle-yard. Condensed water is used for the supply of barracks and hospitals. Wells are common all over the town and neighbourhood. Those near the sea are slightly brackish, but a mile or so from it the water is tolerably sweet. Every family owns a well, which is merely a shallow pit dug in the ground. Some persons, more careful and cleanly than others, protect the well by placing a trap-door over it, and keeping it locked; but this is rather the exception. Old wells abound in the neighbourhood, and become filled with all sorts of refuse and covered with rank vegetation. The water is of a milky whiteness, from much fine clay and sand being held in suspension, and is besides full of animalcules, worms, etc. No doubt, the water is an important agent in the production of fevers and dysentery, which is endemic here, and contrasts well with the very pure water of Sierra Leone, where dysentery is rare.

I am sorry to say that at present there is a great amount of sickness amongst the European troops, who suffer principally from affections of the stomach and bowels. The news of the health of the men, from the various encampments between this and Coomassie, is far from cheering. There are upwards of 160 (I am told) sick on board the *Victor Emmanuel*. On shore, there are six officers sick at Connor's Hill Hospital, eight European soldiers, and ten men of the 2nd West Indian Regiment; and in the Garrison Hospital about fifteen men. There is plenty of hospital accommodation here and to spare. The church, fitted up with twenty-two beds, has not been used, nor is it likely that there will be any wounded to put into it. There is not much sickness amongst the native population—there being only ten patients in the Colonial Hospital, and nothing very serious. In the Small-pox Hospital, there are eighteen patients; and the disease, which was very prevalent six months ago, is now not so common. The Government have rented Bellevue House, No. 1, Macarthy's Hill, as a yellow fever hospital. This is an old tumble-down house, situated about two hundred feet above the sea, and surrounded by native houses, except on one side. It is two storeys high, and the largest room is 8 feet by 12 feet, with a moderately high ceiling. There are smaller rooms on each side, and altogether the place might hold ten patients. While examining this place, I was in terror lest the flooring should give way beneath me; but I fancy before patients are put into it all will be made secure. The Government pays £300 for three months' hire of it, besides putting it into repair.

On the 23rd, I met the German missionary, on the road coming from Coomassie, where he had been detained a state prisoner for the last five years by King Coffee. He looked, and indeed is, almost a skeleton, and extremely weak, as, during that period of captivity, he was almost starved. His food consisted of some dried snails, water, and plantain, pounded together; and his subsistence-allowance was four dollars and a half for forty days. He told me that on the 9th, at midnight, he was sent for by the king, who was beginning to dread the approach of the white men; and, on arrival, found him and two chiefs—one being Amanquatiah, who commanded the Ashantees at Abrakrampa—playing with three cats. The king asked him to go to Sir Garnet Wolseley and give him a piece of cloth as a token of friendship, and to say that he (the king) did not desire to fight with the white men, that they were his friends, etc., and gave the missionary permission to depart altogether from Coomassie. The missionary, having executed the commission, and having stopped six days at Prahsu, and given every information to Sir Garnet, came on to Cape Coast Castle. He left behind him his brother, his brother's wife, their two children, and a Frenchman. The missionary states that Coomassie is a very healthy place, and that they all enjoyed excellent health, notwithstanding the snail-soup; and that fevers are almost unknown. The Ashantee army left Coomassie, in May last, 40,000 strong, and returned, after the defeat at Abrakrampa, reduced by one-half. They brought two hundred and forty boxes of bones, relics of chiefs and warriors slain in battle or having died of disease; and then most of them deserted. The Sniders made sad havoc amongst them at Elmina and Abrakrampa; and the chiefs openly told the king that there was no use in exposing themselves to such weapons, and that they would not fight. The missionary says the wealth of the country is much overestimated; and he thinks that £200,000 could hardly be obtained in the country.

We look on the war as virtually over, this year at least; and while I write, an officer comes in with the report that peace is proclaimed. At all events, our troops are close to, if not actually in, Coomassie, which is not fortified in the least; and the Ashantee army is totally demoralised. It appears that preparations for this war were being made during the last six years; and they certainly have gained their object as far as defeating the minor tribes on the coast. King Coffee thought that no white man could cross the sacred river Prah; and, during the last two months, sacrificed over three hundred victims to assist in that superstition. The missionary states that those bodies were thrown outside the town and left unburied on each side of the road leading to Coomassie, and that when he was coming down the stench was dreadful. He has kept a diary of his captivity in Coomassie, and has been offered £1500 for it, but refused that sum, and thinks he shall place the book at the disposal of the Wesleyan Mission.

I believe the expedition would have failed, had it not been for the ladies of the West Coast coming forward as carriers. The troop of scavengers or sweepers were taken to carry stores, and have not returned to their duty; but, in the meantime, the sanitation is ably supervised by Surgeon-Major Faught, with a small staff, who will, in time, I dare say, work wonders, and place many tons of filth in its proper place. Surgeon Joseph Fleming, pathologist to the expedition, is employed in making a chemical and microscopical examination of the potable water of the town and neighbourhood. Surgeon-Major Mackinnon, C.B., arrived most opportunely, and went up to the front on the 17th instant to assume the duties of principal medical officer. It is hoped the expedition may be beneficial in many ways; and that one of the results may be, to arouse the apathy and indifference of Cape Coast merchants and Fantees to a regard at least for the ordinary rules of cleanliness in and around their habitations, and preserving a pure water-supply.

THE NEW HAMPSHIRE BRANCH.

We recently recorded the formation of a new Branch of the Association which has been entitled the South Hants Branch. It now consists of fifty-three members, and we understand that measures have been taken to extend the new organisation. Invitations have been freely issued throughout Hants, Dorset, South Wiltshire, and the Isle of Wight, and the effort will, no doubt, prove successful. The South Hants Branch will now, of course, become a District Association, and the Branch will be fully established at the first annual meeting, which will be held during the ensuing summer. We trust that the friends of the Association in all parts of Dorset and Hampshire will co-operate in the undertaking. An annual reunion does exert a beneficial influence upon the profession in every neighbourhood. We hope the Branch will succeed, and that its objects, which are mentioned in the proposed regulations—the advance of medical science and the promotion of social union—may be attained.

THE WEBB FUND.

THE following contributions have been received by Mr. Augustus Churchill, the Treasurer, to the 25th instant.

	£	s.	d.		£	s.	d.
Dr. Peter Hood	5	5	0	A Friend	6	0	0
Mr. T. R. Wheeler	3	3	0	Inspector-Gen. Parratt	2	2	0
Mr. Copland	1	1	0	S. L.	3	3	0
Mr. Hinton	1	1	0	Mr. T. H. Clarke	2	2	0
Mr. W. Martin	1	1	0	Mr. J. Scovell Adams	5	5	0
Mr. R. Quain	5	5	0	Mr. T. J. Hodgson	3	3	0
Dr. Burder	2	0	0	Mr. W. Hancock	5	5	0
A Widow's Mite	5	0	0	Dr. Parratt	1	1	0
Messrs. Savory & Moore	5	5	0	Mr. H. Bullock	2	2	0
Dr. George Johnson	2	2	0	Dr. Robertson	2	2	0
Dr. Headlam Greenhow	2	2	0				
Mr. Howard Marsh	2	2	0		95	9	0
Mr. Maunder	5	5	0	Amount previously acknowledged	1201	6	6
Mr. H. Morris	1	1	0				
Mr. W. Harvey	1	1	0				
Mr. Durham	10	10	0	Total	1296	15	6
Mrs. Wing	10	0	0				

ASSOCIATION INTELLIGENCE.

BATH AND BRISTOL BRANCH.

THE fourth meeting of the above Branch will be held at the Royal Hotel, College Green, Bristol, on Thursday, March 5th, at 7 o'clock P.M.; Dr. E. L. Fox, President, in the Chair.

EDMUND C. BOARD, R. S. FOWLER, *Honorary Secretaries.*

Clifton, February 1874.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE next meeting will be held at the Ship Hotel, Faversham, on Thursday, March 5th, 1874, at 3 o'clock; Edward Garraway, Esq., the President of the Branch, in the Chair.

Dinner at 5 o'clock precisely; charge, 5s., exclusive of wine.

Gentlemen who wish to make communications to the meeting are requested to inform me *at once*, in order that a notice thereof may be included in the circular convening the meeting.

EDWARD W. THURSTON, *Honorary Secretary.*

Ashford, February 16th, 1874.

YORKSHIRE BRANCH.

THE spring meeting of this Branch will be held in the Council Room, Halifax, on Wednesday, March 11th, at 2 P.M.

The members will dine together after the meeting, at the White Swan Hotel, at 5 P.M. Tickets 6s. 6d. each.

Gentlemen intending to bring forward any communication, or join the dinner, are requested to communicate with the Secretary.

W. PROCTER, M.D., *Local Secretary.*

York, February 24th, 1874.

EAST SUSSEX AND WEST KENT DISTRICTS OF SOUTH EASTERN BRANCH.

A CONJOINT meeting of the above districts will be held at the Infirmary, Tunbridge Wells, on Wednesday, March 18th, at 3 P.M.; Dr. WARDELL in the Chair, who will read a short paper on the "Progress of Medicine".

Dr. Wardell invites members and their friends to lunch at 1.30 P.M., at his residence, Calverley Park.

Dinner will be provided at 5.0 P.M., at Perry's Restaurant, opposite the Railway Station. Charge, 6s., exclusive of wine.

Notice of intended communications, etc., is requested by the Honorary Secretary before Tuesday, the 10th instant, in order that they may be inserted in the circular convening the meeting.

THOMAS TROLLOPE, M.D., *Hon. Sec.*

35, Marina, St. Leonard's-on-Sea, Feb. 24th, 1874.

CORRESPONDENCE.

THE OBSTETRICAL SOCIETY AND DR. GREAM.

SIR,—In your impression of February 14th, Dr. Gream has so unjustifiably censured the conduct of the Counsel of the Obstetrical Society, that I crave permission to reply. If I rightly understand his letter, he is alarmed at having discovered that the Council is bent on handing over to women the practice of midwifery; and, in proof of his assertion, he appeals to what he calls "a combination" of our efforts to obtain the better ordering of midwives, and of the discussion respecting the advisability of electing women to the Fellowship of the Society. Now, the last issue arose, three months ago, out of Mrs. Anderson's desire to join the Society; and, if the Council, upon which Dr. Gream is so undeservedly severe, had been willing to discuss the question, I fully believe its decision would have exactly coincided with his wishes. I think, however, the Council has done wisely to forestall Dr. Gream's suggestion, and to submit the decision of the question to the general meeting of the Fellows to be held next Wednesday.

Whereas this question arose three months ago, the better ordering of midwives has occupied the Society's thoughts ever since its foundation; and they took their present direction in 1869, in consequence of the Society's report on infantile mortality. The Council's persistent efforts to promote the better regulation of midwives has never met with any opposition at any of our annual meetings, and it received an emphatic approval when, in 1871, the Society sanctioned the examination of midwives by an examining board of its own, until the State should assume a duty essentially belonging to it. So much for Dr. Gream's assertion, that the two movements are of recent date, and designedly organised, the one to further the other.

Dr. Gream makes another unwarrantable assertion in saying that the Council is attempting "the reintroduction of women to midwifery practice". To reintroduce a thing, it is necessary that it should have gone out; but, unfortunately, the necessity of employing midwives never went out of fashion, and is not likely to do so; for while, at the census taken in 1861, 1913 women returned themselves as midwives, there were 2215 described as such at the census of 1871. This means that there is now spread over England and Wales an irregular band of self-constituted female practitioners, two thousand strong, fearful of no other check than that of a coroner's inquest; women who, the other day, told Mr. Stansfeld that they had just as much right as Dr. Gream to give chloroform and ergot, to turn, or to use the forceps and the cephalotribe. It has been the earnest desire of several successive Councils to bring within the pale of some law this class of women who, without having been educated to the medical profession, attend, after a more or less lamentable fashion, to all the emergencies of midwifery. It has been our object to deprive these women of privileges to which they have no right, to restrict them to attendance on natural labour, and not even to trust them with that until they have given satisfactory proof of respectability and of competency. This is what we hope to see done, at some time or other, by Government, and what Dr. Gream calls "reintroducing women into midwifery practice".

Of course, I agree with Dr. Steele, that it would be much better if every labourer's wife could be attended by a fully educated medical practitioner; but, as this is utopian, let us do what we can with our midwives, and teach them, as they do in France and Germany, to call in medical men before it be too late for both mother and child.

I will not, for a moment, suppose that Dr. Gream and Dr. Steele really wish that, as at present, it should be open to ignorant and drunken women to swell the ranks of respectable midwives, and that the present unlimited power to practise of upwards of two thousand irregular female practitioners should be still allowed to increase the number of still-born children, and the mortality of puerperal women. I prefer to believe that these gentlemen have been misinformed respecting the work of the Obstetrical Society. I am, etc., EDWARD J. TILT,

President of the Obstetrical Society of London.

Grosvenor St., Feb. 1874.

THE INSTRUCTION OF MIDWIVES.

SIR,—I will endeavour to profit by my excellent friend Dr. Aveling's good-humoured, yet unsparing, condemnation of my style and composition. How far his own letter can be said to grapple with and refute my "illogical and desultory" arguments, is not for me, but for your readers to judge. I would remind Dr. Aveling that the "little minority" are not always wrong; indeed, a well-known proverb implies the reverse; still, if his sweeping assertion that, of the whole profession, not more than three can be found to disapprove of his scheme, should prove correct, I must then at once surrender at discretion. In the meantime, though by no means opposed to an attempt to meliorate midwives, or any other class of men or women, I must protest against any scheme which compromises obstetrics as a department of scientific medicine.

I am, etc., A. B. Steele.

Liverpool, February 21st, 1874.

THE TREATMENT OF THREAD-WORM.

Sir,—In his lecture on the treatment of thread-worm in this week's Journal, Dr. Cobbold has done me the honour of quoting from a paper of mine, in the *Lancet*, on the same subject. But he has quoted me in a manner which would lead your readers to infer that injections of salt and quassia constitute, in my opinion, the sole treatment necessary in these cases. That such is not my opinion, is evident from the next sentence in the same paper; viz., "Where this treatment fails in entirely dislodging them (*i.e.*, oxyures), they are probably resident high up in the colon. It is then advisable to continue the injections, and, at the same time, to administer, by the mouth, small doses of aloes, combination with iron and quinine." It will be seen, from this, that my reatment does not differ very materially from that recommended by Dr. Cobbold.

At the same time, I repeat my belief, that a patient may often be rid of these pests by injections alone. I have now, "in my mind's eye," a amily of young children who were cured by this means, and have now been free for more than two years, although they had previously tried everal plans of treatment. And this is only one example among many. The permanence of the success, in this instance, was due to the hygienic measures which were strictly carried out, and which I regard, in every ase, as of the utmost importance. Cases of so-called relapse are often owing to fresh infection by ova left lurking in the folds of the anus, or bout the clothes. It is useless to clear the bowel of the parasites, unless, by strict cleanliness and other hygienic precautions (such as are mentioned by myself, in the paper referred to, and more fully detailed by Dr. Cobbold), we prevent the reintroduction of the ova.

I am, etc., William Date.

Crewkerne, Feb. 11th, 1874.

THE USE OF COCA.

Sir,—In reference to Dr. Sieveking's letter in your last impression on "coca", we beg to say that there has been no difficulty, for many years, n obtaining the leaves of this shrub in this country. We exhibited oca-leaves, and various preparations made from the same, at the *soirée* f the Medical Society of London several years ago, and, more recently, t one of the *soirées* at Charing Cross Hospital. Some of our customers ave been using the "coca" preparations since we first obtained the eaves from abroad, one of them an old traveller in Peru; and, as the emand still continues, we presume it may be inferred that its efficiency s not diminished in this country.

We are, etc., Savory and Moore.

London, February 1874.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

Council meeting was held on Thursday, February 19th, at 33, Dean treet, Soho; Dr. Joseph Rogers in the chair. The meeting was conened for the purpose of deciding when and where the annual general eeting should take place, and of determining what should be the immeate future action of the Association. It was resolved that, seeing that any of the influential supporters of the present Government are comitted to the policy of dealing with the question of local taxation, with e view to its more equitable incidence, and this Council holding the pinion that the maintenance of the health of the destitute poor is a uestion in which the whole community is interested, it is advisable that e influence of the Association, in the press and in Parliament, should e directed to securing that the salaries of the medical officers should in ture be paid wholly from the Consolidated Fund, instead of partially, at present. It was also resolved that, as it is desirable that all the edicines and appliances prescribed for the sick poor should be provided by e local authorities, and that, in places sufficiently populous, qualified pensers should be appointed, every effort be made that the Disnsary Clauses of Mr. Hardy's Metropolitan Poor Act (1867) should be extended to the rural districts. It was further resolved that a determined attempt should be made so to modify the Medical Officers' Superannuation Act, that hereafter it should be compulsory on the authorities to grant such superannuation after a defined period of service.

In the course of the discussion which took place, the opinion was expressed that, were the Association to succeed in securing the entire payment of salaries from the Consolidated Fund, all the various grievances under which the Poor-law medical officers have long laboured would speedily be removed, and that a great step towards the successful realisation of that object would be achieved, could it be shown to the Local Government Board and to Parliament that the service was united in demanding this just and needful requirement. It was also decided to convene a general meeting as soon as the House of Commons had settled down to business, the day and hour for holding which would be announced by circular notice to members, and to the profession generally, through the medical journals.

SANITARY DISTRICT ORGANISATION.

Cleckheaton and Gomersal.—Last week, Mr. Arnold Taylor, of the Local Government Board, held an inquiry as to the propriety of incorporating a portion of the township of Gomersal with the district of the Cleckheaton Local Board of Health. The opposition to the scheme seemed to be mainly founded on the alleged "bad government in Cleckheaton," and on the "excessive rates" prevailing in the place. The bad government, however, really consisted in a somewhat energetic performance of its duties on the part of the Cleckheaton Local Board; and the reason why Gomersal is, as yet, but slightly burdened with rates, is simply due to the fact that, hitherto, no sanitary work of any note has been done in the place, and that all the improvements required still remain to be carried out.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birmingham.—Dr. Alfred Hill points out, in his report on the sanitary condition of the borough of Birmingham, during the quarter ending December last, that the general death-rate was 26.95 per 1000 of the population; and even this large death-rate may be deemed comparatively small, when the large prevalence of infectious diseases is taken into consideration, for, out of a total of 2395 deaths, as many as 576, or over 24 per cent., were due to one of the seven principal zymotic diseases enumerated by the Registrar-General. The epidemic of small-pox, which had exhibited some signs of abatement, has followed the usual course of increasing during the colder winter months; and whereas 41 cases came under observation in October, the number increased to 127 in December, 35 fatal cases having taken place during the quarter. Amongst the vaccinated, the death-rate has been 12.31 per cent.; and amongst the unvaccinated, it has been as high as 55.56 per cent., results which should, of all others, have the effect of stimulating the Vaccination Authority rigidly to enforce infantile vaccination, and to offer every inducement to revaccination in persons of maturer years. Scarlatina has also been extremely fatal, 213 deaths having been recorded as due to this cause. Dr. Hill has issued some very excellent recommendations, with a view to staying the spread of small-pox; a caution has also been given to pawnbrokers, that they should, before receiving any articles of clothing, or any textile fabrics, ascertain whether they have been brought from houses where small-pox exists; and it is intimated to them that the provisions of sec. 38 of the Sanitary Act of 1866, relating to the exposure of infected articles, will be carried out. The terms of these notices seemed to be confined to small-pox, but we trust that, in their application, they are made to include scarlet fever, for not only was this disease still very fatal up to the end of the quarter, but it is, of all diseases, excepting, perhaps, small-pox, the one which is most likely to be communicated to others by means of infected clothing, bedding, and similar articles. How far the disinfection of such articles is carried out in Birmingham the report does not show, but the necessity for it is of the first importance, if the spread of the disease is to be arrested. Measures should also be taken to prevent infection being conveyed to the inmates of day-schools, by the attendance of children from infected houses. Enteric fever caused 45 deaths; 18 were also due to simple continued fever; and, in connection with these diseases, we would refer to the serious extent to which the contents of wells have been found to be contaminated with animal and other impurities. The mere existence of wells, in such a town as Birmingham, is, in itself, sufficient to justify renewed efforts, with a view of procuring legislation, which will not confine itself to requiring Sanitary Authorities to see that every house within their districts has a proper water-supply, but will further give them full power to close any wells which have been ascertained to be polluted, and the contents of which are unfit for domestic purposes. The new system of dealing with the excreta of the population, by means of pail-closets, is being steadily carried out; 1722 such closets were provided during the past year; and we hope that, before long, Dr. Hill will feel able to express his opinion as to their working, and as to the advisability of their being more generally adopted.

Barnsley.—At the last quarterly meeting of the Barnsley Town Council, Dr. M. T. Sadler, the Medical officer of Health, presented a report on the mortality, and on the sanitary condition of the town, during the past year. There had been 816 deaths in the borough during the year 1873, or 207 more than in 1872. Of that number, as many as 276 occurred during the last quarter of the year, being nearly 100 more than in any of the earlier quarters of the year. After making due allowance for the deaths in the workhouse, and for the estimated increase in the population, the death-rate was 32.59 per 1000 inhabitants, and that, during the last quarter, reached 36.13 per 1000. The main cause of the excessive mortality was the prevalence of infectious diseases, which caused 254 deaths, or 31 per cent. of the entire deaths. Scarlet fever terminated fatally in 122 cases, and "fever" caused 28 deaths. Children appear to have been the main sufferers, for of the entire number of deaths due to infectious diseases, 192, or over 74 per cent., took place under five years of age.

THE IMPROVEMENT OF CAMBRIDGE.

For some time past the Cambridge Improvement Commissioners have laboured under a financial deadlock, caused by a largely increased population, and the additional duties legally imposed upon Sanitary Authorities, together with a limited rate granted under statute; hence measures of importance, affecting the health of the university town, now so much publicly discussed, have been compulsorily deferred. The rating and borrowing powers conferred on Sanitary Authorities, under the Public Health Act, were also, in their case, conditionally restricted; but, since the failure of recent negociations between the town and university, application has been made to the university and corporation for the removal of such restriction. At a recent meeting, the corporation followed the example of the university, and gave their assent to its removal. This places the Commissioners in a position to levy a higher improvement rate, and thus to carry out beneficial measures. It is believed that it is intended to make application to Parliament for effecting the objects of the proposed private Bill, which, by the Act of the corporation, fell to the ground. The question of establishing a new cattle-market has been again deferred.

EFFICIENT WORKING OF THE SANITARY ACT.

Sir,—A Medical Officer of Health, Dr. P. S. Fentem, calls attention to the difficulty he has experienced in efficiently working out the provisions of the Sanitary Act, arising from the want of early information of the outbreak of infectious diseases—a complaint that will be echoed by every rural district health-officer.

So apparent is it that the whole system must soon collapse, unless radically reformed (and that without delay), that I should not have troubled you with these remarks, had not Dr. Fentem informed us that he had suggested to the Sanitary Authority of his district "a way out of the difficulty," upon which he especially invites discussion. It is this:—"That, on the outbreak of any contagious, infectious, or epidemic disease of a dangerous character, it shall be the duty of the head of the family (or other deputed by him), in which the disease occurs, to give notice in writing, or personally, to the Medical Officer of Health for the district in which he lives, within twenty-fours after the disease has manifested itself; and, providing he fails, he renders himself liable to a penalty."

What! expect Hodge, "within twenty-fours after the disease has manifested itself," to give information *in writing* (a new edition of "Hoblyn" will be speedily required!), or personally, to the Medical Officer of Health (the law, by the way, requires that the information shall be acquired through the *Inspector*, who may reside ten miles distant), every time his wife may call his attention to some cutaneous eruption on one or more of his children, or on the occurrence of a dangerous epidemic of diarrhœa or dysentery!

In these days of compulsory education, the march of intellect may make rapid strides; but the intelligence required for the performance of such duties must be looked for, at the earliest, when Hodge's grandchildren impose these nice discriminations on their parents. I have had, during the last thirty years, some experience of "contagious, infectious, and epidemic diseases of a dangerous character," and have been an attentive observer of them; and I am not ashamed to admit that, throughout the whole period, I have been sometimes sorely puzzled to give a satisfactory diagnosis, "within twenty-four hours after the disease has manifested itself," and have had, not unfrequently, to change my secret opinion within the next twenty-four hours. In fact, I doubt the existence of the dermatologist who can infallibly diagnose all exanthematous eruptions within the first twenty-four hours; and the pustular are little less difficult. I have, within the last few months, had an epidemic of chicken-pox, so similar in character to modified small-pox, that it was several days, and not until I had seen four or five cases, before I was satisfied as to the diagnosis. Again, take a case of that anomalous modern affection, by some called German measles. The medical attendant reports (within the first twenty-four hours), a case of measles; the health-officer visits the case the following day, and insists it is scarlatina; a dispute arises, and a third medical man is to decide the question on the following day; when, behold, there is not the slightest trace of either! Dr. Fentem very aptly calls attention to the regulation by which the cattle-plague was principally eradicated, and requires that even more stringent measures be applied in the case of human beings. Very good; but to make the cases parallel, he should require the return from, and visit the penalty upon, the bullock, as well as upon Hodge. I would ask Dr. Fentem why, in the case of the quadruped, he requires his information from the only source from which it can be effectually obtained—viz., the owner—whilst in that of the biped the Medical Officer is ignored, although he is the only source through which trustworthy information is available? Is it that he has taken his cue from his head master, and thinks, by ignoring all professional assistance, he will soar high above those hated doctors?

I am, etc., Albert Napper.

Cranleigh, Feb. 9th, 1874.

Dr. Woodforde (Reading).—Forms of bye-laws can be obtained from the Local Government Act Office, upon the application of any Medical Officer of Health.

Mr. J. H. Ashworth (Bourne). A registered L.R.C.P.Ed. and L.F.P. & S.Glasg. is fully qualified to practise his profession in any part of Her Majesty's dominions, and to hold the appointment of Medical Officer to a Workhouse and Union District. A general order of the Poor-Law Board, dated December 10th, 1859, provides that the person appointed should be registered, and shall hold a qualification from any competent legal authority in Great Britain or Ireland. In the county of Cumberland, of thirty-seven Poor-law medical officers, nineteen do not possess English degrees or diplomas. A large proportion have the L.R.C.P.Ed. and L.R.C.S.Ed.; and one at least has the L.R.C.P.Ed. and L.F.P.S.Glasgow. This last double qualification is also held by a medical officer of one district at least in Durham; and probably also by others. The holder of L.F.P.S.Glasgow and L.S.A. is not more legally qualified.

MILITARY AND NAVAL MEDICAL SERVICES.

Eleven officers, and a party of twenty soldiers, invalided from the Gold Coast, landed at Portsmouth on Wednesday last (25th February). They had all improved greatly in health during the voyage to England. All the officers were able at once to proceed to London. The non-commissioned officers and men proceeded by train to Netley, but, being convalescent, would be quickly sent on to their regimental depôts.

Army Medical Service.—The following candidates for the Army Medical Service were successful at the competitive examinations held at London in August 1873, and at Netley in February 1874, after having passed through a course at the Army Medical School at Netley. [Maximum number of marks, 6,900.]

*Langridge, G. T.	5243	Gubbins, W. L.	4370
Fowler, B. W.	5209	Thomsett, R. G.	4190
Webb, W. E.	4690	McQuaid, P. J.	4173
Mapleton, R. W.	4650	Spencer, F. H.	3836
Wood, O. G.	4374	Ring, J.	3561

* Gained the Herbert Prize.

Naval Medical Service.—The following candidates were successful in the competitive examinations held at London in August 1873, and at Netley in February 1874, after having passed through a course at the Army Medical School at Netley, and will receive commissions as Surgeons in the Royal Navy. [Maximum number of marks, 6,900.]

Hewett, F. C. C.	4317	Cooke, G.	3609
Preston, T. J.	4173	Pearson, W.	3554
Bedford, R.	3881	Vasey, C. L.	3140

We understand that the number of patients said to have fallen victims to yellow fever, and landed from her Majesty's ship *Aboukir*, at Jamaica, has been exaggerated. Up to this date, only fifteen deaths have been officially reported. The casualties occurred among the young officers and seamen, who were unfortunately detained at Port Royal, for want of transport to convey them to Panama, *en route* to the Pacific. They were fresh from England, and had entered the tropics for the first time.

OBITUARY.

JOHN TAYLOR PORTER, F.R.C.S., Sheffield.

r. John Taylor Porter, who died at Bromhill, Sheffield, on Febary 2nd, was the eldest son of John Porter, Esq., of Sheffield. He ıs a pupil of Mr. Henry Thomas of Sheffield, and in 1840 became A.C. and M.R.C.S. Having studied in Paris, he commenced prace at Sheffield, and in 1848 became partner of Mr. Thomas. The ırtnership was dissolved about two years afterwards, in consequence of r. Thomas relinquishing active practice from ill health. Mr. Porter ld for many years the appointment of one of the surgeons to the Shefld Public Dispensary; and, after his resignation of that office, was ected honorary surgeon for life. Mr. Porter married, in 1848, Sarah, ler daughter of William Smith, Esq., of Sheffield, Barrister-at-Law, ıe of Her Majesty's Justices of the Peace for the West Riding, by hom he has left two daughters and a son.

WILLIAM B. FEGEN, M.R.C.S.Eng., Staff-Surgeon R.N.

r. Fegen, son of the late Captain Richard Fegen, R.N., was born 1818. He was educated for his profession at the Westminster Hostal. He entered the navy, in 1840, as an assistant-surgeon, and served the Mediterranean, and afterwards in the River Plate, during the erations there in 1845-46. He then went to New Zealand in the *ido*, and was promoted, as surgeon, in the *Calliope*. He served in the *ransit*, during the Crimean war; and was in the *Lily*, in China, and the *Archer*, on the West Coast of Africa. He afterwards served in e Royal Naval Reserve, at Bristol; and then in the Boys' Training ıip, the *Impregnable*, at Devonport; his last service being in the *Warr*. He retired in 1872. He married Margaret Edith, eldest daughter Frederick Whitfield, Esq., and has left three children.

MEDICAL NEWS.

University of Dublin: School of Physic. Hilary Term, 74.—At the examination for the degree of Bachelor of Medicine, held Tuesday and Wednesday, February 10th and 11th, the following ndidates were successful.

Allingham, Edward
Booth, Thomas
Dudley, John
Griffith, Robert
Hamerton, Morgan F.
Lawder, Edward J.
Lewis, George Alfred
McDonnell, Hercules
Murray, Charles F.
Ruttle, Robert
Welch, William J. J., M.A.Cantab.

At the examination for the degree of Master in Surgery, held on iday and Saturday, February 13th and 14th, the following candidates re successful.

Bredon, Alexander M.
McDonnell, Hercules
Pearce, George A. C.
Ruttle, Robert

King and Queen's College of Physicians in Ireland.—At ımination meetings of the College, held on Tuesday, Wednesday, and ursday, February 10th, 11th, and 12th, the license to practise Medie was granted to:

Baldwin, John Power
Hughes, William
Johnson, Henry Sandford
Jones, Thomas Reginald
Lucey, Samuel Francis
Scott, Edward Irwin
Taylor, George Grayson Stopford

e license to practise Midwifery was granted to:

Baldwin, John Power
Johnson, Henry Sandford
Jones, Thomas Reginald
Lucey, Samuel Francis
Powell, Caleb K.
Scott, Edward Irwin
Taylor, George G. S.

Erratum.—In the column of "Medical News", page 191, for "Unirsity of Dublin", read "King and Queen's College of Physicians in land".

Apothecaries' Hall.—The following gentlemen passed their exination in the science and practice of medicine, and received certites to practise, on Thursday, February 19th, 1874.

Ashworth, James Henry, Bourne, Lincolnshire
Bateman, Lewis Philip, Dudley, Worcestershire
Steele, Henry Francis Arthur, Liverpool

The following gentlemen also on the same day passed their primary fessional examination.

Bickford, William, St. Thomas's Hospital
Horne, John Fletcher, Leeds Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

ALNWICK INFIRMARY—House-Surgeon: £105 per annum, furnished apartments, etc. Applications, 1st March, to W. T. Hindmarsh, Hon. Sec.

AXMINSTER UNION, Devon—Medical Officer for the Lyme Regis District £58:10 per annum, and fees. Applications, 4th March, to W. Forward, Clerk.

BIGGLESWADE RURAL SANITARY DISTRICT—Medical Officer of Health: £120 for one year. Applications, 3rd March, to T. J. Hooper, Clerk.

BLOOMSBURY DISPENSARY—Resident Medical Officer. Applications, 16th March, to F. Latreille, Secretary.

BOURN UNION—Medical Officer for Workhouse and Bourn District: £35 per annum for Workhouse, and £49 per annum for District, exclusive, in latter only, of extra fees.

BRISTOL GENERAL HOSPITAL—Assistant House-Surgeon: £50 per annum, board, lodging. etc. Applications, 20th March, to Henry Fox, Sec.

CARMICHAEL SCHOOL OF MEDICINE, Dublin—Lecturer on Physiology,

CASTLEBLAYNEY UNION, co. Monaghan—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballybay Dispensary District: £100 per annum, and fees. Applications, 3rd March, to Benjamin Browne, Hon. Sec.

CITY OF DUBLIN HOSPITAL—Physician.

CITY OF LONDON UNION—Medical Officer for Districts Nos. 2 and 5: £140 per annum each. Applications, 2nd March, to F. W. Crane, Clerk, Bartholomew Close.

CORK UNION—Medical Officer and Public Vaccinator for the Queenstown Dispensary District: £130 per annum, and fees. Applications, 3rd March, to John Nolan, Hon. Sec.

EASTERN DISPENSARY, Bath—Two Honorary Medical Officers. Applications, March 2nd, to F. Savage, Honorary Secretary.

EDENDERRY UNION, King's County—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rhode Dispensary District; £120 per annum, and fees. Applications, 9th March, to David Kerr, Hon. Sec.

GRANTHAM UNION—Medical Officer for the Colsterworth District: £37:10 per annum.

HOLBEACH UNION, Lincolnshire—Medical Officer for the Sutton Bridge District: £20 per ann., and fees. Applications. 16th March, to E. G. Ayliff, Clerk.

LICHFIELD UNION—Medical Officer to the Workhouse: £25 per annum.—Medical Officer for the St. Chad District: £50 per annum.

LINCOLN GENERAL DISPENSARY—House-Surgeon.

LONGHOPE, Orkney—Medical Officer: £100 per annum, free rooms, and private practice. Applications to J. G. M. Heddle, Melsetter, Longhope.

NARBERTH UNION—Medical Officer for District No. 1, and the Workhouse: £35 and £20 per annum, and fees. Applications, 21st March, to John Thomas, Clerk.

MARTLEY UNION, Worcestershire—Medical Officer for the Astley District: £50 per annum.

NEWTOWNLIMAVADY UNION, co. Londonderry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Newtownlimavady Dispensary District and the Bridewell: £105 per annum, and fees. Applications to W. S. Fleming, Hon. Sec.

NORTH LONDON CONSUMPTION HOSPITAL—Physician. Applications, 25th April, to W. Hornibrook, Sec.

NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th March, to E. M. Kidd, Sec.

QUEEN'S HOSPITAL, BIRMINGHAM—House-Physician and House-Surgeon: £50 per annum each, board, lodging, etc. Applications, 21st March, to Walter Young, Secretary and General Superintendent.

ROYAL MATERNITY CHARITY—Two Physician-Accoucheurs. Applications, 28th inst., to John Seabrook, Sec.

ROYAL MEDICAL COLLEGE. Epsom—Teacher of Botany and Zoology: £1:1 per visit. Applications to the Head Master.

SALOP AND MONTGOMERY COUNTIES LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, increasing to £120 at end of first year, with board (exclusive of wine and spirits) and apartments.

SANDGATE URBAN SANITARY DISTRICT—Medical Officer of Health. Applications, 4th March, to W. S. Smith, Clerk.

STEPNEY UNION—Medical Officer for the Limehouse District: £250 per ann.

STOCKTON UNION—Medical Officer for the Middlesborough North District: £85 per annum.

SWAFFHAM URBAN SANITARY DISTRICT—Medical Officer of Health; £20 per annum. Applications, 2nd March, to J. Plimsaul, Clerk to the Authority.

TORBAY INFIRMARY AND DISPENSARY, Torquay—House-Surgeon and Secretary: £100 per annum, board, and apartments. Applications, 7th March.

WAREHAM AND PURBECK UNION, Dorset—Medical Officer for the Swanage District: £60 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Ewart, J. H., M.R.C.S., L.R.C.P.Lond., appointed Honorary Surgeon to St. Mary's Hospital for Women and Children, Manchester, *vice* G. W. Pettinger, M.R.C.S.

Gibbings, Ashley, Esq., appointed House-Surgeon to the Dental Hospital of London.

Neal, James, M.D., appointed Medical Officer of Health for the Sandown Urban Sanitary District. Population, 2,350; acreage, 514; salary, £50.

*Wilkinson, T. M., L.R.C.P.Ed., appointed Medical Officer and Public Vaccinator for Districts 2 and 11 of the Lincoln Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 3s. 6d., which should be forwarded in stamps with the communication,

DEATHS.

*Clarke, Richard, M.R.C.S.Eng., at Newcastle-on-Tyne, aged 56, on Jan. 22nd.

Hooper, George, L.R.C.P.Ed., Liverpool, aged 42, on February 8th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY .St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M. —Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ....Royal Westminster Ophthalmic, 1.30 P.M. — Royal London Ophthalmic, 11 A.M.— Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.— Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Royal Medical and Chirurgical Society, 8 P.M. Annual Meeting and Address of the President (Dr. C. J. B. Williams).—Medical Society of London, 8 P.M. Mr. Francis Mason, "Nasal Polypi"; Mr. Arthur E. Durham, "Some Cases of Foreign Bodies removed from the Urethra"; and other communications from Dr. F. T. Roberts, Mr. Victor de Méric, Mr. Henry Smith, Mr. Royes Bell.

TUESDAY.—Pathological Society of London, 8 P.M. Mr. De Morgan, F.R.S., will open a discussion on Cancer.—Harveian Society of London, 8 P.M. Extraordinary Meeting for Legislation, etc.

WEDNESDAY.—Royal Microscopical Society, 8 P.M. Mr. Alfred Sanders, "Contribution towards a knowledge of Appendicularia."

THURSDAY.—Harveian Society of London. 7.15 P.M.: Council Meeting. 8 P.M.: Dr. Farquharson, "On the effects of continued Physical Exertion on the Heart and Large Vessels."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

COUNTRY CORONERS.

SIR,—I can quite corroborate the statements of "Justice" as regards country coroners. About six weeks ago, I was sent for to see a woman who had recently been delivered of a child. On arriving at the cottage, I found the dead body of a full grown child lying in a chamber-vessel in one room, and the patient in another. In answer to my inquiries, she stated she was unaware she was pregnant; and added that the curate of a neighbouring parish had examined her only the day previously, and told her that she was suffering from a tumour, and must go to an infirmary. The child had been born nearly two hours before I was sent for. The cord was ruptured, not tied; but the placenta had been removed by the woman's mother. One of the neighbours who came to fetch me, assured me that she saw the child breathe.

On communicating these facts to the coroner, the same answer as in the case of "Justice" was returned; and in like manner the overseers said that, as the woman was married, there was no necessity for an inquest.

I am, etc., K.

February 1874.

THE DOSE OF CROTON CHLORAL.

SIR,—In Dr. Liebreich's observations on the uses of croton chloral, published in the JOURNAL of December 20th, the administration of "four grammes or a drachm of this substance" is spoken of, but no other indication is given as to the ordinary dosage. Here, in America, the few physicians who have tested this new anodyne have prescribed it in doses of from three to ten grains, regarding the latter as a maximum limit. In view of this striking discrepancy, may I ask that some of your readers who have had larger and longer experience in the matter will state the minimum amount of croton chloral which they have found requisite to produce hypnotic effects? If drachm doses be usually necessary, the costliness of the remedy must place it beyond the reach of patients with small means.

I am, etc., AN AMERICAN INQUIRER.

New York, Jan. 30th, 1874.

NOTICES of Births, Marriages, Deaths, and Appointments, intended fo insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE JACKMAN FUND.

THE following subscriptions have been received.

	£	s.	d.
D. B. Balding, Esq., Royston		10	0
Dr. H. Billinghurst, East Grinstead	1	1	0
D. De Berdt Hovell, Esq., Clapton	1	1	0

THE TREATMENT OF POST PARTUM HÆMORRHAGE.

SIR,—The following plain remarks from the pen of a hard working country practitioner, and a district medical officer of many years' standing, may not be unacceptable.

I have carefully perused what has already been expressed in the JOURNAL upon the above question, and find that, like the Irishman of old, "A very great cry but very little wool". In the name of faith, I am at a loss to find how on earth the cavity of the uterus should have become so metamorphosed as to demand periodically, like the floor of my surgery, the brushing, the rough handling, the scrubbing, and the washing out which some of your correspondents deem requisite in order to ensure its safety. I have always appreciated the writings of Dr. Barnes until he comes to ride his hobby iron horse. Dr. Snow Beck, let alone his personal remarks, in my humble opinion writes and talks sound sense; so does Dr. Gream, with one or two others. Dr. Braxton Hicks's long epistle may easily be summarised in the following sentence. "See whether you have the entire placenta in hand; if not, look out for squalls!"

I have not yet had reason to discard the good old saying, "Let well alone". In round numbers I have attended 2,500 cases of midwifery, including the high and the low, rich and poor, and have not thus far had the misfortune of meeting in my own practice with a single case of flooding proving fatal. This is no doubt saying a good deal in favour of the ordinary means; namely, abdominal pressure, firm, equable, both during and especially after labour. Ergot, good, fresh, procured from a trustworthy dealer; opium and brandy cautiously administered; such, in fact, as has already been mentioned by Drs. Snow Beck, Gream, and others. When I find these means fail to accomplish the desired effect, then, and then only, I for one shall hail with joy the advent of the iron treatment into Wales. In the meantime I would just have the ironmongers to bear in mind what one of the best obstetricians said many years ago, and which, by the way, still holds good, that "meddling midwifery is bad".

I might certainly from memory cite many cases I have met of flooding alarming in the extreme, but which luckily have hitherto been amenable to the ordinary means adopted. Cases, I find, are at times coloured, cut, dried, shaped, and formed to suit the purposes of the delineator.

I am, etc., CYMRO CYMEDROL.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE, EAST ANGLIAN, AND SOUTH MIDLAND BRANCHES.

FORASMUCH as the Annual General Meeting of the Association is to be held at Norwich early in August next, the members of the Councils of the above Branches have decided to recommend the postponement of the combined meeting, which it was agreed to hold at Cambridge at the end of June next, until the year 1875.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail; The Blackburn Times; The Glasgow News; The Glasgow Herald; The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. Jonathan Hutchinson, London; Dr. James Finlayson, Glasgow; Dr. Georg Johnson, London; Dr. Smart, Haslar; Dr. Broadbent, London; Dr. Handfiel Jones, London; Dr. Finsterlin, Munich; Dr. Galabin, London; Dr. J. Murray London; Dr. Morell Mackenzie, London; Dr. Ford, Chulmleigh; Mr. Burt Ilminster; Mr. H. M. Morgan, Lichfield; Dr. J. Wallace, Liverpool: Mr. C. L Anderson, Liverpool; Mr. T. M. Wilkinson, Lincoln; Dr. Aitken, Netley; A Associate; Dr. C. M. Campbell, Staunton; Mr. T. Holmes, London; Dr. Snow Beck, London; Dr. J. N. Vinen, London; Mr. Procter, London; The Secretar of the Pathological Society; Mr. P. H. Holland, London; Mr. J. T. Powell London; Mr. Eastes, London; Mr. W. H. Michael, London; The Secretar of the Royal Medical and Chirurgical Society; Dr. Edis, London; M.R.C.S. The Secretary of Apothecaries' Hall; The Registrar-General of England; Th Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of th Medical Society of London; Mr. J. W. Langmore, London; Dr. Farquharson London; Dr. Bradbury, Cambridge; Mr. Foster, Huntingdon; Messrs. Savor and Moore, London; Dr. Thomas Trollope, St. Leonard's-on-Sea; Our Dub Correspondent; Dr. A. Leared, London; Mr. W. W. Wagstaffe, London; T Secretary of the Harveian Society: Dr. Taylor, Scarborough; Dr. Griffit Dublin; Mr. Bartleet, Birmingham; Dr. Ward Cousins, Southsea; Messrs. M Davis, and Co., London; Mr. J. H. Ewart, Manchester; Mr. G. Hastir Barnard's Green; Dr. Falconer, Bath; Dr. Rumsey, Cheltenham; Dr. Nor South Petherton; Dr. Snow Beck, London; Mr. Eassie, London; Mr. G. Hills, Norwood; Dr. J. West Walker, Spilsby; Mr. J. H. Hitchcock, Londo Mr. Shenland, Portsmouth; Dr. Steele, Liverpool: Mr. L. Armstrong, Newto Abbott; Mr. Erichsen, London; Mr. Spencer Watson, London; Dr. S. Lewis Liverpool; etc.

THE GOULSTONIAN LECTURES
ON
THE ORIGIN AND RELATIONS OF NEW GROWTHS.

Delivered at the Royal College of Physicians.

By J. F. PAYNE, M.B.Oxon., F.R.C.P.,
Assistant-Physician to St. Thomas's Hospital.

Lecture I.

Mr. President,—The title of the course of lectures which I shall have the honour of delivering before you is one so wide and comprehensive, that I must endeavour to define somewhat more precisely the limits of the subject.

The term tumour, which was, I suppose, the one first applied to the structures which I have called new growths, had once, it is needless to say, a very wide range of meaning, and even in modern times has been used with considerable laxity. With the ancients, for instance, before inflammation had been conceived of as an abstract process, the phlegmon or inflammatory swelling was put in the same category as what we should now call a cancer; nor was it then possible to separate from this class swellings produced by any cause whatever. So wide a conception would, of course, at the present day be practically useless, and is accepted by no one. But even in the most important work yet devoted to this subject, Virchow's great treatise on tumours, the corresponding German term is taken in a very comprehensive sense. Virchow includes in his work, for instance, all kinds of cysts, even hydrocele, as well as the products of tubercular and syphilitic diseases. Without any intention of fully discussing the proper definition of the word tumour or new growth, I still feel it necessary to mark out clearly the subject of the following lectures, and will therefore just say, by way of preliminary, that my remarks will be confined to those tumours which may be fairly described as new growths, omitting mere enlargements of parts already existing, and the products of inflammation, whether acute or chronic, and omitting also the consideration of syphilitic and tubercular products, as being more nearly allied to inflammation. What we include, then, are nearly what Virchow distinguishes as pseudo-plasmen or true growths (Gewächse).

The group thus limited includes all new formations, in the form of a more or less circumscribed mass, of substance resembling the simple tissues of the body, or immature stages of them; it includes also those productions known as cancers, and various growths nearly allied to these, known as sarcomatous tumours.

Among the simple tissue-tumours, I recognise fibrous (fibroma), mucous (myxoma), fatty (lipoma), cartilaginous (enchondroma), osseous (osteoma), vascular (angioma), muscular (myoma), nervous (neuroma), glandular (adenoma), and lymphatic (lymphoma and lymphangioma). Under cancers, I include epithelial cancer or epithelioma; and, under sarcomatous tumours, several forms which approximate to simple growths. Finally, there are combinations of the forms just mentioned. I shall not attempt to define the class thus made up, except by simple enumeration. The characters of the smaller groups are tolerably well marked, and no practical difficulty need arise in knowing what kind of objects it is intended to discuss.

The chief fact which all these structures have in common is the fact of growth or increase, and, moreover, of a growth which appears to be, in a certain sense, independent of that of the body, as if the tumour had some separate life of its own. So strongly did this impress the older observers, that for a long time tumours were regarded as something parasitic, or foreign to the organism.

Harvey has expressed this conception very distinctly. After showing that embryos, once fecundated, are inspired with a soul, or *anima vegetiva* of their own [and this may be taken to mean, in Harvey's philosophical language, what we should now call a separate life], "which", he says, "when they have received, they order themselves and grow, living at their own, not their parents', command". . . . . "And in this manner", he goes on, "doe mushrooms and plants growing to trees live. We discover likewise in our own bodies, that cancers, fleshy and also phlegmatical tumours and such like swellings, are supplied and fed as it were with their own proper vegetative souls, while in the interim the live and genuine parts of the body do extenuate and wither, and that because these tumours do seduce all the aliment to themselves; and so defraud the rest of the body of its fostering juice (as of its genius) wherefore they are called phagedænæ and lupi, devouring cankers and wolves." (*Anatomical Examinations concerning Generation*, p. 153. London, 1653.)

The idea of a separate life is of course now untenable, and no one can doubt that a tumour is essentially a part of the body; but, nevertheless, there are certain respects, both morphological and dynamical, in which tumours do separate themselves from the general unity of forces displayed in the organism. Dynamically or physiologically speaking, we may say that this departure consists in a preponderance of the vegetative, and an almost entire absence of the animal, life. No tumour or new growth exercises any specially animal functions. Their life is simply nutritive; and, if we may adopt the distinction of Mr. Herbert Spencer between the function of accumulation and that of expenditure of force, then we may say, though it seems a paradox, that tumours are like plants, in being almost wholly accumulators. This difference, also, is not without its bearings on morphology; for if expenditure or liberation of energy, which is the characteristic dynamical feature of animals, be scarcely exhibited in new growths, we may see in this fact partly the cause of their unrestrained increase in size. It has been shown by Mr. H. Spencer to be a general and almost self-evident law of organic nature, that the amount of growth depends upon the surplus of nutrition over expenditure. Growth will, then, the nutrition being equal, vary inversely as the amount of force liberated. When the expenditure is nothing, the whole of the nutrition will be applied to growth. If the expenditure of energy be very great, growth will be strictly limited.

A simple illustration may make this distinction plain. The antagonism between increase of bulk and the quantity of force evolved in different organisms is seen in the contrast between birds and mammals, or between birds and reptiles. The former, compelled by their aerial life to exert a relatively much greater amount of energy in motion, will have the less material remaining for nutrition; and the only members of the class which approach in bulk the larger mammalia and reptiles are those which, living on land, use far less energy in locomotion. Comparing birds and reptiles alone, as being the most nearly allied, we see another broad contrast in the greater amount of heat liberated in the small bodies of birds than in the comparatively bulky reptiles, as well as in the more rapid and varied motions of the former.

Applying these principles to the growth of tumours, we have, of course, to compare structures which are alike in all other respects except those points under consideration. For instance, we may contrast physiological and pathological productions of simple tissues. In the former case, the newly formed structure has what we call a function; in the latter, none. Function is, of course, not always associated with liberation of force. These are simply passive functions, like those of the fibrous tissues and the skeleton in preserving mechanical equilibrium, or that of the fatty subcutaneous tissue in preserving the equilibrium of temperature; in these cases, there is evidently no considerable liberation of energy. Again, the precise dynamical relations of the functions of the organs of assimilation and of those of secretion are still doubtful. But in the case of muscular tissue, and in some parts, at all events, of the nervous system, liberation of energy is inseparable from the functional activity of the organ. Hence, it is only from the latter class of tissues that our illustrations can be drawn.

To illustrate our present point, we may compare, for instance, the physiological growth of muscular tissue in the uterus, during pregnancy, with the pathological production of the same tissue in the form of tumours. In early stages, we know that the process of growth is essentially the same in both cases. There is, in both, a new production of muscular fibre-cells, and the histological development appears to be identical.* The production of new tissue in the simple physiological hypertrophy of the gravid uterus, is as abundant as that in many tumours; it must, also, be equally rapid; but it reaches a certain limit, and conforms to a certain type; while the tumour, on the other hand, has no very definite limit, and shows no conformity to rule in its shape. How are these differences to be explained? Certainly not by a difference in the amount of nutriment supplied. The pregnant uterus is a structure extremely rich in vessels, and most abundantly nourished; uterine tumours, on the other hand, contain so few vessels, that the existence of the latter has been even denied altogether. The chief point of contrast seems to be that the uterus, however large, is still capable of exercising normal functions, and there will thus always be a certain liberation of force, proportional to the pressure which the organ has to sustain, even independently of the immense efforts of parturition. The muscular tissue contained in a tumour, on the other hand, although also capable of liberation of energy by contraction (for spontaneous contraction has been observed in such tumours), does not, in fact, exercise any force; its situation and relations make this impossible. Whatever nutriment, then, it receives, will all be applied to the accumulation of tissue—that is, to growth. The surplus of nutrition over expenditure will, in fact, be nearly the whole of the nutrition. What wonder, then, that such structures, once commenced, show such monstrous exaggeration of growth? Dr. Bristowe has remarked, that "such tumours not only do, but must, grow during pregnancy, and must, at least, attain a bulk, the ratio of which, to the former bulk, is that of the gravid to the unimpregnated uterus." If our principle is correct, they must grow in an even higher ratio, since they lose nothing by functional activity.

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* The identity of the processes was indeed observed directly by Dr. Bristowe in the tumours of the pregnant uterus. (*Path. Trans.*, iv, 218.)

An obvious test of the truth of this principle is the relative frequency of new growth in passive or actively functioning tissues respectively; and we do find, as a matter of fact, that they are incomparably more frequent in the former. Fatty tissues, bone tissues, and all the varieties of growth which originate in fibrous tissue, are instances of the connection between mechanical passivity and excessive growth. On the other hand, voluntary muscle, the dynamical tissue κατ' ἐξοχὴν, never gives rise to tumours, or forms a part of any, except of certain perfectly abnormal mixed growths, which more nearly resemble an abortive fœtal development. We have here, perhaps, the secret of the extraordinary rarity of tumours composed of striped muscle.

This argument might obviously be pressed too far. If taken without qualification, it would go to prove that there could be no limit to the growth of a tumour. In fact, we know, of course, that tumours do not unfrequently cease to grow, though their growth is much less clearly circumscribed than that of the normal parts of the body. They must, indeed, obey the general laws of limitation of organic growth, which laws are very clearly stated by Mr. Herbert Spencer somewhat as follows. "Growth," he says, "is unlimited, or has a definite limit, according as the surplus of nutrition over expenditure does, or does not, progressively decrease."

In the case of organisms, Mr. Spencer shows that there are certain relations which necessarily cause this surplus to decrease. That which is most applicable to the case of tumours is the following.

"Since, in similar bodies, the areas vary as the squares of the dimensions and the masses vary as the cubes, it follows that the absorbing surface will increase in a smaller ratio than the mass. If a growth like an organism increase, so that its dimensions are doubled, the absorbing surface will be only four times what it was, while the mass has become eight times as great. It follows, then, the ratio of nutriment absorbed to mass will become less and less, while, if there be any expenditure of force whatever in the mass, this will come, in the end, to more than balance the nutrition. The supply of nutrition over expenditure will at least become zero, and growth will be arrested."

Now, in tumours, the absorbing surface is, of course, represented by the inner surface of the blood-vessels, and this would, of itself, be sufficient to show that the growth of tumours cannot be really unlimited. In special cases, too, particular causes, such as the condition of the vessels, the relation to other parts, will have their effect; but, notwithstanding all this, the broad distinction will remain that, while organs of the body reach only a definite size, and then remain stationary, the growth of tumours is limited by no rigid law; their growth being like the growth of a tree, rather than like the growth of an animal. In fact, if we may, for the moment, speak of a morbid growth as an organism, the following statement of the law of limitation, in Mr. Spencer's words, will be strictly true.

"In the same organism, the surplus of nutrition over expenditure is a variable quantity, and growth is unlimited, or has a definite limit, according as the surface does, or does not, progressively decrease. This proportion is exemplified, on the one hand, by the increasing growth of organisms that do not expend force, by the growth, slowly diminishing, but never completely ceasing, of organisms that expend comparatively little force, and by the definitely limited growth of organisms that expend much force. On the other hand, this law follows from a certain relative increase of expenditure that necessarily accompanies increase of bulk, and is, therefore, an indirect corollary from the persistence of force."

The aspect of new growth just considered has perhaps been too much neglected, but greater importance will always attach to the morphological aspect, and that I now propose to consider.

For the formation of tumours or new growths, I have been able to arrive at no better definition than this: the addition to an organism, which is in its general outlines already completed, of new parts without any definite function. Such a process must be—in the case of highly organised animals, at all events—one extremely abnormal. To explain it all, we must have recourse to the method of a comparison, and endeavour to find out what better known processes it most resembles, and what, on comparing it with each of these successively, are the points of likeness and the points of contrast.

It appears that there are three processes much more commonly met with in living bodies with which the production of tumours may advantageously be compared. These are the formation of parts in the incomplete embryonic organism; the reproduction of parts worn out or lost in the complete organism; and, finally, the enlargement of parts already existing. Of these three processes—embryonic development, repair, and hypertrophy—each possesses some points of contact with the processes of which we are to speak; in fact, so gradual is the transition in some cases from each of them to tumour-formation, that it may be difficult to know what term we ought to apply. The transition from embryonic development to tumour-formation is seen, for instance, in the occurrence of congenital tumours. Sometimes, as in the peculiar congenital tumours from the sacral region, a continuous series may be traced from a comparatively simple cystic structure through teratoid forms, gradually increasing in complexity up to a complete twin fœtus, or "pygodidymus".

The transition from repair to tumour-formation is also quite gradual. It is seen, on the one hand, in such structures as granulations, which would be called new growths, had they a more permanent existence; and in such growths as cicatricial keloid of the skin, which, though ultimately tumours, start from a scar.

Finally, that there are numerous transitions from hypertrophy to tumour-formation is a fact so generally recognised, that it need hardly be insisted upon as a general principle, though certain special cases will afterwards be discussed. It seems, then, worth while to follow out the three lines of comparison here suggested, and to see how far the formation of tumours agrees with or differs from each of these processes. In making these comparisons, I shall, in the first place, confine myself chiefly to the consideration of tumours which resemble the simple tissues of the body, since the formation of each of these must of course be more nearly paralleled by physiological formations than the malignant heterologous growths, such as cancer and sarcoma; but it is not always possible to draw the line, and I hope to show in subsequent lectures that the same principles which apply to the one class of tumours apply also to the other.

Comparison of Tumour-Growth with Embryonic Growth.

The most striking features of embryonic growth may perhaps be set down as follows. There is, according to the great law of Von Baer, progress from the general to the special, with ever increasing differentiation of parts—so that it is, in fact, development or increase of structure, not merely growth or increase of size. The amount of growth is limited by some general law of the organism, and we can predict beforehand with tolerable certainty what size will be ultimately attained. The form of growth is also limited, or, so to speak, predetermined in the same way, so as to be susceptible of prediction in most cases, if we know the circumstances. These three features, which may be called the general laws—namely, progressive development, limitation of size and of form by some inherent but not apparent law—are true of the parts of organisms as well as of the whole. Minute investigation reveals part of the machinery by which these results are produced; viz., in the growth and multiplication of cells. The primordial cell divides and divides again, till the whole has become converted, by the process of segmentation, into a mass of nucleated cells. These embryonic cells become transformed into tissues by further division and proliferation—a process which may be termed histogenesis.

There are, then, two chief stages or periods: the first, cell-multiplication without differentiation; the second, differentiation with development. In the formation of limbs, the same laws generally prevail [as was first clearly laid down by John Goodsir]. Just as the germinal spot of the ovum is that from which the whole organism derives its origin, so each part, or even each limb, he supposed to have its subsidiary germinal spot or centre of nutrition. Though further observation has shown that this is not strictly true—at least of the higher animals—still each embryonic cell, as it multiplies, bears of course the same relation to its progeny as was borne to it by the germinal spot of the ovum.

The causes of differentiation, like those which regulate size and form, remain obscure. What we know is, that the embryonic cells arrange themselves into certain layers, from which the subsequent development of organs and tissues takes place.

The whole process of development, then, whether of organisms or of parts, may be summed up as being histogenesis by cell-proliferation and multiplication; the development controlled by certain obscure laws of size and form, and involving constant progression from the general to the special.

On comparing with this process the process of tumour-development, it is impossible to deny the close analogy of the early stages in both, and of the results up to a certain point. In both cases, cell-proliferation and multiplication are the starting-point of growth. Whether, indeed, a tumour starts from a single cell, like the ovum, or from a single germinal centre, as, according to Goodsir, do the limbs and other parts of the body, is uncertain, for the actual beginning of all tumours is concealed from us. When we are able to examine the process, we find germination taking place from several points, but it may, of course, have originated in the first place at one.

The analogy between these processes is, as is well known, the basis of the Cellular Pathology of Virchow. Confining ourselves to the subject of new growths, we find Virchow laying down the general principle that they all pass through a stage comparable to the undifferentiated cellular stage of the embryo. This is the stage of "indifferent cell-proliferation", in which all the elements are alike, whatever they may be destined ultimately to become. A mass of these indifferent corpuscles he supposes to have a latent possibility of differentiation and development like that of the cells of the embryo; so that of these elements, which appear quite like one another, some may become epithelium, some cartilage, some bone, and so on.

Indifferent cell-proliferation is an undoubted fact; we may see it at the margin of almost every growing tumour. Sometimes, considerable masses of a tumour are made up of this, while other portions are more specialised. Nor need we hesitate to allow that, as the earlier stages of all animals have a considerable resemblance in structure, so have the early stages of all tissues. For instance, the Malpighian layer, or rete mucosum of the skin, from which the epidermis is formed, has a structure as "indifferent" as that of granulations or connective hypertrophy, which give rise to vessels and fibrous tissue.

The difficulty is to allow as great a faculty of differentiation to the granulation material as to true embryonic tissue. Is there any distinct evidence that the former ever does give rise, by progressive differentiation, to several kinds of tissue, or that a new growth, composed of several kinds of elements, had its origin in a simple mass of indifferent corpuscles, formed when the organism was already complete? One line of specialisation can, doubtless, be often traced—are there several? Virchow has given a categorical answer to this question, and states positively that, in certain tumours, a part of the original elements become converted into connective tissue, another part into epithelium, till a complex structure is produced like that of an organ of the body, *i.e.*, a pathological organ or an organoid tumour, which usually, he says, imitates a gland. Further, he describes a class of "teratoid" or monstrous tumours which represent, not an organ only, but a system of the body, and in which, for instance, there may be skin with both its connective tissue and its epidermis, its sweat-glands and hairs. Such a development is, as he says, not more difficult to conceive than that of simple tissue tumours or organoid tumours; for, "if there be, in fact, a stage in which there are indifferent elements capable of development in various directions, then it is just as conceivable that they should sometimes develope in one direction, another time in two, as a third time in five or six directions." (*Die Krankhaften Geschwülste*, i, 95.)

And, if these relations were as easy to see in reality as they are to conceive in thought, the case would be clear enough, and we should have no difficulty in recognising the precise analogy between embryonic development and new growth. But, differing with all respect from the great authority of Professor Virchow, we must say that the case is not so clear, for it is doubtful whether either the organoid or the teratoid tumours can be shown to originate in a stage of indifferent granulation-cells. By organoid tumours are chiefly to be understood adenoid or glandular tumours and papillomata, with some cysts. Now, glandular tumours appear to be, in almost every case, outgrowths of existing glands, the few exceptions being certain detached masses of glandular substance near a normal gland, which there is generally much reason to regard as congenital structures; so that, at least, no clear instance can be quoted where the histogenesis of such a tumour from indifferent cell-proliferation has actually been observed. (Lücke, *Geschwülste*, p. 281.) The same may be said of papillomata or their analogues, the polypi of mucous surfaces, which always appear to be either enlargements of pre-existing structures, or else composed of two tissues, namely, vessels and an epithelial covering, which are evidently of different origin, and not differentiated from a common basis. With regard to the only forms of cyst which can be called organoid, those, namely, which contain proliferating structures, these appear to be always either enlargements of pre-existing structures, or else it appears that their epithelial element is really of different origin from the other tissues which they contain.

Finally, the extremely rare structures described as teratoid tumours, in which, for instance, skin, hair, sweat-gland, teeth, or bone, are all found together, appear to be always instances of inclusion of part of the integument at an early period of fœtal life, or else to be comparable to an imperfectly formed fœtus. They are apparently always congenital, with the exception, perhaps, of some growths in the ovaries. When a growth of this kind, originally small, increases rapidly, and is found to contain various tissues, some imperfectly formed and in various degrees of evolution, we cannot doubt that the process of tissue-formation has been actually going on; and, since a considerable proportion of such a tumour always consists of immature or indifferent tissue, it is reasonable to assume that histogenesis has gone on at the expense of this tissue. But in such a case the embryonic mass was formed before, not after, the completion of the organism; so that it must be regarded as part of the produce of the original conjugation by which the organism was produced.

Such growths are singularly suggestive of the process of budding and agamic reproduction in the lower animals, which are, as Quatrefages (*Metamorphoses of Man and Animals*, translated by Lawson, 1864, p. 238) has pointed out, essentially processes of growth. Waldeyer, indeed, goes so far as to speak of these growths in the ovary as a parthenogenetic development from an ovarial epithelial cell turned into an ovum-cell; and similar productions in the testis have been explained by the presence of ovarial elements, or part of the germinal epithelium in that gland. But tumours quite as complicated occur in distant parts of the body, as the mediastinum (Virchow, *Archiv*, vol. liii, p. 444; Lang, *ibid.*, p. 128).

Other forms of tumour remain to be spoken of, which might be supposed to bear the same interpretation; namely, mixed tumours, such as those composed of partly cartilage, partly fibrous tissue, or partly sarcoma. These undoubtedly pass through a stage of indifferent cell-formation, indifferent tissue being found passing by insensible gradations into each of these forms. Now, in these, all the tissues belong to what is termed the connective-tissue series, or, to use the expression of Virchow, are physiologically interchangeable. We know that one may, under certain circumstances, pass into the other; so that the plurality of tissue-forms need not be taken absolutely as showing plurality of lines of development, or at least the degree of difference is far less significant than in the cases which we have been considering.

One great class of tumours—the true cancers—remains to be considered. Here we find in general two types of elements—the stroma, which is a connective-tissue structure; and the cells, which are usually thought to have more or less an epithelial character. If both parts of the structure arise from an indifferent cell-formation, then of course there is a differentiation, or progress from the general to the special, quite comparable to that of embryonic development. Whether it is really so, will be discussed hereafter. At present, we may take it provisionally as not proved, and conclude that indifferent cell-formation does occur in the early stages of cancer, but that it is not certain whether that does or does not produce the epithelial elements.

From all this we must conclude that the process of tumour-formation is strictly analogous to that of embryonic development up to a certain point—namely, so far as both processes result in the formation of a mass of indifferent or similar cells, such as the mulberry-mass of the embryo, or the indifferent granulation-material of new growths. Beyond this, the parallel is less exact, and the progressive differentiation which is characteristic of embryonic development is less clearly traceable in tumours. The indifferent granulation-material, which is analogous to the undifferentiated embryonic structure, is capable of producing structures which vary within certain limits, such as the group of connective tissues, or, on the other hand, of producing epithelial elements; but it is uncertain whether the same group of cells can produce both.

One very striking coincidence may be noticed with regard to the point at which the resemblance ceases to be exact; viz., that the early stage of development of the ovum—that which is imitated by new growth—is possible, and perhaps even in some animals the rule, without impregnation. This amount of development is possible to elements derived from one organism alone, though conjugation with elements derived from another is necessary to establish the progressive differentiation which results in the development of a complex structure. We may, therefore, say that what amount of development an unimpregnated ovum is capable of, that, at least, is possible to new growths, which may imitate on the one hand the incomplete process of development of such ova in the higher animals, and on the other hand, in rare cases, make some approach to repeating the agamic reproduction of the lower animals.

Comparison of Tumour-Growth with Repair and Reproduction of Lost Parts and with Inflammation.

It is well known that the capacity for reproducing lost parts differs very greatly in the animal kingdom; and, while it is generally greater in the lower than the higher animals, the differences are not entirely to be so explained. The most general law which seems to have been arrived at is this, that the capability of repair is inversely as the amount of metamorphosis or change through which the animal has gone. Insects, for instance, have no power of restoring lost parts; batrachia have a great deal. In the mammalia, at all events, this power is extremely limited. An organ once lost is lost irretrievably; and even the more specialised tissues, as muscle and ganglionic nervous matter, are usually replaced by other tissue, not actually restored. These very tissues, it is worth notice, rarely or never appear in new growths. New growth, taken as a whole, has, perhaps, greater possibilities than has the process which constitutes repair—giving rise to more various and more specialised products. On the other hand, the latter process is far more completely subject to the general law of evolution of the whole organism, for the parts reproduced always conform to the size and shape of the whole body; while it is, of course, the most remarkable feature of new growths, that they are so entirely unlimited in these respects. In other respects, the reproduction of lost limbs in some of the lower animals, has a decided analogy to the production of a tumour. Harry Goodsir (*Anatomical and Physiological Observations*, 1845) described, for instance, long ago, the reproduction of a claw in the crustacea, as starting from one nucleated cell, which multiplies and gives rise to other centres of growth. In fact, there is a true cell-proliferation.

With regard to the minute processes of repair, they differ from the corresponding processes in new growth very greatly, in the degree to which the vessels and the blood with its formed elements participate therein. The share taken by vascular changes in ordinary repair is known to be very great; so much so, that it has been the great question with surgeons, whether the healing of wounds is possible without inflammation. In new growth, vascular phenomena seem to play a subordinate part, though perhaps their importance has been underrated. At all events, in order to compare the one with the other, we must leave out of account the vascular changes; and then we find that the residue, or changes in the fixed tissues in repair, bear the closest analogy to new growth, being really, in the early stages, processes of germination and proliferation. These, of course, are also the tissue changes in early stages of inflammation, with which repair is so intimately connected. In describing one, we are, therefore, describing the other. Of course, the extent of these germinative changes is a matter of much controversy; and I am, therefore, glad to be able to show you the results of some direct observations.

As an instance, we may take the changes produced in an extremely simple structure, such as the omentum, by inflammation and by new growth respectively.

It is well known that mechanical injury, heat, and the action of various irritating substances, all give rise to the same series of changes called inflammatory. We may, then, take any one of these as a type of the rest. I have accordingly represented on the diagram the appearance of a human omentum inflamed in consequence of perforation of the bowel. The endothelial cells covering the fibrous trabeculæ are seen in several places to give evidence of proliferation; that is to say, one sees divided cells, cells with divided nuclei, groups of cells showing by their shape that they have been formed under mutual pressure, and, therefore, probably from one original mass; and also what look like compound, or mother cells.

These are the evidences of tissue-germination, and agree with the observations of Stricker, Burdon Sanderson, and others, on the cornea. They also resemble the phenomena brought to light by the comprehensive researches of Dr. Klein on the serous cavities of animals in which he has found germinating endothelium. Now, in the early stages of three different new growths—namely, cancer, sarcoma, and tubercle—we see the same or similar proliferative changes, sometimes affecting the endothelium, sometimes the connective tissue. Without now dwelling on other peculiarities of these minute changes, it will be enough to have shown that in the early stages of all these growths there is actual germination of the tissues, and that the same is to be seen in inflammation. The appearances of inflammation in connective tissue are still more like those of certain stages of new growth. The diagram, for instance, representing indifferent cell-proliferation, might equally well stand for one of inflammation. At the same time, I must venture again to lay stress upon the immense preponderance, in the latter process, of phenomena connected with the vessels and blood-corpuscles, which are only subsidiary in the case of new growths. We know, moreover, that even the resemblances are only like the resemblance between all embryonic tissues, for instance; it is a resemblance involving great latent possibilities of difference.

Products of the Reparative Process.—If we pass to the more definite structures produced by the process of repair, we still see a considerable analogy between them and new growths. The repair of many tissues passes through a stage very fairly comparable to what we called the indifferent cell-proliferation of new growths. Granulations are tumours in everything but in permanence. It is unnecessary to describe their structure minutely. Essentially outgrowths of vessels, they possess a framework or stroma which, except in its extreme vascularity, is not unlike that of a lymphatic gland, and to which histologists have not always done justice; and, beside, we have a large number of lymphoid corpuscles. The structure has been compared to that of a round-celled sarcoma, but in reality it is only the cells that are alike; the architectum of the growth is very different. It might rather be called, in the nomenclature of new growths, a highly vascular fibroma, with very numerous migratory cells. But, as we know, this condition is far from permanent. Granulations either die away or else they lose their abundance of lymphoid cells; the fibrous element increases; and they become organised, as it is said, into fibrous connective tissue and similar tissues. Do they also become organised into epidermis? We know that some epidermis commonly covers them; and, according to the more generally accepted view, this is produced by metamorphoses of some of the lymphoid or indifferent cells. Some authorities, again, regard the epidermis as of different origin; and the question is so undecided, that we must hesitate to pronounce an opinion. The only point on which we must insist is that, both positively and negatively, these results agree perfectly with what we said just now about the indifferent cell-proliferation. The question of the origin of all epithelium produced for purposes of repair is one which I prefer to consider in the next lecture.

So far, then, as we are able to compare the phenomena of repair and inflammation with those of new growth, there are important analogies; but a large part of the phenomena of the two former processes—those, namely, connected with the vessels, exudation and cell-migration—have not, so far as is yet known, their parallel in the development of tumours, except as simply subsidiary to the germinative changes.

[*To be continued.*]

LETTSOMIAN LECTURES

ON

SYPHILIS AS A CAUSE OF DISEASE OF THE NERVOUS SYSTEM.

Delivered before the Medical Society of London.

By W. H. BROADBENT, M.D., F.R.C.P.,
Physician and Lecturer on Medicine at St. Mary's Hospital.

LECTURE III.—*Concluded.*

Syphilitic Disease of the Cerebral Arteries.—Varied and important as are the effects of syphilitic disease in the membranes and substance of the cerebrum, not less so are the results of syphilitic disease of the cerebral arteries. Here, again, as in every part of my subject, I have to acknowledge my indebtedness to Dr. Hughlings Jackson, who has led the way in this as in many other investigations, and has repeatedly insisted on the importance of recognising the effects of syphilitic disease of the arteries. The arteries of the brain in syphilis are frequently attacked by inflammation, usually beginning in the outer coat. This may lead to thrombosis, which cuts off the supply of blood, and produces the result now known to follow this event. The effects are first an accumulation and stagnation of blood in the capillaries in the area of distribution of the vessel blocked, and, unless collateral circulation can be established, there will subsequently be softening. The symptoms will depend upon the part fed by the artery which is obstructed. I am disposed to think they are more varied than those produced by embolism, since a fragment carried from the valves of the heart, or from the aorta, appears to find its way into certain vessels (notably the left Sylvian artery) in preference to others, while syphilitic thrombosis may occur anywhere. In identical situations, the effects of thrombosis and embolism would, of course, be identical.

Syphilitic thrombosis must be of very frequent occurrence, judging from my own experience and from the number of cases collected by Zambaco, Gros, and Lancereaux, but set down as examples of inflammatory softening.

CASE I. *Left Hemiplegia, affecting chiefly Face and Upper Extremity; Convulsive Attack followed by Mania; Peculiar Loss of Intelligent Use of Hands, without Loss of Power; Syphilitic Disease of Arteries; Thrombosis of Right Middle Cerebral; Softening of Convolutions near the end of Fissure of Sylvius, etc.*—Emma C., aged 30, dressmaker, was admitted into St. Mary's Hospital, under my care, on March 28th, 1873, suffering from partial left hemiplegia. She had been married four years, and, during that time, had had four miscarriages before the completion of the sixth month of pregnancy. Her husband was found to be suffering from ulcers on the tongue and plantar psoriasis from syphilis contracted eighteen months before marriage. Her health had not been affected till two days before her admission, when she suddenly lost the use of the left arm. There was first twitching in the fingers for about five minutes; the limb then dropped, and felt cold and insensible; she lost her speech for an hour, and it had not since been quite the same as before; there was no loss of consciousness. The legs were unaffected, and she walked home, half an hour's walk, after the attack. Up to the time of her admission, the hand remained clenched, but, when first seen, she could move the rest of the limb freely, and soon the hand also. The tongue was protruded with difficulty, and deviated greatly to the left. Articulation was a little indistinct. The face was much distorted to the right, especially on talking or laughing. Both eyes were winking, and closed voluntarily, but the left was not capable of winking alone. There was no loss of sensation, nor impairment of intellect; the emotions were easily excited. The pupils were equal. Her sight was good; the optic discs were normal. She had a little headache over the eyes; there was, no pain in the head before the attack. She had a peculiar red, blotchy eruption on the face, especially the forehead; she said that it had come out since the attack. There was no heart-disease; the apex-beat was a little outside the normal situation; both sounds were short and well-defined; the second rather marked, and heard well in the neck. Pulse 80, rather hard and durable; bowels regular; urine normal. She took iodide of potassium, in doses gradually increased up to twenty grains, three times a day, and recovered rapidly, leaving the hospital on April 24, after a stay of barely four weeks, apparently well.

She returned, however, on May 3rd, with great pain and swelling of the face, which was found to be due to a node on the left jaw. The paralysis had recurred, but in a slighter degree, and was more marked in the face and tongue than in the arm; the eruption had also reappeared. She was now very emotional, crying when spoken to, and complained of headache. Pulse, 80, hard; temperature, 98.3. The iodide was again given, but the progress was not satisfactory till, on May 24th, she was delivered of a dead fœtus of about the sixth month, after which she recovered rapidly, and again left the hospital on June 12th. Traces of paralysis, however, were still perceptible in the tongue and face. There was no optic neuritis. It was remarked, but not at the time considered at all important, that, when she had so far recovered the use of the hand as to be able to do sewing, this was for a time extraordinary, quite childish in its execution; much more irregular than was accounted for by the impairment of power. She continued well while taking iodide of potassium, but, when the supply which she took from the hospital was exhausted, she did not apply for more, and gradually became worse. The hemiplegia returned, and she had an attack of momentary unconsciousness. About two or three months after leaving the hospital, and a month before her readmission, she became violently maniacal for a time, but had partly recovered, and, on admission, October 3rd, was quiet, but extremely emotional, laughing and crying by turns, while the intellect was greatly impaired. She answered questions, but was unable to give any account of her condition since she was last under observation, and appeared helpless and "dateless". The hemiplegia was again very apparent, and the leg was weak when she walked, as well as the arm. The eruption was conspicuous; she complained of headache, and vomited daily.

On October 5th, after restlessness, she had a convulsive attack, which began with a loud scream; all the limbs were rigid and violently convulsed, but the left most; the head was drawn back; the face was purple; unconsciousness was complete. The convulsions lasted about ten minutes; she lay in a state of stupor for an hour afterwards, the skin being cold and clammy. When she recovered from this, the left arm was quite paralysed. She was very restless for the remainder of the day, complained much of headache, and had no sleep at night. Next day, she talked perpetually, and in a random way, recognising, however, and naming anyone. She vomited two or three times; laughed almost without cessation from 10 A.M. to 6 P.M., and then became noisy, violent, and quite unmanageable, shouting and raving all the night. There were distortion of the face and deviation of the tongue. She used the left hand, and moved the leg freely when in bed, but was unable to stand. The face was flushed; the head hot. The pulse was 80, sharp and weak; but the artery was full in the intervals, if not compressed. The tongue was dry and furred. The bowels were confined; her urine was passed in bed. Medicine was vomited. She continued in this state for many days, only quieted by large doses of chloral and morphia injections. She talked incessantly, and her language was abusive and bad; but she would frequently express her regret for it, saying she could not help it. She always recognised and named me and the nurses, and, in my presence, was quiet, or only muttered, or laughed, or cried, put out her tongue, and answered questions, usually saying she was better. Her mood was most variable, laughing one moment, crying the next; she often sighed deeply, and frequently, after either laughing or crying, gave a peculiar inspiratory snort. The peculiar minutely dotted papular eruption was present on the face, forehead, and chest, with an occasional acneiform papule. The treatment consisted in the administration of iodide of potassium in drachm doses every four hours by enema, as the medicine was vomited when given by the mouth in doses of twenty or thirty grains. The bowels were kept freely open.

After ten days, she became profusely salivated, and was very prostrate; the iodide of potassium, therefore, was discontinued. Improvement had begun, and she gradually became more quiet. On October 25th, she was better in all respects; was delirious only for an hour or so at a time in the night. She got up to the chair when the bowels acted, but passed her urine in bed during the night. The pulse was particularly hard and long, and, as I feared, this betokened another outbreak. I gave iodide of potassium in doses of fifteen grains. On the 27th, however, she was more helpless, and passed her urine in bed by day as well as by night. The iodide was discontinued. Her answers were rational, but not always accurate. The pulse was now soft.

From November 1st to 4th, she was better, eating, drinking, and sleeping well; answering questions, and quite rational and sensible, but evidently feeble in mind. The urine and fæces were passed naturally. A curious fact, however, was, that she appeared to have no intelligent use of her hands. She was quite unable to put on a jacket, and fumbled in a most extraordinary way in the attempt. She would notice when the bed-clothes were a little awry, and try to arrange them, but would fail altogether, and bring them into the greatest confusion; so also with the box at her bedside for her clothes and other things. She would apparently form an intention of putting in or taking out something, and fumble about the lid, but only once succeeded in raising it. She could, however, feed herself. This condition brought to mind her extraordinary sewing when previously in the hospital, and an interesting field for inquiry was promised in the investigation of this peculiar mental condition. Unfortunately, the amendment was only temporary. On November 7th, she began again to be noisy; and, from this time, while she lived, she was always more or less in the same condition, talking loudly, calling out, crying, laughing, but usually with some reference to the people about her; almost always able to command herself during my visit, recognising and naming me, saying she was better, and had no pain in the head, putting out her tongue, and permitting ophthalmoscopic examinations. If I reminded her that she had been violent or abusive, she would acknowledge it, and express regret. The urine and fæces were passed in bed. She always took food very well. The eyes were frequently examined. Nothing abnormal was seen beyond a degree of hyperæmia of the disc, which did not pass physiological limits. Phosphorus was given, and large doses of iodide of potassium were again tried. There were occasional gleams of improvement for a few days, but, no lasting impression being made, biniodide of mercury was given rather freely. This failed either to affect the gums or to produce any good effect on the symptoms. Mercurial inunction was, therefore, tried. She had appeared to be better for a few days, when, on January 17th, she was suddenly seized with convulsions, which continued with little intermission for twenty-six hours, when she died.

Post Mortem Examination, January 19th, 1874.—When the cranium was removed, the dura mater was found normal; there were no adhesions. On removing the dura mater, fluid was seen beneath the arachnoid, over the convolutions, in unusual quantity; it was limpid. The membranes were a little opaque. From the posterior end of the right fissure of Sylvius, two small arteries were seen to issue, which were empty, and had numerous small white patches in their walls. The same was observed on the left side, but less marked. There was much fluid about the base. The arteries of the base, both large and small, but especially the basilar, were thickly studded with white patches. In the basilar, they lay transversely round the artery, and were not so thick, or hard, or rigid as is usual in atheroma. There were no great irregularities in diameter. An empty dotted artery ran obliquely across under the surface of the right hemisphere of the cerebellum. The membranes were very lacerable. There was no special change round the crura. In the right fissure of Sylvius, nothing was found, except the condition of the arteries described above. On the right, when the middle cerebral artery was followed to the end of the fissure just before emerging, it was found embedded in a small yellow hardish substance, and occluded. Three empty branches emerged on the surface, and ran, two obliquely upwards and backwards, the other downwards and backwards. There was no softening in the fissure of Sylvius. The convolutions posterior to the end of the fissure of Sylvius were shrunken and small, depressed, soft, different in colour, but not distinctly yellow. The softened convolutions did not belong to the temporo-sphenoidal lobe, but began behind the lower end of the second ascending parietal gyrus, which was not affected; they involved the supramarginal lobule, the angular gyrus, and the lower annectent gyri, not reaching the occipital lobe. When a section was made, the subjacent parts were found softened, and two large cavities of very irregular shape, but with defined walls containing only a little turbid fluid, were found, each of which might have held a nut.

Softening did not reach the surface in the fissure of Sylvius, or penetrate to near the ventricle ; it did not extend into the fissure of Sylvius or the occipital lobes. A small depression was seen on the surface of the corpus striatum (intraventricular), with yellow stain ; this was soft, and, on section, a small cavity of the size of a split pea was seen ; it was confined to the intraventricular portion of the corpus striatum, close to the surface, near the outer edge, and about midway in its length. A small cavity, of the size of a pea, was found in the thalamus, near the upper surface, about the middle of its length. The left hemisphere was normal, but the intraventricular part of the corpus striatum was depressed and softened to a greater extent than the right (to the area of a sixpence, nearly). A cavity with turbid fluid contents was found immediately beneath the ependyma ; its posterior end was about midway of the length of the corpus striatum. The cerebellum, pons, and medulla were normal. The heart was hypertrophied ; there was a little atheroma in the mitral and aortic valves, much in the aorta. The lungs were healthy. The liver was elongated, and had a depression on its surface near the anterior edge, and several pale yellow patches, which extended for a little depth. The spleen was very large. The kidneys were granular and rather small ; the cortex was wasted, but not in a very advanced degree. The ovaries were large. There was a small tumour in the uterine wall. The Fallopian tubes were long.

It is easy to see, after the *post mortem* examination, why remedies failed to influence the disease. Iodide of potassium may, and, I think, does, facilitate the removal of the *débris* of softened brain, but can do nothing to restore the damaged structure ; but there are several interesting questions suggested. 1. Was the maniacal excitement due to the conspicuous lesions, or to the general cerebral anæmia from the arterial disease ? 2. Was the paralysis of the face and tongue the result of the extreme softening in the convolutions, or of the small patches in the corpus striatum and thalamus ? 3. Was the peculiar loss of all intelligent use of the hands associated with the special situation of the softening ? The last question is the most interesting.

CASE II. *Convulsion ; Mania ; Hemiplegia ; Probable Thrombosis.*—The mistress of a gentleman had had syphilis seven years before I saw her ; she had also been in the habit of drinking freely. Two years and a half previously, she had been found standing rigid and insensible ; she had then had convulsions lasting some hours. Later, she had acute mania, for which she was twelve months in an asylum ; afterwards, she became quiet ; had no delusions, but her memory was poor, her mind feeble, her speech hesitating and slow. She stooped also, was unable to walk far, and often tripped.

At 4 A.M. on December 10th, 1871, she complained of pain in the left knee, and soon afterwards vomited. At 9 A.M., she was found to be unconscious, and the left limbs were useless, agitated, and rigid. She was unconscious for a great part of the day. I saw her with Mr. Coulson on December 11th. She had then lateral deviation of the eyes and head to the right, being unable to look to the left at all. The face was slightly distorted to the right, and the tongue pointing to that side when protruded. The fundus of the eye was normal.

A week later, after aperients and careful dieting, she had recovered the use of her limbs ; her mental condition varied ; at times quite equal to her condition before the attack, but, when I saw her, her state was childish ; her conversation was limited to expressions of welcome, and her answers were brief. Even now the eyes were not brought readily to the left, and occasionally she had double vision looking to the left. Her aim, when told to take an object with the hand, was not good. Later, the symptoms of cerebral softening gradually came on, and she died. A *post mortem* examination was not permitted.

CASE III. *Syphilitic Thrombosis ; Right Hemiplegia, with Tonic Contraction of Paralysed Limbs, relaxing during Sleep ; Access sudden, and attended with Temporary Aphasia.*—Robert O'N., aged 27, formerly in the Royal Engineers, was under my care in St. Mary's Hospital from June 20th to September 2nd, 1873, suffering from right hemiplegia, with tonic spasm of the affected limbs of more than six years' duration. At the time when the attack came on, he had been breaking up antimony, and to this he attributed his illness ; he was, however, suffering from syphilis, contracted about twelve months before. The attack was sudden ; it was not attended with unconsciousness, but speech was completely lost for some time. He had regained speech, and a considerable degree of power in the limbs ; he halted, however, in walking, and the right leg was stiff and awkward, and the foot came down with a "bang"; the right arm could be moved in most directions, but not freely and readily, on account of a degree of rigidity ; the wrist was flexed, and the fingers bent, and he was unable to extend them, on account of tonic contraction of the flexor muscles. With the aid of the other hand, however, or by another person, the wrist and fingers could be straightened out readily, and the contraction was not the rigidity of paralysed and wasted muscles. On the contrary, the limb was well-developed, and the muscles were full and firm. It was found also, on examination of the paralysed arm during sleep, that the contraction was entirely absent, and that the fingers moved freely and naturally. This was not simply from the warmth of the bed, since the patient himself never found the fingers relaxed while he remained awake, and it was only by requesting the nurse to make the examination while he slept that the fact was ascertained. There was no inequality of the two sides of the face. Sensation was not affected. The optic discs were more pink than usual, but well-defined, and not swollen ; the retinal vessels were of natural size.

The mode of attack and subsequent course of the symptoms seemed to point to obstruction of a branch of the left Sylvian artery, the most probable cause of which was thrombosis, from syphilitic inflammation of the vessel. It was not expected that any great impression would be made on the affection, but I thought it right to give him the advantage of any good to be obtained from iodide of potassium, which he took in full doses. Galvanism and faradisation were employed, and the general result was a decided improvement, so that the hand could be used at meals, and the walk was less clumsy, but the paralysis remained quite evident. A remarkable change was noted in the urine. For about three weeks after his admission, the specific gravity varied from 1010 to 1012. After this time, it was 1020 to 1030.

CASE IV. *Right Hemiplegia, Sudden, with Loss of Consciousness and Impairment of Sensation.*—George H., aged 52, a shoemaker, was admitted into St. Mary's Hospital on February 2nd, 1873, suffering from right hemiplegia of nine months' duration. He denied that he had ever had syphilis, but he had pigmented scars on the knee, shin, shoulders, and abdomen, and a serpiginous ulceration had, for eighteen months, been creeping down the right side of the neck towards the shoulder. The hemiplegia had come on suddenly with loss of consciousness, and the motor paralysis was accompanied by impairment of sensation. He had been brought to the hospital against his will, and was extremely lacrymose and full of complaints. The optic discs presented no distinct abnormality ; the fundus of the eye generally was pale.

He wearied every one with his complaints, and insisted on leaving the hospital after a stay of only twelve days. The paralysis was probably due to thrombosis and softening, and therefore, in great measure, irremediable.

CASE V. *Syphilitic Thrombosis.*—Mary W., aged 30, single, a domestic servant, was not aware that she was the subject of syphilis. She had had no cutaneous eruption, but, five years before she came under observation, she had suffered from perforating ulcer of the soft palate, which had left a large aperture. One morning, at 4 A.M., while in bed, she suddenly lost the use of the left limbs, and, twelve months later, she was still suffering from marked hemiplegia. A little improvement was obtained by means of iodide of potassium, cod-liver oil, and iron ; but the condition was evidently one of permanent damage, and almost certainly of syphilitic thrombosis of a cerebral artery.

CASE VI.—*Syphilitic Thrombosis* (?)—Eliza W., aged 43, married, the mother of sixteen children, of whom ten were alive and well, came under observation on April 26th, 1867. She was aware that she had suffered from syphilis, and had scars on her forearms, from rupia thirteen years before. Two months previously, when apparently in good health, she suddenly fell down insensible while preparing dinner, and so lay for an hour and a half. When she came to herself, she found she had lost the use of both legs and of the right arm. She also saw double, and everything seemed to go to the top of the room. She had recovered power in the limbs, but suffered much pain over the right brow, and there was slight paralysis of the left side of the face. From this, and from the peculiarities of the attack, the seat of mischief was apparently the upper part of the pons. The nature of the lesion must be acknowledged to be uncertain ; it might have been hæmorrhage or thrombosis. Small doses of iodide of potassium had not much effect, and she did not remain under treatment sufficiently long for large amounts to be reached.

CASE VII. John K., aged 50, had suffered from syphilis for five years, and, while under treatment for this disease, awoke on the morning of December 15th, 1870, with a sense of numbness and impairment of power in the right half of the body and face. He could squeeze the hand faintly, and could pick up a pin with the aid of vision, but could not feel it. He walked unsteadily, and stood with the legs apart. Here, again, the lesion might be either hæmorrhage or thrombosis.

A few words remain to be said on the diagnosis, prognosis, and treatment.

DIAGNOSIS.—The considerations involved in the diagnosis of syphilitic disease of the nervous system are too numerous and elaborate to be resumed in the time which remains at my disposal. We have, on the one hand, to guard against the conclusion that whatever happens in a person who has suffered from syphilis is necessarily due to this disease ; and, on the other, to avoid being misled by the absence of an acknowledged syphilitic history or of traceable syphilitic antecedents. The period of life at which the nervous affection comes on is a great guide. In old persons—except in very obvious cases—we should arrive at a diagnosis of syphilis only after exclusion of other more common causes of disease of the nerve-centres; in young adults, syphilis would suggest itself early, unless there were heart-disease or disease of the kidneys. The chief aids in the diagnosis, in addition to evidences of syphilitic disease in other parts, which must be carefully looked for, will be the antecedent or associated symptoms, which we have learnt by experience to connect with syphilis, headache with nocturnal exacerbation, sleeplessness, and irritability. The gradual and irregular mode of access, except in the case of thrombosis, is again suggestive of syphilitic disease, and convulsions are very common.

PROGNOSIS.—In the prognosis, we have always to bear in mind the liability to relapse. Occasionally we see recoveries which are apparently complete and permanent; frequently, I think, when the symptoms have been only epileptiform attacks, and the associated nervous disturbances enumerated in speaking of syphilitic epilepsy; sometimes when there has been evidence of graver mischief; but in a large proportion of the cases the patients will enjoy immunity from similar or more serious symptoms only on condition of perseverance in the employment of the remedies.

The chief considerations which bear on the prognosis are the duration, nature, and seat of the lesion.

As to *duration*, the longer the mischief has existed the more likely are its effects to be permanent; for, although syphilitic exudations and growths are singularly amenable to the influence of remedies, if they be allowed to remain for any length of time they destroy the structures in which they are lodged. This is more particularly important in the spinal cord, in which a very limited lesion will involve the entire segment, and cut off the part below from the cerebrum. It is, however, remarkable how much relief is often afforded, even after a prolonged train of disturbances, by removal of the cause, especially when the symptoms point to an affection of the cerebral hemisphere.

As to the *nature* of the lesion, supposing it to have been determined that it is of syphilitic origin, the most important point is to distinguish between the effects of syphilitic disease in the membranes or nerve-substance, and of thrombosis from syphilitic inflammation in the arteries. As Dr. Hughlings Jackson has often insisted, the results of the blocking up of an artery will be independent of the nature of the obstruction. If a collateral supply of blood do not find its way to the part, softening is inevitable; and supposing that treatment could affect the original disease, as when a cerebral artery is included in a gumma, it would probably come too late to obviate the effects. Usually, as has been stated, thrombosis gives rise to sudden attacks without much pain.

Syphilitic epilepsy, so called, generally yields to treatment. We have here, in Dr. Jackson's language, only a "discharging" lesion, not a destructive one. In paralysis, on the other hand, there is frequently destruction; but recovery may be expected if we can exclude thrombosis and softening, and if the duration have not been too prolonged. The tumours which give rise to unilateral convulsion appear to be particularly liable to be attended with optic neuritis, and may wear out the patient's strength; but tumours at any part can sometimes be brought to a state of quiescence, and the effects of disseminated lesions are more serious than those produced by a single growth.

As to the *seat* of the lesion, I will only further add that growths from the dura mater are apparently less amenable to treatment than affections of the other membranes or of the nervous substance, probably because they are less vascular, and therefore less easily reached, and less freely acted upon by remedies.

TREATMENT.—The treatment is simple. The one remedy is iodide of potassium, or, this failing, mercury. I usually begin with doses of six grains, and always combine with it ammonia—the carbonate or aromatic spirit. Having, by one or two days' experience, ascertained that there is no special intolerance of the iodide, it may be rapidly pushed to doses of 12, 18, 24, 30, or 36 grains three times a day. Occasionally, even larger doses are necessary; and I have given a drachm every four hours. That large doses are often absolutely required, and that they succeed when moderate doses fail, I am convinced by abundant experience; and, if iodism be induced, which is very rarely the case in tertiary syphilis, it is almost always before large doses are reached. Large doses are better borne when taken after meals. Of course, iodide of potassium is more quickly taken up into the blood from an empty stomach, but it is also quickly out of the blood and in the urine; and, when a continuous action on the system is needed, which is what we require in dealing with the effects of tertiary syphilis, the indication is best met by giving so diffusible a remedy as the iodide of potassium after food.

If the iodide of potassium fail after a full and fair trial, a resort to mercury is always desirable; and the more recent the syphilis, the earlier should this be made. In passing from the use of one to the other drug, either a certain interval should be allowed to elapse, or the mercury, if given by the mouth, should be in one of its most soluble and active forms—the bichloride or biniodide. More than once I have seen sudden and profuse salivation when this precaution has been neglected—no doubt from the mercury being converted into biniodide within the system. Sometimes I have employed mercurial inunction at the same time with the internal administration of iodide of potassium, and have frequently given the biniodide of mercury with iodide of potassium, either in the same mixture or in the form of pill at night.

One word as to the *modus operandi* of iodide of potassium. This was the subject of a beautiful explanation by Dr. Odling in his Goulstonian Lectures before the College of Physicians—hypothetical at that time, but demonstrated by experiment since. The active agent is the iodine, as is shown by the fact that other salts of potassium have not the same effect, while other combinations of iodine, such as iodide of ammonium or sodium, have. The iodine is permitted to exercise its influence on the seat of disease in virtue of the comparatively slight affinity by which it is held in union with the base; this being so feeble that, in the presence of certain forms of living protoplasm in active change, the salt is decomposed, and the iodine set free to exercise its solvent action on the organic matters. Whether this be direct, or indirect through the well known oxidising effects of free iodine, is not so certain.

In conclusion, I have only to offer to the Society my sincere thanks for the kind and patient attention to these lectures, which have not been all I could have wished, but which, I am already assured, have answered one great purpose I had in view—namely, that of calling more general attention to the subject of Syphilitic Affections of the Nervous System.

ON THE VARIOUS PREPARATIONS OF KOUMISS, AND THEIR USE IN MEDICINE.

By V. A. JAGIELSKI, M.D.Berlin,
Late Physician in the Prussian Army, etc.

[*Concluded from page* 231 *of number for February* 21*st.*]

THE two following analyses, one of mare's-milk koumiss, made by Hartier, a chemist of Moscow, and the other of E. Chapman's medium cow's koumiss in London, made by Wanklyn, may be compared.

	Mare's Koumiss.	Medium Cow's Koumiss.
Alcohol . . .	1.65 per cent.	1.60 per cent.
Fat . . .	2.05 ,,	0.30 ,,
Milk-Sugar . .	2.20 ,,	4.85 ,,
Lactic Acid . .	1.15 ,,	1.08 ,,
Caseine and Albumen	1.12 ,,	1.07 ,,
Ashes or Salts . .	0.28 ,,	0.75 ,,
Carbonic Acid . .	0.785 ,,	1.50 ,,

Thus we see that the caseine in both kinds of koumiss is the same to a fraction; much less is the butter or fat in the medium koumiss, for the simple reason that it is not advisable to send out the koumiss *à longue course* with all the fat contained in the milk, as it decomposes too quickly into butyric acid, which is deleterious to the digestive organs. Further, the lactic acid and alcohol show no difference worth considering; but the lactose in the medium koumiss is twice as much as in mare's koumiss, if Hartier's analysis deserve full credit for correctness, as Wanklyn's does, whose reputation as an analytical chemist is undeniable.

The *Whey Koumiss* (C) is derived from cow's milk completely freed from its butter and caseine, so that it merely contains some albumen, lactose, lactic acid, alcohol, and the salts. It affords the best proof of showing how wrong all the theories were which proclaimed the caseine or even the butter as being indispensable for koumiss-making, and may prove useful as a beverage in disease with even a strong febrile reaction, with copious or excessive expectoration, perspiration, or diarrhœa, either in plethoric or in strong constitutions, which do not require an increase of weight, or in patients with inflammation or fever. We must, however, not forget that in the latter case the treatment becomes more difficult and complicated; and we have to use all our skill to abate the fever by antipyretics, to calm the pain by sedatives and narcotics, and to prevent local inflammations from spreading, etc., according to the nature of the localised disease. According to the more recent school of medicine, whey is only of limited value, as it supplies the body with slight nourishment; and it is obvious that, on this account, whey can never take the place of the highly nutritious milk, and therefore can never be applied to the purpose of a proper plastic treatment. The whey koumiss, however, promotes decidedly the appetite and digestion, and, as a cooling and refreshing dietetic remedy, calming irritation. The "sparkling bland", a diluted and still more pleasant form of whey koumiss, may, in febrile disease, be used as a refreshing drink, and prove more convenient, as bland will keep for a long time, and is agreeably flavoured with ginger, lemon, or orange, etc.

The *Diabetic Koumiss* (D) contains, according to Wanklyn's analysis, 1.6 per cent. of alcohol, 1.1 per cent. of lactic acid, and not more than 1.0 per cent. of lactose. It is particularly suitable for the treatment of that disorder, to increase weight, to allay thirst, to excite the action of the skin, and to check the loss of sugar and the abundant flow of urine, although it appears to me less important how much urine and sugar are excreted, as long as the patient's weight and strength are increasing; and the confidence created in the remedy is also of much consequence in such a distressing condition. According to Stahlberg, koumiss is, in the treatment of diabetes, of greater value than even Vichy or Carlsbad water; and we need not restrict the diet in the usual severe way. If the skimmed-milk treatment, the buttermilk cure, or Professor Cantani's lactic acid treatment, has given such good results, I do believe that koumiss is of still more value, as it acts as a ferment in decomposing within the body all saccharine matter, and as an easily absorbable and strength-giving plastic nourishment; otherwise I cannot explain its beneficial effects on this disease, even as *ultima ratio,* when the tongue appears parched, and the patient seems skin and bone, and thoroughly exhausted. The complication with lung-disease appears a forcible indication for its immediate use, as the life will be prolonged under this treatment.

Muscular exercise in open air, regularly continued every day, is of the greatest importance in the treatment with koumiss generally, but especially during the use of diabetic koumiss, which ought to be about a week old, sour, and well sparkling. It contains fermenting caseine in the most favourable condition for digestion and nutrition, and a larger amount of lactic acid than even buttermilk, of which Dr. L. Brunton has spoken highly as a remedy in diabetes in this JOURNAL. Further, the carbonic acid and alcohol in this diabetic koumiss must not be disregarded as powerful remedial agents in the treatment of diabetes. In fact, diabetic koumiss is buttermilk in the state of alcoholic fermentation. It ought to be made the principal or exclusive beverage of a diabetic patient, as soon as he has acquired a taste for it. He may also take it with his meals, chiefly consisting of meat-diet. Why Dr. Brunton has so entirely excluded koumiss from his experiments and observations, I do not know; and I sincerely regret it, because his lectures on the subject of diabetes appear to me a *chef d'œuvre de science.* If glycerine be of any value in this disease, as recommended by Schultzen, it may more advantageously be given with koumiss instead of with water (four pints per day); and, as glycerine is fermentable, according to Berthelot, it may be prescribed as an addition to koumiss, or better in koumiss, in order to prevent nausea and diarrhœa from glycerine. When given at the dose of about an ounce and a half, I feel sure that the combination of glycerine and lactic acid in koumiss, along with the proper diet, will yield the most satisfactory results.

As to my own experience in the general use of koumiss, I have observed that it exerts a striking remedial power in chronic gastro-catarrh arising from any cause, but especially from the abuse of alcoholic drinks, the use of tonic astringents, styptics, and sialagogues, or the habitual taking of opium. It stimulates digestion without affecting the head—a fact noticed and expressed to me by patients with the utmost satisfaction and joy. Some extolled its peculiar influence on the brain, it leaving the head clear for brain-work, and generally strengthening memory and intellectual power. In many of the secondary symptoms of diseases such as dyspnœa, cough, weakness, emaciation, etc., even where they are so strong as not to correspond with the topical process of the malady, koumiss is a prompt and powerful check to development of the morbid process; and many other cases of debility, in consequence of excessive or protracted copious secretion of muco-purulent matter or severe hæmorrhages from any organs, or after operations, childbed, and lactation, find a comforting restorative.

In lung-consumption (chronic form), the first stages are most benefited by koumiss. Through an improvement of the digestive functions, the regulation of the nutrition, and its particular healing effect on all relaxed mucous membranes, the cough subsides, shortness of breath improves, night-sweats disappear, and sleep is induced, and coincidently weight and strength and plumpness of the body augment. But I must repeat, in this connection, that full koumiss, like other nourishing diet, is contraindicated in the febrile phases of phthisis, and should be replaced by whey koumiss, bland, salines, etc. On the other hand, so long as the bodily temperature is still above normal, or so long as a high temperature may fluctuate several degrees between morning and evening, there is reason to use the koumiss, and expect good effects from it. If in eight or ten days the body do not begin to gain weight, the temperature do not show a declining tendency, the tongue do not clear, the appetite do not improve, then the koumiss will be of as much or as little use as any other treatment or medicine, because the prognosis will have turned out *pessima.*

Koumiss is an admirable succedaneum for purely drug substances, and even for cod-liver oil, in cases where the stomach has assumed an aversion to such medicines. At the same time, there are critical phases of disease in which a judicious association of drug-treatment is indispensable; and of this the attending physician will be best able to give proper directions. In all cases of koumiss-treatment, the dinner-hour should be about 1 o'clock, and, after dinner, a repose of two hours before recommencing to take the koumiss. The doses should also be discontinued about 7 or 8 o'clock P.M. The presence of albumen in the urine is no indication that the koumiss-treatment should be interfered with by any drug-treatment for that symptom till the general health of the patient has improved; but, as long as the patient has to keep to his bed, the total consumption ought never to exceed two or three pints *per diem.* When the patient becomes able to take active exercise without fatigue, he may increase his doses advantageously according to his appetite.

In chronic pharyngitis, laryngitis, bronchitis, No. 2 or No. 3 koumiss will be found to act beneficially, even when relaxation and general weakness are great; but in ulceration, No. 1 or fresh No. 2 is more advisable. I have found it far superior even to Ems water in those complaints, when accompanied by copious expectoration and emaciation, and in large vomicas; and this corroborates Stahlberg's dictum that "koumiss has the properties of Ems water *plus* a great nutritious power." As to diseases of the mucous membranes of the urinary system, I can say, from my own experience, that its use proved successful in cases of renal colic with sandy deposit in the urine, and also with hæmaturia but principally in catarrh of the bladder with copious mucous, or even muco-purulent, sediment. For vaginal and urethral discharges, Nos. 2 and 3 will be found very useful. It is a physiological property of koumiss to lessen all discharges, but to stimulate the secretion of the urine, and to render it clear; often a kind of pressure or contraction of the bladder is produced, especially at the beginning, which, however, ceases in a few days, when, also, all cloudy, turbid, or dark appearances of the urine gives way to a heavy limpid state; during the warmer season, diaphoresis takes the place of diuresis.

When the koumiss is taken only in small quantities, the appetite is always keen, but larger quantities are more satisfying, and preclude the necessity of solid food. For general use, the No. 2 state of the koumiss is to be preferred, as it is neither astringent nor aperient. In relaxation of the mucous membranes, and more particularly in chronic diarrhœa, No. 3 koumiss is indicated. On the other hand, when the secretory functions are impaired, as is often the case in constipation, No. 1 full koumiss must be employed, because of its mild aperient effect. I must note here, however, that this aperient effect can be imparted to the other properties of both Nos. 2 and 3 koumiss by mixing them with one fourth or one-half of fresh milk at the moment of drinking. The use of bran-bread with salt will also sometimes neutralise the astringent effect of No. 3 koumiss and counteract nausea. In warm weather, koumiss runs through all the changes very rapidly, and the No. 3 koumiss spoils then sooner. As a general rule, fresh koumiss retains its No. 1 condition for two or three days in summer when kept cool immediately after it is bottled; from that time to the eighth day, it is No. 2 koumiss; beyond that period, it is No. 3 koumiss, and retains its soundness for several months if kept cold. In the treatment of chronic cases, the use of koumiss should extend from six to eight weeks, *à peu près.* If there should be a recurrence of any of the symptoms, they may be checked at once by a repetition of a shorter course, or even a few bottles only. Previouslly to commencing the koumiss treatment, the patient should be carefully weighed. A patient on two quart bottles a day appropriates so much nourishing matter, that his increase of flesh and weight cannot fail to be perceptible. Of course, there is an increase of weight corresponding to the more or less emaciated state of the patient, even if the koumiss be administered in very small doses; but the most surprising effect can always be observed when emaciation and prostration have been greatest (without fever). Even when the patient remains in bed, a pint bottle a day has shown a rapid increase of strength. The average increase of weight during a course I can state at six pounds, more or less; although, in some cases, twenty pounds and more are on record in eight weeks, or eight to eighteen ounces per day during the first ten days. In cases, however, where the increase of weight has been less marked, a great improvement in the patient's strength, spirits, and appearance will be noticed. Thus, we perceive that where the process of digestion and nutrition has been improved, the consequences are very soon apparent upon the system of circulation by an improved heart's action, better pulse, and freer capillary circulation, especially noticeable in the peripheral parts of the body. Here it produces a pleasant feeling of warmth all over, a healthy action of the skin, when the pores open, the vessels expand, and a healthy moisture and colour reappear. As a general rule, all other drinks, oily, pickled, salted, and smoked food, and all strong condiments, should be avoided during its use.

In conclusion, koumiss, though not a specific for any disease, is a benign agent in medicine, which merits serious consideration and study in both private and hospital practice. By its use, the digestive organs are roused into activity, fat is deposited in the subcutaneous cellular tissue, the flesh becomes plump, and the complexion assumes freshness and colour, the dull eye assumes expression, and the depression of spirits gives way to animation; the respiration acquires more depth and regularity, as has been determined by the spirometer. Large doses have the effect of promoting a feeling of laziness and even sleep; but this sleep is of a most refreshing kind.

To give a list of diseases for which the koumiss treatment is applicable, appears to me quite irrational, as I should otherwise be compelled to name almost all diseases, because, generally speaking, nearly every disease may reduce, more or less, nutrition, and in such a condition koumiss is indicated; and, more than this, it would even sound quite paradoxical to prescribe koumiss in a fracture of the thigh, although this is quite possible when such a fracture is accompanied or followed by anæmia, loss of flesh, or has become complicated by catarrh of lungs, stomach, etc.

These hints may suffice to show that koumiss is neither a specific nor a panacea, although rationally or logically, and practically or empirically, its use is a very extended and general one.

In order to prepare koumiss in an uniform state of excellence, the place of its manufacture must be quite to itself, so that the tendency of milk to absorb foreign odours and emanations may be free from the least encouragement. Moreover, the operative manager of the process should be a man of experience in the work, and always on the spot, to insure its proper progress. It is, therefore, not possible for a dispensing druggist to make its manufacture a branch of his pharmaceutical business. At the same time, there is no reason why hospitals, requiring large and fresh supplies daily, should not have a special apartment for its preparation, under the constant supervision of a duly qualified *employé*.

CASES WHERE DEATH HAS FOLLOWED THE INJECTION OF THE PERCHLORIDE OF IRON INTO THE UTERUS TO ARREST *POST PARTUM* HÆMORRHAGE.

By T. SNOW BECK, M.D.Lond., F.R.S.

[*Concluded from p.* 269 *of last number.*]

CASE III.—Mrs. J. H., aged 23, of rather small stature, of fair complexion, blue eyes, and light hair, was taken with lingering pains on the evening of May 19th, 1872. Her husband had left her some time previously. She was very desponding; did not care what became of her; complained of a general feeling of lassitude; had pains in the limbs, headache, and no appetite. Her urine was thick, high coloured, and small in quantity. The pains continued much the same till the evening of the 21st, when they became stronger, and the orifice was dilated to the size of a florin. She slept pretty well during the night. In the morning the pains increased, and the membranes broke; after this the pains became strong and rapid, and the child was born about noon on the 23rd. The vagina was hot and tender. It was necessary to introduce the catheter. A good deal of blood was lost, and the placenta did not come away; after waiting about half-an-hour, the hand was introduced; the orifice was not contracted, and the placenta was situated at the upper part of the cavity; the uterus did not contract strongly in the hand, and some blood was lost in withdrawing the placenta. The pulse was very quick, about 130. A binder was applied. After about half-an-hour, the patient was observed looking very pale; and, on inquiry, said "something warm seemed to be running away." On examination, considerable hæmorrhage of a bright red colour was taking place from the vagina. Firm pressure was now made by grasping the uterus; cloths dipped in cold water were applied to the vulva, and flapped on the abdomen; ice could not be procured. The hæmorrhage lessened, but still continued; the patient became very faint, and the respiration sighing; cold water was now injected into the uterus. As the blood still continued to flow, about half-a-pint of solution of perchloride of iron, one part of strong solution to six parts of water, was injected into the cavity of the uterus. The hæmorrhage was very soon stopped; the faintness passed away, and the binder was reapplied. Everything seemed doing very well until the evening of the 26th, the third day, when she complained of feeling very ill; an extra blanket was put on the bed; a dose of chloric ether, compound spirit of ammonia, and lavender was given. The patient became warmer; perspired freely, and slightly delirious in the night. About 4 A.M., a very black clot came away.

In the afternoon of the 27th, the fourth day, the pulse was very small, and so quick it could not be counted. She lay on the back, with the knees drawn up. The abdomen was full and tender. Light nourishment, with milk, was given; warm fomentations, with turpentine, were applied to the abdomen; and an enema with castor-oil and turpentine was administered.

On the 28th, she was much better. The abdomen was not so distended; the enema brought away much flatus. On the two following days she was not so well.

I saw her on May 31st, the eighth day. She was lying on the back, with the knees drawn up; the face was slightly flushed, the expression anxious. The eyes were hollow, and surrounded by dark areolæ. She was quite conscious, but, the nurse said, wandered and talked all night. There was slight pain at the top of the forehead; the skin was warm and dry; the pulse small, 140, slightly wiry; the abdomen much distended, smooth, tympanitic; there was considerable tenderness all over, but more so at the hypogastrium and left iliac region. She could not extend the legs, on account of the pain, nor turn on either side. The lips were dry; the tongue was coated with thin yellow fur. She was very thirsty; had no sickness; the bowels were moved twice, the stools being loose, very black, but not offensive; much flatus passed from the bowels, and the lochia were free and of a dark brown colour. She was taking light nourishment—beef-tea and milk. Five grains of carbonate of ammonia were given in infusion of calumba every four hours; and turpentine stupes were applied to the abdomen.

I saw her again on June 3rd, the eleventh day. She had been getting worse. She was lying on her back, with the shoulders low and the knees drawn up. Respiration quick, 42 in the minute; pulse 135, very small; skin warm, dry; face slightly flushed. She did not notice anything, yet could be roused; apparently dosing, muttering, and talking, occasionally giving a deep sigh and crying out. She took any drink when offered, but did not ask for anything. There was no sickness. The bowels were moved into the bed, the stools being fluid, and very black. The abdomen was greatly distended; it was apparently tender, as she cried out when it was pressed. The upper part of both arms was swollen, and appeared to be tender when pressed.

She continued in much the same state, becoming more difficult to rouse, appearing to lie in a dosing, muttering, delirious state, occasionally crying out, and quietly died on the morning of June 7th, the fifteenth day after her confinement.

The body was examined on the afternoon of the following day, June 8th. The weather was rather warm. There were no signs of decomposition. The abdomen was much distended, tympanitic; the arms were swollen, and the veins near the chest full. The intestines were much distended with flatus, especially the small intestines; their coats were thin, not injected. The stomach was apparently natural. Only a little brownish-yellow fluid was found in the abdomen; there was no exudation of lymph anywhere in the peritoneum. The uterus lay in the pelvis; it was removed for examination. The blood which flowed from the pelvic veins when divided was of a deep brown colour. The lungs, heart, liver, and kidneys were all apparently healthy, but were only superficially examined.

The uterus was large and doughy; it measured nearly 5 inches long by 4¾ inches broad at the fundus. There was some slight leaden marking at each side; the veins were not much congested. The Fallopian tubes and ovaries were apparently healthy. On cutting through the posterior walls of the uterus, different sinuses were divided, which contained a thin, opaque, ink-blackish fluid. The inner surface of the organ was covered with dark brown mucous secretion; the tissue beneath was of a deep reddish brown colour mottled with black. When washed with a stream of water, the surface was uniform, with the usual reticulated appearances of the inner portion of the contractile tissue. Studded over the previous situation of the placenta were numerous larger and smaller round black spots, which proved to be the orifices of the sinuses, containing a similar opaque ink-blackish fluid. Incisions made into the substance of the walls, at and near the seat of the placenta, divided several sinuses, all containing more or less of a similar opaque ink-blackish fluid. No remains of any coagula were anywhere observed. Some of the arteries were picked up with the fine point of a needle, and were found to be open, free, and without any appearance of coagula in their canals.

CASE IV.—In the afternoon of October 2nd, 1872, I received a small box, by railway, from a medical friend in Yorkshire, containing the uterus and appendages of a patient, and accompanied with the following history.

"The wife of a farmer in this neighbourhood was confined of her fourth child on September 7th, 1872. She was a healthy woman, and had been quite well up to the time of her last confinement. The labour was lingering; and, as I had been with her a long time, I applied the forceps and completed the delivery. As the placenta did not come away, I introduced my hand and took it. I applied a binder as usual, and all appeared going on nicely. I was just leaving the house, when the nurse called me and told me my patient was flooding, and I found a good deal of bright red blood running away. Mrs. W. was pale, but not faint; I passed my hand into the uterus and removed the clots. I then gave a full dose of ergot, applied cold water externally, and, after a time, injected cold water into the uterus, but the flooding still went on. After a time, I made the nurse press upon the uterus, and mixed a strong solution of the perchloride of iron, which I had with me, with six or eight parts of water, and, passing a large male catheter into the uterus, injected half-a-pint or more of the iron mixture. The flooding soon stopped. I applied the binder again, gave a drachm of the fluid extract of ergot, with some brandy and water, and left. All went on very well till the third day, when Mrs. W. said she did not feel at all well. She did not look bad; but the abdomen was full and tender when pressed, and the pulse very quick. She took a dose of castor-oil, and I sent her some carbonate of ammonia and chloric ether, in a bitter infusion, to be taken three times a day. The next day she was better; the day after, not so well. Then the abdomen became more swollen, and was very tender; the pulse very quick and small. She was very thirsty; had no sickness; the bowels were loose, moved twice a day, and very dark coloured; and a great deal of talking and wandering during the night. She took her food very well; but lay on her back, with the knees drawn up, in a dreamy state, mumbling and wandering. She gradually became worse and worse, until she knew no one, and died quietly on September 28th, the twenty-first day after her confinement."

The uterus was large and doughy; it measured full 5 inches long, by 4¾ across. There was no exudation of any kind on the peritoneal coat; the veins were a good deal congested; the Fallopian tubes were a good deal injected, but otherwise healthy, as were also the ovaries. On cutting through the posterior wall, different sinuses were divided, which contained some thinnish black-looking fluid in their cavities. Some dark red brown coloured fluid was found on the inner surface, which, when washed away, left the tissues of a dark red brown colour, mottled with ink-black. The seat of the placenta, and the space around it, were spotted over with black spots, which were the openings of the sinuses, filled with a similar black fluid. Incisions into the walls divided several sinuses containing a similar black-coloured fluid. No coagula were found anywhere, so far as the examination was made. The arteries were not examined.

It is singular how these cases are a mere repetition of the same facts, with only slight modification; but this probably arises from their being a repetition of a natural process occurring in healthy women, and not being the result of any previous disease. After the completion of a natural labour, the uterus becomes sufficiently relaxed to allow the blood to escape from the open ends of the torn arteries. The means which are adopted to induce the contractile tissue to again contract and close the canals of these vessels, either fail to provoke contraction, or only induce partial contraction; and in either case the hæmorrhage continues, when a solution of the perchloride of iron, of varying strength, is injected into the cavity of the uterus. After the injection of the perchloride, the hæmorrhage ceases at once, or very soon afterwards; the patient revives; and all things appear to be going on favourably till about the third day, when the usual series of fatal symptoms commence by the woman complaining of feeling very ill. The symptoms, once begun, continue gradually to increase in gravity, and at the end of two, three, or four weeks, the patient appears to fall asleep as death closes the scene. In the examination of the body afterwards, all the organs are found in a healthy condition; the intestines are greatly distended with flatus; there is little injection of the peritoneum, or effusion into the peritoneal cavity; the uterus is found large, and the uterine sinuses more or less filled with an ink-black coloured fluid, which, from its similarity to the secretion on the inner surface, leaves no doubt that some of this fluid has entered these canals through the open orifices at the inner surface of the uterus; and, as fluids are known by experiment to pass readily from the vena cava along the uterine sinuses, and to escape at the inner surface of the organ, it appears to admit of no reasonable doubt that the fluids at the inner surface have followed a contrary course, have entered the open orifices of the sinuses, been conveyed into the general system, produced blood-poisoning and death; all the other uterine tissues being found in a perfectly healthy state. A similar sequence of events, and similar *post mortem* appearances, are known to follow in cases of puerperal septicæmia—so long known under the term of puerperal fever—the only difference between the two conditions being in the nature of the fluid taken up from the inner surface. In septicæmia, it is evidently the natural secretions formed at the inner surface of the uterus which are found in the sinuses. "On cutting through the uterus at the site of the placenta, a large quantity of puriform matter flowed out, as though an abscess had been laid open; this followed each section." (*Obstetrical Journal*, p. 443.) After the injection of the perchloride of iron, it is generally the secretion at the inner surface, mixed with the perchloride, which is found in the sinuses; and it is not improbable that some of the symptoms observed in cases where death has followed the injection of the perchloride, are the effects from these noxious secretions, modified and rendered more fatal by the addition of the perchloride of iron which had been injected. I do not know of any instance where the perchloride of iron has been probably taken up without being mixed with the secretions from the inner surface, except in the case which occurred in Dr. Barnes's own practice, and which no doubt his modesty prevented him recording, where the injection, in a woman of strong wiry constitution, was directly followed by severe pain in the hypogastrium, and death in about seven hours. The deadly effects of the perchloride, when introduced into the general circulation, are also shown in those cases where a few drops have been injected into a nævus in infants, and death has followed in a few minutes. In one case, the "*post mortem* examination showed that the point of the syringe had penetrated the transverse facial vein, and that the blood in the right cavities of the heart had been immediately coagulated."

The whole mischief in these cases of *post partum* hæmorrhage appears to turn upon the single point of the want of proper contraction in the gravid uterus; and the sole question in the treatment upon the best means of inducing and maintaining complete contraction. Want of contraction, or subsequent relaxation, which practically is the same thing, allows the blood to escape from the arteries; want of proper contraction permits the canals of the sinuses to remain pervious, the noxious fluids to enter them, and death to result. Hence the effect which immediately follows the injection of the perchloride into the uterine cavity becomes of considerable importance. In the previous cases, all the tissues of the uterus were perfectly healthy; there was not the least appearance of any local action, beyond some of the tissues being stained of an ink-black colour. The perchloride is known to be a powerful stimulant to the contractile tissue, and to induce permanent contraction. And I conclude that the good effect which follows the use of it arises from the effective contraction which is produced; for, when complete and permanent contraction is induced, the woman appears to be safe from all ill consequences, and will make a good recovery. But it is also known that even the use of the perchloride is sometimes not followed by any perceptible contraction; or by only partial contraction, by which the flow of blood is arrested, and the way to injurious impregnation of the general system left open.

These views, however, are not admitted by Dr. Barnes or Dr. Braxton Hicks. . Dr. Hicks does "not enter into the discussion as to how it acts. It stops blood in hæmorrhage from a wound on the outside; I presume it acts similarly on the inside of the uterus." But the nature of the tissues on the "outside" are very different from those on the "inside", though so important a difference may be considered too trivial for Dr. Hicks's notice. Dr. Barnes, however, makes distinct statements. He says that the perchloride acts chemically upon the part to which it is applied; that it stops the hæmorrhage by the direct application to the bleeding surface; that it instantly coagulates the blood at the mouths of the uterine vessels, causing these vessels also to retract in the direction of their length, and to contract in their diameter; that the inner surface becomes contracted, corrugated, and crinkled, under the contact of the iron; that the arrest of the hæmorrhage is due to "the formation of clots in the vessels. Stasis, for a brief period, is enough to allow of clotting." As all these statements are directly contradicted by the examination of the tissues of the uterus in the previous cases, and as they rest solely upon his own statements, and as so far, to quote his own words, he has "persistently evaded the plain duty incumbent upon us all to set forth the facts upon which alone scientific conclusions can be drawn," I trust he will now cease "the manner of a schoolmaster", and state clearly the facts upon which he relies to support and justify these assertions.

P.S. In the last volume of the *Obstetrical Transactions* which has recently been issued, I find that eleven cases of death, and "one unsuccessfully", after the injection of the perchloride, were mentioned by different Fellows of the Society, at the partial discussion which was permitted. These cases, with the four now recorded, make a total of fifteen or sixteen cases of death, besides others which are known to have occurred.

ON *POST MORTEM* TEMPERATURES.

By JAMES F. GOODHART, M.D.,
Assistant Demonstrator of Morbid Anatomy at Guy's Hospital.

THE medical evidence arising out of the terrible combination of circumstances known as the "West Haddon tragedy" has, it would appear, not unjustly roused the indignant comments of those best competent to criticise the opinions which were given at the inquest. The main question raised appears to be this: "How far can a high temperature after death be taken as evidence against death by syncope?" In some of the communications which have appeared on the subject, reference has been made, amongst others, to some observations of mine on the temperature of patients immediately before death, which were published in the *Guy's Hospital Reports* for 1869-70. Those cases, forty-three in number, embracing all kinds of diseased conditions, and some deaths at any rate from syncope, led me to the conclusion that, except in isolated cases of long standing disease accompanied by emaciation, the temperature is not materially lowered *at the time of death.* An article by Dr. Wilks and Dr. Swaine Taylor, published in the *Guy's Hospital Reports* for 1863, "On the Cooling of the Human Body after Death," had already shown that rapid cooling of the body *after* death did not necessarily attach to the state of syncope; and the two series of cases, taken together as complementary to each other, supplied, I had thought, all the information that was wanted on the subject. At the time when the facts relating to temperature during the last hours of life were being recorded, I was engaged also on *post mortem* temperature in its relation to rigor mortis; and in nineteen of the cases where the temperature had been recorded previous to death, the rate of cooling afterwards was noted also. Looking over my notes subsequently, it did not appear that they added anything to our knowledge of the subject, but merely confirmed what had already been determined by Dr. Wilks and Dr. Taylor. I found it difficult to draw any conclusions from them which should be at all general in their application, with this exception, which at the present juncture should be pointedly enforced, that an opinion must be formed of each case according to its own condition and that of its surroundings; that it is not so much the disease that the patient died of, which will determine the rate of the loss of heat *post mortem*; nor is it the mere cooling or the reverse which will help to an opinion as to the cause of death; but that it is rather this: a body just dead has a certain amount of heat to lose—will it part with this slowly or quickly? To determine this, its facilities for parting with heat must be ascertained, *i. e.*, the atmospheric temperature, the moisture, the wrappings of the patient, the condition of the body as to fat and muscle, the state of the skin, the time of accession of rigor mortis, and so on; and even then, all these things being estimated as much as possible at their own proper value as factors in bringing about a certain state, there would still seem to be such a margin of opportunities—mostly owing, perhaps, to states or reactions going on within the body, and therefore not perceptible to our senses—of falsifying the conclusion arrived at, that I believe it to be almost, if not quite, impossible to go farther than we had already gone in saying that, isolated instances of retention or rise in body-temperature excepted, the dead body cools slowly and progressively, and that emaciated bodies cool more rapidly than fat ones. But, to put aside this general conclusion, the opinion in question has been formed upon an exceptional case. It is necessary, therefore, to examine any observations at our command, to see in what direction they tend. It is a little difficult to deal with the opinions given in the West Haddon case in one way, for the statement upon which they seem to have been founded may bear either of two interpretations. Mr. Walker testified that he found "a high temperature of the body after death." This, I take it, might mean that the temperature was higher than that of a healthy living body, or else that it was high in comparison with that of other dead bodies. In the report of the case which lies before me (BRITISH MEDICAL JOURNAL, January 17th), it is not stated at what time after death the *post mortem* examination was made, neither is any mention made of the temperature during life; at the same time, it is hardly possible to form an opinion of any value upon the case without such evidence be furnished. It will be seen that thus three different aspects of *post mortem* cooling, or three different conditions under which it may have to take place, must be considered in order to come to any conclusion as to the accuracy of the opinion of the medical expert.

1. The body-heat may rise subsequently to death.
2. A high temperature may exist before death.
3. A low or normal temperature may be present at the time of death.

What effect will these have upon the rate of cooling of the body? Of the first, that of increase of temperature after death, so little is known, that it cannot be foretold under what circumstances it may or may not occur, or, supposing it to have taken place, what pathological states its existence negatives. The temperature of the body has been noticed by Dr. Dowler to rise especially in yellow fever and cholera. But it occurs in other cases also; Dr. Wilks and Dr. Taylor having placed on record, in their article already quoted and referred to in the BRITISH MEDICAL JOURNAL for January 24th, an instance of Bright's disease with erysipelas, where the temperature rose three degrees in the two hours between the first and second observation. I have also noted the same occurrence once in a case of extreme emaciation from the drain produced by a discharging abscess in the liver. The rise began nineteen hours after death, and resulted in an increase of 4 deg. (71 deg. to 75 deg.), and this notwithstanding a fall of 4 deg. in atmospheric temperature. Rigor mortis was disappearing at the time, but nothing indicative of commencing decomposition was observed. In a second case, where death resulted from tetanus, the temperature remained at 95 deg. in the axilla between the observation at two hours and that two hours and three-quarters after death, and at the latter period it was 97.6 between the labium and thigh.

I shall not allude further to this condition of things, for the reason given above, that we have no sufficient data on which to go in its discussion; and Dr. Moxon has already pointed out how, even supposing an increase of temperature to have occurred in the case in question after death, it is precisely in diseases where death does indeed occur from syncope that this rare *post mortem* change has been the most frequently noted. The fact is, that death from syncope includes deaths from or with high temperature and deaths at normal and lowered temperature; while, if this be so, and the fact cannot be questioned, it at once disposes of the main point at issue, and destroys the foundation of any arguments for or against death by syncope which rest upon the temperature of the body afterwards.

Restricting the term syncope, as I apprehend has been done in this instance, to a group of cases where people in advancing years die from a fatty state of the muscular fibre of the heart, it would be fair to assume that the temperature was near the normal at the time of death; and, according to the fat and good condition of the body or the reverse, so to some extent would be the rapidity of cooling. In such a case, a cool surface coupled with a flabby heart would be not inconsistent with death from syncope. Very little more than this could be said. It certainly would not be correct to say that any other state of body-heat was not associated with a state of syncope, else in many cases of phthisis, for instance, with emaciation and high temperature at death—where, also, I apprehend, death comes at last by syncope—how do the patients die?

The second point, viz., the influence of a temperature higher than that of a healthy person at the time of death on the cooling afterwards, is of some importance here, inasmuch as, lacking any statement of thermometrical observations previously to the death of Mrs. Gulliver, it seems quite possible that, with a history of vomiting and drowsiness, the temperature may have been high when she died. In my notes, I find nine cases where the temperature shortly before death was over 102 deg. The average loss per hour, during the first few hours after death, was 3.37 deg. These included both well-conditioned and emaciated subjects. The average loss to emaciated subjects only, taking cases with a temperature of 100 deg. and higher, was 4.55 deg. Individual exceptions, however, were numerous: thus a robust child lost 8 deg. in an hour; another body (of a boy aged 19) lost 4 deg. in half-an-hour; and others might be given. Indeed, most bodies decline in surface-temperature very rapidly during the first hour or so after death, compared with the loss afterwards. This will be seen in the subjoined table, where, from the materials at my disposal, it has been attempted to express in figures the rate of cooling in robust and emaciated people where the temperature was normal at the time of death.

	Observations under three hours from time of death. Showing loss per hour.	Observations under six hours from time of death. Loss per hour.	Body nearly cold. Loss per hour.
Emaciated	4 7	3	1.12
Robust	3.5	3	1.26

It will thus be seen that the difference between the rate of cooling in the two classes is not so very marked, though it is sufficiently so to accord with the observations of previous writers on the subject.

Having already said that the rate of cooling is variable in different bodies, it is only another mode of expressing the same fact, to say that the time when a body will be perfectly cold is not to be predicted with any certainty. I have watched bodies, at intervals, through periods of 105 and 116 hours, well into a state of decomposition; and they had not then, as gauged by a thermometer on the surface of the body, reached the temperature of the atmosphere. That period, included between 30 and 45 hours, would, however, take in the larger number of cases. I have noted no instance of very rapid cooling.

In dealing with instances of death by emaciation, the *post mortem* temperature in cases of syncope, such as that of Mrs. Gulliver may be supposed to have been, has been practically disposed of, and requires no special treatment. Amongst my notes, I find three cases—two of old people brought in dead and one a case of aneurism with death by hæmothorax—which would all be in point, and in none of them was the decline of temperature more than ordinarily rapid. As to drawing any conclusions, then, as to the cause of death from the temperature of the body afterwards, whether high or low, such a course is surely not justified by what knowledge we possess upon the point.

With reference to rigor mortis, it appears that, under the external conditions in which these observations were taken, its supervention was somewhat earlier than is usually stated. The average time in twenty-eight cases gives five hours; and this, probably, is near the time required for its complete development. The condition, however, takes usually from one to two hours at least to mature; and the average time for the *commencement* of rigor mortis, as evidenced by stiffness of various parts of the body, may, I think, be correctly stated at from three to four hours. It would not appear to be dependent upon the temperature of the body; for, though the greater number of cases are found with a surface-heat of about 88 deg., eight occurred out of fifty-three in which the thermometer stood at 90 deg. and upwards when the rigor was distinctly marked. Two of these were cases of tetanus, and are therefore open to the objection that theirs was rather the muscular spasm said to simulate rigor than the actual rigor itself; one had a temperature of 95 deg., and the stiffness ensued within ten minutes of death; the temperature of the other was 94 deg. It is possible that the early supervention of rigor mortis might have some influence in lowering quickly the surface-temperature of the body.

OBSTETRIC MEMORANDA.

TREATMENT OF *POST PARTUM* HÆMORRHAGE.

XI.

The following brief notes of a lamentable case of *post partum* hæmorrhage will serve as an appropriate introduction to the description of a mechanical contrivance, which I beg to suggest as a means of meeting the perils of such formidable cases.

A finely developed lady in mid-life, who had passed safely through five previous deliveries, became again pregnant. One evening at full time, the pains becoming regular and severe, her medical attendant was sent for. The membranes had given way about a week previously. About midnight, the os being fully dilated, the pains strong and frequent, but the head making no progress, a dose of ergot was given, the pains soon became violent and incessant, and in half an hour the child was born nearly asphyxiated. The separation of the placenta was followed by the pumping out of an immense quantity of bright fluid blood. The medical man, an experienced practitioner, tried the usual remedies of cold water and compression of the uterus, but without avail, the patient dying within half an hour of her delivery.

In this case, then, although under the powerful effects of secale, hæmorrhage occurred. Again, had it or had it not any share in producing the asphyxiated condition of the child? But what I would especially draw attention to, is the difficulty that occurred in procuring ice. The neighbouring fishmonger, although told by the husband that his wife was dying, withdrew his head from the window, telling him that he would not be disturbed. If this difficulty can occur in one of the busiest suburbs of London, how would it fare with a provincial practitioner? It seems, excepting in large towns, that ice must be almost excluded from our list of remedies; and even in them, how often is it available? Ergot, if the evidence of the case I have related go for anything, is not to be trusted. No doubt, Nature's remedy of fainting is very valuable. Would it, let me ask, be advisable to raise the woman, so that fainting might occur as soon as possible?

There remains one other most valuable proceeding, namely, pressure externally, and the introduction of the hand into the uterus, pressure being made by the fist on the site of the detachment of the placenta. It is on this principle I would act, but, instead of the fist, I would introduce an India-rubber bag, which should then be distended with water, ice-cold if possible. Surely, this would make more effectual pressure on the placental site than the fist; like the fist, it would tend as a foreign body to induce contraction; but, unlike the fist, it would not tire, neither would it exclude the simultaneous application of cold, which, if ice were not procurable, might be ensured by some freezing mixture, and which, though inadmissible for direct injection into the uterus, might, of course, be used for distending the bag. Next comes the question of what is to occur when the uterus begins to contract. It evidently would not do to leave an unyielding substance in the uterus when it begins to contract; to get over this difficulty, Messrs. Louis Blaise and Co., of St. James's Street, have undertaken to add a discharge tube fitted with a valve, which opens so soon as the uterus begins to contract on the bag. I do not know whether this plan of combined external and internal pressure have been tried; if it have, I should much like to know with what result.

I may add, that Messrs. Blaise and Co. manufacture for me Dr. Barnes's bag for dilating the os uteri with a hollow style passing right through the bag up to its fundus, through which it is injected, and which also serves to introduce it; by this means, I do away with the pocket on the outside of the bag, also with the extra instrument which is used for its introduction. Not only is the bag thus simplified, the means of its introduction being an integral part of the bag, and the expense diminished, as no second instrument is required, but a much more important advantage is gained, namely, facility of introduction, for, by putting the bag on the stretch over the inside style, it may be almost as easily introduced as the uterine sound, and thus becomes available in those cases of early abortion where the os is small, and where Dr. Barnes confesses that the bag, as he uses it, is impossible of introduction. Another no small advantage is, that the bag can be much more easily kept *in situ*, and the chances of its slipping out of the os during dilatation entirely avoided.

A. Godrich, M.A., M.R.C.S., Fulham Road.

XII.

In a tolerably large midwifery experience, I have had the good fortune to see comparatively little of *post partum* hæmorrhage—a result mainly due to my invariable practice (when there is time) of placing an abdominal binder round my patient, and directing the nurse to keep up firm and continuous pressure upon the uterus; and, if there be a history of previous flooding, I give a dose of ergot (liquid extract of the *British Pharmacopœia*). I have within the last few days attended a lady who, from dread of the treatment pursued at her last confinement, when there was alarming hæmorrhage, had fallen into a low nervous condition, which caused great anxiety to her friends. In this, her third delivery, she had done well, with no flooding whatever.

With regard to the question of the injection of astringents into the uterus, I cannot say much, but should not hesitate to use the perchloride of iron where the ordinary means had failed. Two years ago, I was called to a patient who had been delivered four hours previously, and found that she had been flooding for some considerable time, the uterus continually relaxing as soon as the hand was removed. After repeated doses of ergot and the other usual means had been exhausted, I injected (in the presence of another medical man) two ounces of the tincture of perchloride of iron in eight ounces of water, which not only controlled the bleeding, but caused firm and persistent contraction of the uterus. No bad symptoms followed, and she made a good recovery.

Henry Kettle, M.R.C.S.Eng., Small Heath.

THERAPEUTIC MEMORANDA.

CHLORAL HYDRATE AND CAMPHOR: CROTON-CHLORAL.

I.

Last year (*London Medical Record*, May 7, 1873), attention was drawn to the fact that the intimate mixture of equal parts of chloral hydrate and camphor will produce a clear fluid, which is of the greatest value as a local application in neuralgia. I have now employed this preparation for several months, and have induced many professional friends to use it also. Having in every case found great, and often instantaneous, relief follow its application, I think the members of the Association may be glad to have the opportunity of adding to the very uncertain stock of antineuralgic remedies which we have already at our disposal. Its success does not appear to be at all dependent on the nerve affected, it being equally efficacious in neuralgia of the sciatic as of the trigeminus. I have found it of the greatest service in neuralgia of the larynx, and in relieving spasmodic cough of a nervous or hysterical character. It is only necessary to paint the mixture lightly over the painful part, and to allow it to dry. It never blisters, though it may occasion a tingling sensation of the skin. My friend Mr. George Wallis allows me to say that he has found it of great service as a remedy which patients can apply themselves for the relief of toothache; and to its success in this respect I can also personally testify. In the original article, the compound was recommended for arresting the progress of incipient boils and carbuncles. I have no experience of its value for this purpose.

The question of "An American Inquirer" in the JOURNAL of last week, as to the dose of croton-chloral, is one on which there is very considerable and general doubt, since practitioners have frequently confused the dose prescribed by Dr. Oscar Liebreich for sleeplessness with that which should be given simply for the relief of neuralgic pain; and even for these two purposes the amount advised by different physicians varies considerably. Dr. Liebreich thinks that sixty grains may be safely administered as a single dose; while Dr. Burney Yeo (*Lancet*, Jan. 31, 1874) does not consider it safe in any case to go beyond fifteen grains, and advises that this amount be administered in doses of two to five grains every hour or half-hour until the desired effect be produced or the maximum be reached.

Considering croton-chloral as a hypnotic, I do not find that it has any advantage whatever over chloral hydrate, while it is from ten to fifteen times as expensive. I have occasionally found the effect of chloral hydrate increased by addition of croton-chloral, in the proportion of five grains of the latter to fifteen of the former. This combination is especially serviceable in cases of spasmodic asthma occurring during sleep. The sleep produced by the combined drugs is much deeper than that produced by ordinary chloral; but, on awaking, there is frequently considerable stupor and headache. I have observed these same symptoms after administration of smaller doses of this combination, when taken for the relief of spasmodic cough; while the simple chloral hydrate has produced no such effect in the same patients, whether taken in the smaller or larger dose. One of the greatest disadvantages of croton-chloral is the uncertainty with which it acts, since it is decidedly most serviceable in cases of neuralgia and of spasmodic cough—cases in which speedy relief is of the greatest importance. Thus, while hourly doses of one grain will produce the best results in one case, in another frequent doses of five grains will produce no effect; while again, as in Dr. Falconer's case (JOURNAL, Feb. 28), disagreeable head-symptoms may be experienced after a single dose of two grains. I yesterday saw the prescription of an eminent physician ordering five grains every hour until pain was relieved, eight doses being prescribed. This appears a full dose; but certainly most practitioners will do wise to hesitate before giving the very large quantity in one dose, as advised by Dr. Liebreich. Croton-chloral is very slightly soluble in water, and glycerine does not largely increase its solubility. Probably the best way to prescribe it is in the form of pills. It mixes exceedingly well with a glycerine of tragacanth; and, when silvered or varnished, the pills are quite tasteless.

LENNOX BROWNE, F.R.C.S.E., Welbeck Street.

II.

A boy aged 15, the son of a waterman, had suffered for two or three months from intense facial neuralgia, rendering him at times almost frantic. Four teeth had been extracted without relief. Ordinary remedies, including large doses of quinine, having signally failed, one grain of croton-chloral hydrate was given three times a day. After two days, the pain was greatly mitigated, and in three days more it had entirely left him. The remedy left anæsthesia of the left side of the face and tongue, so that he was quite insensible to touch and the presence of food on that side of the mouth. The vision was unaffected. The anæsthesia passed off in a few days, and he had no return of the neuralgia.

In another equally severe case, the remedy utterly failed. This was a young woman who had been deserted by her husband, and whose mind, of course, was much depressed. As I have said, the croton chloral signally failed.

Query: What was the differential condition of nerve-tension in these two cases?

C. M. DURRANT, M.D., Ipswich.

III.

Having seen several inquiries in the BRITISH MEDICAL JOURNAL respecting the dose of croton-chloral hydrate in different diseases, I beg to state that I have employed it lately in three cases of severe neuralgic dysmenorrhœa with remarkable benefit, the dose being five grains twice during the day. All pain ceased in each case after two or three doses.

LOUIS LEWIS, M.R.C.S., Albert Street, Regent's Park.

IV.

I have prescribed half-drachm doses of the croton-chloral every night for above three weeks in a case of insomnia. During the whole of that period, only about three good nights of calm sleep were obtained. The effects produced were very unsatisfactory. In another case, I gave half a drachm to procure sleep in neuralgia. The pain was removed, but sleep was not procured. This is the whole of my experience in the use of the above medicine; but I certainly have not found it, so far, of very much value in cases of sleeplessness.

H. A. ALLBUTT, L.R.C.P., Sheepscar, Leeds.

THE USE OF COCA.

WITH reference to the letter of Dr. Sieveking in the JOURNAL of February 21st, and also to that of Dr. Arthur Leared in that of February 28th, I have to say that large quantities of erythroxylon coca, and its preparations, cocaine, concentrated tincture, and fluid extract erythroxylon, have for some years past been imported into this country from America. The demand for the article is at this time considerable, and regularly increasing. It has been successfully used in dyspepsia, flatulency, colic, convulsions, and in the debility following severe acute affections, anæmia, scurvy, etc. In large doses, it has been proposed in tetanus and hydrophobia. Three or four drachms of the leaves are a medium dose, whether chewed or used in infusion; of the hydro-alcoholic extract, ten to fifteen grains in pill-form. In large doses, it is said to cause delirium, and finally cerebral congestion. In small doses, it acts as a stimulant, increasing the temperature of the body, as well as the respiration and frequency of the pulse. In moderate doses, it excites the nervous system in such a manner as to render the performance of muscular exertion much easier, and producing a sensation of calmness. The leaves chewed or taken in weak infusion stimulate the gastric nerves and greatly facilitate digestion, and are also useful in relieving the sense of fatigue from excessive mental or physical exercise. I shall be most happy to supply a small quantity to any medical man desiring to use it in his practice.

J. ALEXANDER BELL, D.D.S., Nelson in Marsden.

THERAPEUTICS.

ABORTIVE TREATMENT OF BOILS.—The *Cincinnati Lancet and Observer* has a note from Dr. C. B. Hall, stating that the following, applied to boils with a camel-hair pencil or feather, gives great relief in a very short time: Tincture of arnica flowers, 1 drachm; tannic acid, half a drachm; powdered acacia, half a drachm. The inflamed surface, and a little beyond all around, should be painted with the medicine every fifteen minutes, or as fast as it dries, till a good thick coating covers the part. The throbbing, tensive pain, and the intense tenderness will be promptly relieved; the redness will subside; the smooth, shining integument will shrink and become wrinkled, and comfort will succeed torment. If the boil be in the first stage, it will disappear without sloughing. If sloughs have already formed, it will be quickly separated, and the cure will be soon complete. The preparation should be used as soon as prepared.

QUININE PILL MASS.—M. Berquier of Provins publishes (*Répertoire de Pharmacie*, N.S., vol. i) the following formula for a quinine pill mass:

Sulphate of quinine	30 grams.
Pulverised gum	5 ,,
Pure glycerine	10 ,,

Suspend the gum in the glycerine, then incorporate the sulphate of quinine, rubbing the ingredients well together in a mortar. A white mass of good consistence is thus produced, which may be divided and rolled as wanted. The mass should weigh exactly one-and-a-half times the weight of the sulphate of quinine employed, so that it is easy to calculate any desired quantity. Thebaic extract, or any other substance, may be readily introduced. Pills prepared thus are small, and do not harden so as to become more or less insoluble in the stomach. The mass may be kept indefinitely, and if at length it should lose a little of its malleability, a few strokes of the pestle will soften it without any addition.

SURGERY.

A NEW RECTAL BOUGIE.—When attention first began to be directed towards anatomy, some two thousand years ago, the name "rectum" was given to the last portion of the intestine, from the mistaken notion, originating in the dissection of animals, that the canal was here straight. This error is perpetuated to this day by instrument-makers, who continue to make all rectal bougies perfectly straight. Professor Edmund Andrews of Chicago (*The Medical Examiner*, Nov. 1, 1873) demonstrates that these bougies fail to correspond to the cavity which they are intended to explore, for which reason they can rarely be inserted with any safety more than five inches, and are utterly worthless for any exploration beyond that length. He has, therefore, devised a new bougie, consisting of a smooth bulb of hard rubber riveted upon a somewhat flexible staff of metal, to the other end of which is attached an ebony handle. It is found that this instrument will often pass in ten or twelve inches without obstruction, and can be made to press on the abdominal walls from within, so as to be felt by the surgeon's hand within two inches of the umbilicus, an extent of exploration which no straight instrument can ever approach.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, FEBRUARY 27TH, 1874.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

PYÆMIA IN PRIVATE PRACTICE.

THE discussion on the President's paper, on Pyæmia occurring in Private Practice, was resumed.

Mr. CALLENDER: I will take up the consideration of this subject from the point at which it was left at the last meeting, in order that I may endorse all that fell from Mr. Savory as to our indebtedness to yourself, for bringing before our notice facts which show us clearly that pyæmia is a disease which is not limited to hospital practice, but that it may occur under circumstances which, at first sight, might appear to be very favourable to its avoidance. And, further, with reference to these cases, I should like to say that I think that many of them show, conclusively, that this disease must have arisen entirely in private practice; for I observe that they were cases in which the disease had been established before you, sir, had been called in consultation; therefore they could not, in any way, have been cases infected from hospital wards, the infection being carried from them to private rooms. I think, after the remarks I have heard made on this subject, that that is a very important point, to which our attention should be directed. Now, as you have, by referring to the recurrence of pyæmia in private practice, opened up the whole question of the consideration of this subject, I shall make bold to refer generally to pyæmia, and I shall make my remarks, as far as possible, practical and clinical. I shall refer—as I think we ought always to refer, in discussing such subjects at the meetings of this Society—especially to the question of treatment. Now, when, some years ago, I was called upon to take charge of a large number of hospital cases, I felt, as Mr. Hulke expressed himself, the necessity of having some distinct plan, or scheme, by which one might be guided with regard to the pathology of these various affections. I think we shall make but very little progress in the consideration of the subject of pyæmia, unless we mark out for ourselves comparatively new routes, along which we should travel. It may appear somewhat heterodox if I commence by saying, that I think it is extremely desirable that we should ignore the use of the term pyæmia. If, by the use of the term, we are to understand all those conditions in which, in the course of various diseases, the blood may become so affected, that suddenly we have the formation of abscesses in various tissues, or outpourings of pus into synovial or serous surfaces, then I imagine we must extend the term, so as to make it include all those cases in which, in the course of the slow decay of chronic diseases, or in tardy convalescence from various affections, such as typhoid fever, or scarlet fever, we have the occurrence of these various abscesses. But it must be recollected that, in nearly all these cases, the formation of abscesses is associated with a certain amount of inflammatory action, and this is a condition of things which I am not disposed to group among cases of pyæmia. Certainly, it does not seem to belong to those cases of pyæmia which we, as surgeons, consider to be typical as interfering with the progress of surgical cases. Pyæmia is also a term misleading, if it is for a moment to be supposed that it is to be associated with the presence of pus in the blood; for nothing is more clear than that this notion, which originated in the early days of the consideration of the subject, is absolutely erroneous, for there is no evidence to show that pus, as such, is ever found to be present in the blood. Further, it is misleading, in that it has induced observers to look for certain sources from which pus might be derived. They have, for example, thought that the pus might come from inflammation of the veins; but I am not aware of any evidence, that bears the test of strict scientific investigation, which shows that the veins are inflamed, leading up to the production of pus, whereas there is abundant evidence to show that veins may become filled with clots; but clots, as stated by previous speakers, may undergo previous disintegration, may be filled with a puriform mass, but not with a purulent fluid. The term is further misleading in this respect, that it has induced surgeons, more especially, to look for an explanation of the occurrence of pyæmia in association with certain affections, particularly in cases in which it is supposed that the veins have lain ready, if I may use the expression, at the bases of wounds, to take up any infecting product, as, for example, in connection with various injuries and diseases of bone; in connection, also, with another class of cases which occur in the puerperal condition following parturition. Indeed, if there is one thing, to my mind, clearer than another, it is this. In all these cases, as Mr. De Morgan has expressly pointed out, it amounts to this, that in such wounds, or injuries, or conditions of parts, we have the wounds so circumstanced that they are filled with cracks and crannies, in which matter may lodge, and from which it is with difficulty dislodged, where it may putrefy, and give rise to the serious affections with which we are, unfortunately, too familiar. Now, when I came, in the interests of those patients submitted to my care, to look at these considerations—when I made up my mind to ignore altogether the use of the term pyæmia, in reference to these diseases, I had to consider how best to group together, so that one might have certain distinct landmarks to follow in the treatment of one's cases, the various pathological conditions which past experience seemed to me to associate with the various untoward results that occasionally follow the practice and treatment of surgical cases; and I came to the conclusion that, on the whole, it was desirable to group cases into three distinct sets. In the first group of cases, I placed all those which might be spoken of as instances of primary septicæmia, cases, that is to say, in which the poisoning of the blood (I use homely expressions in reference to all these matters, for I think it is very desirable to speak in plain language regarding them), is due to the action of those acrid and irritating fluids, which are poured out into the wound during the first twenty-four or thirty-six hours which follow its infliction; substances which are so acrid and irritating that, if they be lodged in the tissues lodged in the wound, if an escape or vent be not provided, they rapidly produce most serious constitutional symptoms. In the second group of cases, I placed all those that may be spoken of as instances of secondary septicæmia, cases in which the poisoning of the system depends upon the decomposition of residua, whether these residua may happen to be sloughs, or matter which is passing into a putrid state. And it must be recollected, respecting either of these two conditions, that we may have either a small quantity of poison present in a wound, or a large quantity of it present; or we may have it passing into the system of one who is weak and feeble, and readily succumbs to its action, or through the system of another who is robust and strong, and resists its influence. Thus, we have a great variety of modifications in the condition, appearance, and progress of the cases we have to treat. Then, beyond this, there is a third class of cases, to which I should like especially to refer, which I would speak of as instances of thrombosis. We are all aware, as a previous speaker pointed out, that this is a condition very apt to occur in connection with contusions, a condition in which the veins become filled with clots. These clots frequently undergo disintegration. This disintegration may occur in the course of chronic diseases. I have known it to occur in the case of phthisis, but such occurrences are comparatively rare. On the other hand, when the system becomes poisoned, through some septic influence, the change produced in the fibrine is such that, deposited in the veins, it rapidly does undergo this disintegrating process. When this disintegration has been established, after a certain time the disintegrated fluid passes into the general circulation, lodges at various points in the tissues or organs of the body, and then produces what I should prefer to call secondary deposits. It attracts around it fresh coagula, which again disintegrate and break down, and we have, not abscesses, but softening disintegrating masses of fibrine; and here, I think, is the material distinction between the cases to which I refer and those I of which I have already spoken as instances in which, in the progress of certain chronic diseases, abscesses are formed in various parts of the body. In the cases of which I now speak, we have secondary deposits formed without the inflammatory process; whereas, in the other, we have the abscesses usually associated with local inflammations. Now, I should say, further, that this condition of thrombosis must not be confused (and I am sure we require a distinct term to indicate it), with the condition which we have heard spoken of under the name of embolism. We are, of course, all familiar with the fact, that the vessels may have clots formed within their canals. We know that these clots may have a blood-stream washing against them, and cast off certain portions. These portions may be washed through the circulation, and may lodge and establish a blockade at certain points. But there, so far as the clot itself is concerned, the change ends. The clot does not undergo disintegration, but remains with the blood as fibrine. Fresh clots form, which are also fibrinous; but I do not understand that these cases of embolism have these disintegrating processes, which, I think, are characteristic of another condition, spoken of as thrombosis, a condition which may occur independently, but is frequently mixed up with these two conditions that I have referred to as instances of primary and secondary septicæmia. Further, I may say that, in just outlining the main point of an important pathological subject such as this, it is quite impossible to take into consideration various other matters which may fringe round the subject. For example, we may have cases of erythema; we may have various forms of erysipelas. I have no doubt myself that these are, to a certain extent, connected with the greater changes to which I have been referring. What I wish to place distinctly before the Society is these three chief changes, because I think they lead us up to a very accurate view of the sort of treatment which, in the management of these affections, we ought to adopt. Passing on to the consideration of this question of treatment, I suppose most members of the Society will be at one with me when I say, that very little can be hoped for from treatment in these cases when the disease is once fairly established. It is quite true that, in certain cases, a comparatively robust patient may drift through the affection, but I doubt very much whether any treatment which has hitherto been recommended has, except in the general sense of good nursing and good food, been of any avail in such cases. This leads me to speak strongly as to the importance, in all these cases, of what I would term preventive treatment. I shall not dwell long upon the subject, because recently I have had occasion to refer to this treatment of operation and other wounds; but I may point out what I consider to be the leading features which should guide us with reference to this treatment; and, first, and I think I am justified in saying most important of all, I would put the question of drainage, so that all those acrid and irritating substances, which are effused after the first few hours, and all those substances which may cause local and constitutional symptoms to arise, may be carried out from the wound. Next to this I place cleanliness, which goes, to a great extent, with the drainage, to which I have already referred. I may also speak of the use of those remedies which, of late, have been much spoken of under the term of antiseptic agents. Beyond this, I speak of the ventilation of the wounds. It is, I conceive, absolutely necessary, in all these cases, that the air about them should be comparatively pure and clean. Then, again, I refer to the isolation of wounds. I do not myself believe in the contagiousness of these affections, except in the broad sense in which we may understand that the patient is in unfavourable circumstances when he is in a polluted atmosphere, especially polluted by excreta or effluvia from pyæmia causes, or in the gross sense in which one may understand that a nurse may carry poison from one wound to another. In that sense, I believe that these affections might be looked upon as contagious; but with ordinary care and ordinary precaution, I do not believe they can be propagated by any influences short of those to which I have referred. Then, with regard to the question of treatment, I would say that I think we cannot too highly rate the importance of rest. And, if I may venture to throw out the suggestion, I would say that there has been a failure in this direction, which has given rise to the greater number of mishaps that have occurred, especially after amputations in the lower extremity. From the apparent necessities of these cases, from the dressings which they require, the parts have been disturbed, and not allowed that rest which, during the first four or five days after operation, should be invariably provided. With reference to this point, I do not know whether the members of the Society were attracted by a statement made at the last meeting (which I consider to be a very important one) by Mr. Savory. He made it when speaking of the dialysing property of animal membranes. He thought it was not at all improbable (and I quite agree with him with reference to the probabilities of the case), that in those cases the granulations on the surface of wounds formed a sort of shield or protection to the wound, and prevented the passage into it of septic agents; but that when, under various circumstances, these granulations were broken through, when, more especially, by the unrest of a wound, for example, the unrest to which amputations of the lower extremities are commonly subjected, these granulations are broken through, fissures are formed in the wound through which septic matters may filtrate, so as to pervade and poison the system. With these views, with regard to the pathology of the affection, and holding strongly these opinions with regard to the preventive treatment to be adopted, all the patients under treatment in my wards have been rigidly disciplined, during the three years I have filled the office of surgeon to our hospital. I will not venture to intrude upon the Society with the results of my own experience, but I may be permitted to make this one statement with regard to those results, that, during the three years to which I have referred, out of a great crowd of patients under treatment in wards, there have been but two cases of septicæmic poison, and but two cases of thrombosis; and I may say, as it is possible that I might commit an error by omitting the statement, that we had not one death from erysipelas arising within the wards of the hospital. I cannot but feel strongly on this subject. I do believe, and I can only trust that my belief will be confirmed by the experience of others, that we have it in our power to control these affections. I would not say that these diseases can be blotted out, because we know that, with all the care, and with all the supervision lavished upon such cases, errors of omission and commission will occasionally occur; but I do believe that we have it in our power so far to suppress these affections, that, practically, they may cease to embarrass us in the treatment of surgical cases.

Mr. Barwell: I am sure no one in this Society can have listened with more interest to the remarks of Mr. Callender than I myself have done, and also to those which fell the other night from Mr. Savory. But I cannot help being struck with the fact that, in speaking of the various causes of pyæmia, most of those whom I have heard speak at this Society have confined themselves very much to the condition of affairs in the wound itself; and, although this is an important, perhaps it may be one of the most important, it is not, I venture to think, that part which your paper especially called forth. For we see, again and again, patients with large fœtid abscesses, whether in the ischio-rectal fossa, or in the neighbourhood of bones, with the pus in the very worst position, as far as we can judge, and in as bad an anatomical condition as may well be imagined, and yet these patients escape all pyæmic poisoning; while other patients, with comparatively no especial sign about the wound, no fœtid pus, no constriction, get pyæmic poisoning very rapidly, either in the form of pyæmia proper (and I must use that word until we have another), or its ally, erysipelas. And I cannot but think that we must take the other side of the question. In all cases of poisoning, be they mere chemical poisoning or animal poisoning, we have two things to consider—the poison brought to the system and the system which takes it in—and I think your paper more especially refers to that condition of the system which is liable to take in pyæmia, or the matters which produce a pyæmic condition of blood; and whether we consider that this condition of blood may be produced by what Sir James Simpson called hospitalism, if there be such a thing, or whether it may be produced accidentally, or be constitutional, we still must find that there must be a certain condition of blood, or of system, rendering the patient susceptible to this form of poisoning. I need not here instance the peculiar condition of system which is combined with albuminuria. You yourself have pointed out of what grave importance this is in the prognosis of injuries of the head. We all know we must not touch with the knife, if we can avoid it, patients who are affected with albuminuria; if we do, the probability is, that the patient, if the kidney-disease be not bad enough to kill him, will die either of erysipelas or of pyæmia. Hence we find a state of blood which introduces the pyæmic poison even when the wound itself is in the most favourable circumstances. This is a constitutional state. But let us come now to the artificially produced state, that, namely, which has been called hospitalism; and here we must distinguish (and I am sorry to say Mr. Erichsen does not, to my mind, sufficiently clearly distinguish) between badly ventilated and ill-drained and ill-kept hospitals, and hospitals perfectly well kept, perfectly drained, etc. Every hospital, or every private house that has bad drains and bad ventilation, will be liable to spread a pyæmic condition as soon as an operation is performed in that dwelling. It does not matter whether it be such a hospital as there is at Lincoln, or in some other towns, or whether it be a private dwelling in the healthiest part of the country; as soon as we find bad ventilation, and bad drainage, and uncleanliness in those dwellings, so soon do our patients run a danger of pyæmia, and in this way we have the most strongly marked artificial production of pyæmia. But now let us take the case, and this is really where the comparison should come, between the very best kept and constructed hospitals and private dwellings; and the question is simply whether there is a larger percentage of pyæmia in hospitals than there is in the dwellings. Well, sir, I am sorry to say our statistics, in the one or the other, are not sufficiently complete for us to answer this question; but we may gain some inkling of the subject from considering the fact, that none of us, I suppose, will dare to operate upon a case of ovariotomy in the general surgical ward of a hospital. Here, I think, it seems pretty clear that there must be some amount of septic influence in the air. But this case is rather peculiar, and there may be in other cases, in operations, for instance, upon limbs, counterbalancing advantages in the hospital which may counteract the slight pyæmic influence sufficient to affect a case of ovariotomy. These counterbalancing influences I need not especially mention, but I would point out this fact—that we have in our large and better ventilated hospitals very few cases of pyæmia, considering the number of operations—I think, in some of them, only about 15 per cent. per annum of cases of pyæmia after operations. Do we get a less amount of pyæmia in private? Only the other day, Sir James Paget told me that he had a case of hospital gangrene in private practice, and he said that it was the fourth case he had seen during his career in private, while, in his public or hospital practice, he had seen but three. This is a most striking circumstance; and I cannot but think that, if all the cases which occurred in private practice were put together, we should find them very much larger, and very much fuller, than is usually imagined. I was called, in the year 1868, to see a patient, then under the care of Sir Thomas Watson, on account of a knee-affection, which had come on during a certain disease of the lung; I forget just now what it was; and, when I saw this patient and examined the knee, I found it to be a case of pyæmia as clearly marked as any case that I have ever seen. The other joint became subsequently affected, and the patient died. The only source of suppuration in that case was an eruption in the skin, which the patient had scratched, and caused little sores and scabs to form, underneath one or two of which there was pus. At that time—it was in the year 1858, and I do not think I should be committing any breach of confidence in mentioning the name —Panizzi himself had pyæmia, and he was attended by Dr. Guéneau de Mussy, who has left this country. Dr. Guéneau de Mussy was attending the case when he had pyæmia, and Sir Thomas Watson was called in afterwards; therefore, there was no carrying in of the pyæmic influence from a patient whom Sir Thomas Watson had seen with me to the other patient. These cases are very striking, and show that, at all events, in private practice, we have a large amount of pyæmia. I am sorry to be able to bring forward another case which occurred to me but a very few days ago. A lady, with a small exostosis on the metatarsal bone of the left foot, wished me to remove it. She was 64 years of age, and perfectly healthy. I endeavoured to dissuade her from it, but she said it caused her such pain that she insisted on having it done. The exostosis was a mushroom-shaped one with a very small stalk not bigger than a barley straw, and it was nipped off with the greatest ease, and the wound was carefully dressed with carbolic acid. The house in which she lived was perfectly healthy and pure, and every precaution which could be taken was, I believe, taken in this case. But, when I saw her six hours afterwards, the pulse was failing, and I learnt from her son that, previously to the operation, she had expressed her strong belief that it would kill her. In spite of this, she met us with the greatest cheerfulness and courage. She had made all the preparations for death, and, from the time of the operation, it was with the utmost difficulty we could get her to take food or any form of stimulant or medicine. This was on Thursday—yesterday week. On the Sunday night, the temperature rose to 100.4. On the Monday morning, the knee and shoulder-joint on the same side of the body, the left, became affected; and from that time, when pyæmia may really have been said to have set in, the patient rapidly sank, and died one day within a week of the operation. In that case, I happen to know that every sponge, every piece of lint that I used was in perfect order. The instruments even had been washed in carbolic acid—not a very usual precaution with me, but I had taken it at that time, and there was no possible precaution omitted with regard to the dressing of the wound that I could have taken if I had now to do the case again. But then comes the question, whether we may not also have a moral influence so far depressing the system as to produce this pyæmia. I can only make it out in that way. In my own private practice, I have had within four years two cases of pyæmia, one occurring before I came to the patient, and one in operation. Sir James Paget has had no fewer than four cases of hospital gangrene, and I am not aware how many cases of pyæmia he may have had. You yourself have brought forward a goodly number; and I cannot but feel that, if all the untoward cases occurring in this way were published, we should have a great many more. But it requires some courage. The fact of such cases occurring in private practice is very depressing to a man's feelings with regard to his work, and to publish them afterwards is not the best way to procure more cases of operation. I fear we shall never get to the absolute bottom of these statistics; nevertheless, the undetermined number in private practice is, I suspect, very much larger than is generally known, and, I think, conduces very much against the idea of hospitalism. Though, to conclude, I may say again, referring to cases of ovariotomy, my own belief is, that there is a septic influence in the air of hospitals which, however, in ordinary cases of operation in the limb is more than counterbalanced by the great attention and good diet which the patients ordinarily receive there.

Mr. Brudenell Carter: On the first evening of the debate, when Mr. Hutchinson expressed an opinion that wounds of veins were especially liable to be followed by pyæmia, I appealed to some of the elder members of the Society as to their experience with regard to pyæmia following venesection. If I am not disqualified by that brief appeal, I should be glad to say a few words on the general question. I should like to carry this discussion, so admirably sustained by many members of the Society, and for the origination of which we are so deeply indebted to yourself, one step further in the direction which has been already indicated to us by Mr. Callender, viz., the clinical direction as opposed to the pathological. It strikes me that, although we must unhesitatingly accept the account which Mr. Hulke has given us of the sharply defined line existing between pyæmia and septicæmia when these conditions are artificially produced in the laboratory, still we do not, in disease or in Nature, find the experiment tried for us with anything like the same precision; and I think we should be unable clinically to draw any definition either of pyæmia or septicæmia, which shall exclude the other, unless it exclude also a great number of cases and conditions which must be recognised as intermediate between the two. But I think there is a certain clinical division into two classes, which may be drawn not only with truth, but also with some practical advantage in assisting us to gain notions of the nature and treatment even of these cases. I think we may recognise cases of septicæmia (I prefer to use the larger and more general expression) in which the patient poisons himself, and that we may distinctly separate such cases from those in which he is poisoned by another. The distinction which I endeavoured to draw between these two classes of cases, although it may be illustrated very frequently and in many ways, may, I think, be particularly well illustrated by the clinical history of gonorrhœa. I have long entertained the conviction that gonorrhœa is essentially to be looked upon as a constitutional disease, of which the urethritis is only one, and frequently by no means the only local symptom. A few weeks ago, I was asked to see a young robust vigorous countryman, in his nineteenth year, well fed, well housed, well cared for in every way, who had lately come to reside in London, and had contracted gonorrhœa. On the second day of his gonorrhœa, his left eye became affected; the eyelids became exceedingly swollen, brawny, and hard, so that they could not be separated; the conjunctiva became ecchymosed; and the eye poured forth a quantity, not of pus, but of thin sanious discharge. On the fourth day, the patient was attacked with acute pneumonia of the most intense severity, involving both lungs, which carried him to the brink of the grave, attended by such extreme depression that he slipped down in bed, became delirious, and had the general aspect of a patient in an advanced stage of typhoid fever. Now, although I cannot exclude the possibility of inoculation, as far as the eye is concerned, yet, when I consider the early stage of the affection, and how frequently inoculation commences in the right eye instead of the left, I cannot help thinking that the ophthalmia, pneumonia, and gonorrhœa, were three local expressions of the same blood-poisoning which the patient received from the same source. I think we must draw a very definite line between a case such as this and a case such as you have related, in which, after three weeks or so of gonorrhœal discharge, possibly from some absorption of gonorrhœal discharge into the system, there was suppuration, or the symptoms of what is called gonorrhœal rheumatism. The case related to us by Mr. Barwell seemed also to be one of those in which the patient distinctly poisoned herself. It seems as if there we could exclude, as Mr. Barwell had excluded, all external influences. I think we must admit that, even cases in which a patient poisons himself, are cases in which we may at once lay aside all considerations of hospital influence, and cases of that kind we must expect to find in private practice as well as in hospitals. On the other hand, I think we must recognise the possibility that a patient who prepares, so to speak, a fluid capable of acting in this manner upon himself, may also be the source of poison to others, if, by any chance, that fluid be conveyed from one patient to another by the hands of nurses, or, as Mr. Callender has suggested, if, by any less direct and gross method, it enter into the wound. Now, if we inquire into the causes which may make a patient poison himself, into the causes which may produce, instead of laudable pus, a fluid of acrid character capable of producing symptoms of septicæmia, must we not look very much to the general state of the patient's nutrition, to the condition of his nervous forces, to the state of his trophic nerves, if there be trophic nerves? I think the more we study the external aspect of wounds and many kinds of external inflammation—I speak especially from what I have seen of ulceration and inflammation of the cornea—we shall more recognise that there are certain stages of the general system, certain states of defective nervous force which impress themselves locally and tend to produce disintegration of the tissue in lieu of natural and healthy repair. Must we not, then, look rather in such cases to the state of the patient's nervous system than to his surroundings, rather to the state of general nutrition than to the state merely of the atmosphere? On the other hand, may we not class all those cases of septicæmia in which poison is conveyed to the patient from without in the category of those which it is in our power, in a great measure, to prevent by those precautions which Mr. Callender has so ably stated?

Dr. Glover thought it would be interesting to know if Mr. Barwell had any cases of pyæmia in the hospital at the time of the occurrence of the case in private practice.

Mr. Barwell said he had no such case under his care.

Mr. Cadge: If I avail myself of the privilege accorded to strangers in this important discussion, I have the less reluctance, because it may, perhaps, be not altogether uninteresting to compare instances of provincial experience with those of metropolitan surgeons. Sir, in doing so, I will endeavour to keep clear of those abstruse questions as to the origin, nature, and agency of the causes of pyæmia. I think they are subjects far too abstruse to be fully elucidated by discussion, no matter how distinguished or how eminent the members of the Society may be. They seem to me rather to require patient working in the laboratory, in the dead-house, and in the study, and I despair of anything like a full elucidation of the subject from this or any discussion whatever. But, with regard to the occurrence of pyæmia and the facts surrounding it, there, I think, we are travelling quite within the proper lines of discussion. You, sir, have initiated that discussion; and to that point I would simply, as far as regards my own experience, confine myself. It is now about twenty years, or rather more, since I became attached to the Norfolk and Norwich Hospital. I am grieved to say that, for a considerable part of that period, the building has fallen upon evil times with regard to this question of pyæmia. We have had within the last six or eight years a decidedly increasing amount of pyæmia in hospital practice, and that notwithstanding that the hospital is fairly well provided in regard to cubic space and beds, having a perfect system of drainage which has been established within the last few years, and with other precautions which have, in times gone by, seemed to secure us from these plagues of surgery. Still, the fact remains, that, during the last three years (I go no further), we have had twenty-one or twenty-two deaths from pyæmia in the hospital. Yet this is, on the whole, clearly and thoroughly to be accounted for. The way of accounting for it seems to me to touch the very question we have at issue between private and hospital practice, and it arises chiefly—in great part certainly—from overcrowding the wards of the hospital. During twenty, or twenty-five, or thirty years, we have had no extension of the hospital. It accommodates about one hundred and forty patients, seventy or seventy-five on each side. We have had no extension; but during that period there has been a large increase of population, and there has been a still greater increase in the growth of mechanical contrivances and machinery, particularly of agricultural machinery, which has thrown into the hospital a very large increase of serious injuries, accidents, and wounds of all kinds. I have no doubt in my own mind that the increase and development of pyæmia in that institution is largely due to this increase of serious accidents and wounds which have not been properly cared for by extension of hospital accommodation. Some proof of this is found, I think, in this fact. Of course, by far the major part of these cases of injury and disease, and of all other surgical operations and diseases, largely occur on the men's side of the hospital. Out of twenty-one cases of pyæmia during the last three years, only one has occurred on the women's side; and this, I think, must be a proof that we have an overcrowding, not in the sense of a deficient cubic space, but in the sense of numerous cases of a bad kind in that space, which we could not well avoid. We have been obliged to take serious steps towards altering this condition of things, and those steps are now in progress. Still, that state of things remains. We have shut up one ward after another; we have abolished the use of sponges; we have weeded out beds from each ward; we have looked after the ventilation in a very careful way; and the results of these experiments we have not yet had time to prove. So far as we can tell, I am afraid that they have wrought no benefit; and I should not wonder that the end is that we either close the hospital, or make a large extension, or a full reconstruction of it. If that be the case in hospital practice, I am happy to turn to the absence of pyæmia so far as private practice is concerned. During the last fifteen or twenty years, a considerable share of both surgical operations and all kinds of surgical cases has fallen in my way in the city and in the county for twenty or thirty miles round, and I think I can say that during twenty years and more, with one exception, I have not come across a case of pyæmia, and I am not sure that that one exception can be regarded as a typical unequivocal case. It was a case of lithotomy, in which a country gentleman of very florid habits and congested appearance had hæmorrhage on the day succeeding the operation. On the third day, there came on terrible rigors, which were repeated day after day until death took place on the fourteenth day. At the *post mortem* examination, not a drop of pus was discovered in any part of the system. There was simply an enormous congestion of the visceral organs. The viscera, in the abdomen especially, were enormously enlarged, and there was a turgid spleen. That, I think, is the only case. Neither have I seen any case following from carbuncles or boils. In this way I have been led to think that one's private practice was perfectly secure and very much opposed to hospital practice. I have unwillingly. and almost tremblingly, proceeded to operate in the hospital; but I have had a happy confidence and a perfect assurance that in all private cases I should avoid any of these disastrous consequences. It fell upon me, therefore, with some surprise when I read your admirable address, quoting such a large body of evidence with regard to the occurrence of pyæmia in private practice, and I felt still more surprised when I heard one speaker after another—notably one eminent speaker—declare that pyæmia was, in his experience, as frequent, and arose from just as trivial causes, in private as in hospital practice. Then came other speakers who had similar experience to my own to quote, having had no decided case of pyæmia following operations in private practice; and those gentlemen were, as far as I could ascertain, practising in the same sphere as yourself—Sir James Paget and others. How are we to reconcile these discordant records and experiences? There can be no doubt, I apprehend, that the nature of the practice must be the same, and that the variety of cases must be very much the same, but there must be some mode of coming to a conclusion so as to make the one set of facts fit in with the other; and I can only explain it by supposing that there are some gentlemen—Mr. Erichsen to wit—who would hesitate to designate as pyæmia certain cases which you yourself have given as instances of the disease. That is the feeling I have at this moment, that in looking over the carefully recorded cases you have given us, there are some of them that would never enter into my mind to give as pure typical cases of pyæmia. Notably I refer to two or three cases of typhoid fever that were succeeded by feverish symptoms during convalescence and the development of abscesses in the limb, and in various parts—sometimes one, sometimes more—ending in recovery in all but one case. I admit I have seen cases of typhoid fever ending in development of abscesses during recovery; but certainly they differ as widely as cases can differ from those cases with which I have been so familiar in hospital practice. Therefore, if you will allow me, I will compare, in a few words, the records of the same number of cases in the hospital that I have a distinct recollection of as to their main facts, as those you have given us in your admirable address. Taking the last twenty-one cases of pyæmia in the hospital, I found that they all died. Of your twenty-one cases, nearly half, if not quite a half, recovered. Now, that is a striking contrast to begin with; and I think I shall have the assent of most surgeons when I say that pure typical pyæmia is marvellously fatal. Probably I am within the mark when I say that, in the experience of most persons, ninety per cent. of the cases of pyæmia would be fatal—probably more. In your cases, ten out of twenty-one seem to have recovered. If it be said that the hospital cases represent a malignant form of pyæmia, it may be so; but in answer to that, I can quote Sir James Paget's remark, that in his experience, which probably is London experience in the main, pyæmia was as fatal in private as in hospital practice. Then, again, in noting the pathological and anatomical facts of these twenty-one cases of hospital pyæmia, I have had *post mortem* examinations in every instance; and I find that, in twenty of them, there were visceral abscesses, abscesses of the lung and the liver. In your twenty-one cases, there could not have been abscesses of the lung and liver in quite half, because they recovered; and I should think, in considerably more than half, there probably were not any visceral abscesses whatever. There, again, is a considerable contrast in the anatomical facts. I notice, also, that all these twenty-one cases to which I have directed attention arose, with one doubtful exception, from operation or ulcer, or some broken surface; but in six out of your twenty-one cases, there was no wound, no operation, no sore, no broken surface whatever. Now I am quite ready to admit that pyæmia may occur without any broken surface. It is denied, I believe, by some authorities; but I think I have seen it, and I have no reason to doubt its existence; but, at the same time, most surgeons will agree it is extremely rare. Six out of twenty-one cases seem to me to indicate a very marked excess of what I should have thought to be possible. I notice, also, that in the twenty-one cases of which I have taken note, pyæmia followed in at least fourteen cases from surgical operations—some slight, such as fistula; some heavy, as in the case of stone and amputations; but of your twenty-one cases, I think there are only six cases of operation, and those of a slight and trivial character; so that I still feel a difficulty in bringing into harmony and unison such typical cases as I have reported, and those twenty-one cases the notes of which you have been so good as to lay before the Society. If it be the case that private practice affords such a large body of evidence with regard to the occurrence of pyæmia, I scarcely know what inference to draw, except this—I may be pardoned for making it—that those people who are afflicted with wounds, and stand in need of operation, will really do well, instead of flocking to London for its matchless surgery and superior advice, to remain and take advantage of the humbler attainments that they will meet with in the country, where they will exchange skill for greater safety. Still, I come to the conclusion in my own mind that pyæmia, if it do not find its birthplace, does find its natural home and resting-place in hospitals; and although a hospital may not be the mother of pyæmia, it is its nurse. Nevertheless, I cannot but express my gratitude to you for the bold and fearless way in which you have reported these most unwelcome cases, leaving us to think the matter over in every possible direction; and the direction of all others that it strikes me is most useful to think about, is not so much the mere treatment of it, as that which Mr. Callender has pointed out, and which he has done so much to illustrate, namely, the prevention of the disease. It strikes me that in that direction we shall conquer this terrible pest and plague; and I, for one, shall not rest satisfied in my own locality, until we have subdued in our Norfolk and Norwich Hospital this dreadful pest down to the low level and satisfactory condition that Mr. Callender so well describes as existing in St. Bartholomew's.

Mr. W. ADAMS: Amongst the very interesting observations arising out of the valuable paper which you have communicated to this Society, it appears to me that the two of greater prominence are, first, the establishment of the fact of pyæmia occurring in private practice in a much larger proportion of cases than hitherto has been supposed; and, secondly, the facts which have been arrayed, especially by Mr. Erichsen and Mr. Callender, with regard to the prevention of pyæmia when it arises in hospital practice; for we know now that it is liable to occur both in private and in hospital practice, I will not say with equal, but with more or less equal, degree of certainty. With regard to the remarks made as to the prevention of the spread of pyæmia, I think I should second the observations made by Mr. Callender with some experience in a smaller hospital—the Great Northern. In large hospitals like St. Bartholomew's and the London—and my recollections go back to the old days of St. Thomas's—we know that operations were frequently almost suspended for a time during the prevalence of pyæmia in the wards. Surgeons almost refused to operate, or they operated only in cases of extreme emergency. Now it happened in the Great Northern Hospital, about two and a half years ago, that our surgical deaths reached fifty per cent. from pyæmia. This, of course, called for an inquiry. The staff and the Committee were anxiously engaged in investigating all the circumstances connected with the nursing department, the ventilation, the cubic space, and so forth. After that time, a change occurred; and a house-surgeon, Mr. Young, was elected from one of Mr. Callender's and Sir James Paget's house-surgeons, and he was therefore well instructed in the general principles that Mr. Callender has enunciated this evening. Our surgical deaths then rapidly diminished; and, within the past year and a half, out of three hundred surgical cases, we have had only eighteen deaths, and not more than one, and that a doubtful case, of pyæmia. This result was considered to be due not only to the diminution of the number of beds in some of the wards, and the increase of the cubic space for breathing, but also to the preventing of cases of severe accidents and large suppurating wounds from accumulating in one ward, and especially to the care paid in dressing wounds within the period which Mr. Callender has specified after the accident. All sponges were abolished in the wards. They are used in the operating theatres, and they are only kept for operation cases. All materials are quickly removed from the wards. With these general directions, our deaths have now declined, though, after what Mr. Cadge has said, we can hardly depend upon such sanitary arrangements being always attended with equally good results.

Mr. DURHAM: The subject of pyæmia is one of very great interest and importance; and if we wanted any evidence of the interest felt in this subject by all our London surgeons, I suppose we could scarcely find better evidence than that afforded by the number of large and well-attended meetings that have occurred for the discussion of the subject in consequence of your opening remarks. It is an interesting subject, from whatever point of view considered; and, that it may be considered from a great number of points of view, is well illustrated by the remarks of the different speakers in connection with the subject. I do not propose to enter for one moment upon the discussion of this subject from many of the points of view that have been already taken, but I venture rather to come back to the point from which you started—the question of pyæmia, as occurring in private practice,—for it does appear to me that this is a most important view of the case to take, when considered in several ways; for, at the present day, we hospital-surgeons are so accustomed to have thrown in our teeth the great horrors of hospitalism or the fatality that attends it, that it is a great matter of consolation to find men—our seniors—men of large experience, like yourself and Sir James Paget coming forward and telling us that you meet with such a number of cases of pyæmia in private practice, which some would make out to be especially a hospital disease. I have met with at least five undoubted cases of pyæmia in private practice, and in each case I venture to say it arose altogether without any such cause, as some would suggest, as being the cause in many cases of pyæmia occurring in the private practice of distinguished hospital-surgeons. It has been said that, if these surgeons get pyæmia in their private practice, it is because they, their assistants, or their nurses, have conveyed the poison to their patients. I stand here to protest against the truthfulness of any such views. There is a kind of practical addendum to that, which is, that these hospital-surgeons ought not to operate in private, in such and such particular cases; and I wish again to protest against that view of the case. I speak in all seriousness. It has been distinctly said to me: "You hospital-surgeons convey these diseases about; you hospital-surgeons have no business to operate in such and such cases." Without entering into personalities in any kind of way, I may venture to say that many gentlemen in this room will know quite well the line of direction my remarks take. Your cases, sir, many of them, are certainly free altogether from the possibility of being clouded by any such imputation as that, and it so happens that the cases which have occurred under my own eye were also free from such an imputation; for I had nothing to do with them till the pyæmia had certainly been established. Of those five cases, I should like to mention two: the first, because of the manner in which the malady arose; and the second, because of the extremely successful and satisfactory results which attended the treatment. The first case to which I refer was one that made a very great impression, indeed, upon me at the time, though it is many years since. A young gentleman, in the middle of his examination at the University of London, having got through the first week, was rather depressed on the Friday, and on the Saturday he was extremely ill. That night he had a severe rigor. On Sunday, he was still more ill, and I saw him. He was extremely ill, presenting all the symptoms of pyæmia; the duskiness of complexion; the dry, glazed, reddish tongue. He had effusion in one shoulder and effusion in the knee on the opposite side, with the general mental trepidation, and so on. I recognised the serious condition of the young man, and called in my colleague, Dr. Wilks, the next day, who saw him with me. The effusion which took place, first in one knee and in the opposite shoulder, subsequently took place in the other knee, and then in or about the testicle, then in the calf and the other leg; and, on the Wednesday following, this young man died. It was not until after his death I learned, and then I had it on the strongest possible evidence, that he had, unfortunately, been suffering from an attack of gonorrhœa at the time. This I take to be a case of unmistakable, indisputable pyæmia, owing its origin to gonorrhœa. I refer to the case because you mentioned a similar case; at the same time observing, no doubt perfectly correctly, that such cases were very rare. The next case to which I would venture also to call attention, as occurring in private practice, was a case to which I was called by my friend Dr. Hunter, of Lavender Hill, Clapham. It was to see a lady twenty-four years of age, who had always had very fair general health. She had aborted on the 19th of October, and had hæmorrhage afterwards. The vagina was plugged, and secale cornutum administered, and the hæmorrhage arrested. I need not trouble you with all the details of the case, but would merely say, so far, that the mother was extremely depressed by the fact of her other only child having a severe attack of scarlet fever, and this child had had the attack while sleeping in the same room with the mother. The moment the malady was recognised, the child was sent away. On October 28th, that is, eleven days after the abortion, the patient had rigors, and all the symptoms of pyæmia set in, accompanied with sleeplessness, and so on. She continued in this state, and had renewed rigors until November the 9th, and at that time fluctuation was discovered in the anterior part of the right thigh, about the junction of the middle and lower third; also evidence of fluid in the left knee-joint. Under such circumstances, a consultation was proposed, and I was called in. About the nature of the case, there was no room for doubt; as to its origin, that seemed to be pretty clear also; that the woman was suffering from pyæmia, was perfectly clear. I made a very free incision right through the muscles into the large abscess in the front of the thigh, and evacuated a considerable quantity of ill-formed pus. The femur was laid completely bare, and denuded of periosteum for three or four inches. I passed my fingers up and down it. I then proceeded to tap the opposite knee-joint. I passed a trocar and cannula into the knee-joint, and evacuated from that from four to six ounces of serum and some ill-formed flocky kind of pus—the kind of stuff we are in the habit of recognising in the joints in these conditions. The patient was very much relieved, as the result, and she went on pretty well for some days. About a fortnight subsequently, I was again called in, a fresh collection of fluid having taken place in the opposite leg, deep down amongst the muscles. I again made a free incision, deep down, and found that the tibia was bare for the space, again, of two or four inches. That was the last time I saw the patient, until she came to call upon me perfectly well, having entirely recovered. The places healed up; there was no exfoliation of bone. She moved her knee-joint perfectly freely, and in every respect was in good health. That is a very satisfactory and successful case, and I bring it forward as an illustration of the method of treatment. I believe the success of our proceedings was owing to the fact that we administered to her very large doses indeed of quinine. It has happened to me to have seen a great many cases of pyæmia in hospital practice; and of late years, whenever I have seen the slightest indication of the symptoms setting in, I have immediately given large doses of quinine; and in cases in which pyæmic symptoms have been well established, and which, I have no doubt, would have gone on to a fatal termination, I have also given large doses of quinine; and, in some cases, the most satisfactory results have been obtained. I have seen, over and over again, a patient with a dry, red, glazed, brown, furred tongue; with a rapid pulse; high temperature; having had rigor a short time previously, with evidences of suppuration occurring in one part or another. I have, in such cases, given half a drachm of quinine, and repeated it in three or four hours; and, on the next day, I have seen the patient in a totally different condition: the temperature down; the pulse lower; the tongue clean and moist; and the patient expressing himself well. I beg respectfully to recommend this kind of treatment to the members of the Society—large doses, three or four times a day, regularly, and whenever there is a prospect of a rigor coming on. If the patient cannot take it, it may be given subcutaneously. The most striking case I have seen of the beneficial effect of this treatment was a case in which the quinine was administered subcutaneously.

Dr. A. P. **Stewart**: I must beg the pardon of the Society, if, at the fag-end of what appears to be an essentially surgical debate, I should rise to protest that pyæmia, so far as my experience goes, is by no means essentially a surgical disease, and that it is by no means necessarily connected with, as has been stated in the course of this discussion, open wounds. I can look back nearly forty years, when I was resident in the Fever Hospital at Glasgow, in a time of extreme prevalence of epidemic typhus, with very limited accommodation for the multitude of patients that presented themselves, during which time the wards were exceedingly overcrowded; and at that time, and for the period of perhaps four or five months, pyæmia, in its essential characteristics, was very prevalent, without a single open wound existing among those affected by it; that is to say, as a sequela of typhus. About the crisis, or rather after the crisis, intense rigors came on, with dusky, and even jaundiced skin; extreme rapidity of pulse; glazed tongue, and painful joints; finally, most of the joints of the body were proved in almost every case, upon *post mortem* examination, to be filled with pus, not only the larger, but the smaller joints; and there were visceral abscesses, that is to say, purulent deposits in the lungs. This occurred, not in one or two cases, but in a multitude of cases, without a single wound having been present in any one of these patients; added to which, in a considerable number of them, there was inflammation of the veins to a very large extent, with large swelling of the limbs. Now this, I think, no one would deny was essentially pyæmia. The two conditions were an intensely infectious, contagious, malignant disease, and great overcrowding, such as has been stated by Mr. Cadge to have been present in the Norfolk and Norwich Hospital; and, I believe that, wherever you have these same conditions, you will have the same results. I recall particular attention to the remarks made by my late colleague Mr. De Morgan, on a former evening of this discussion, which, as it appeared to me, recalled a case that had been already repeated *usque ad nauseam*, as occurring in the Middlesex Hospital, in which, from bad air in a particular portion of the ward, there were continual cases of pyæmia occurring; on the removal of that condition, the pyæmia ceased, and did not return for a series of years, till the same condition occurred again from neglect, and pyæmia occurred. On paying attention to the condition, once more pyæmia ceased. I believe it does lead us back to the question, whether this condition of things does not arise mainly from bad air in some form or another, overcrowding, the presence of malignant disease, the presence of blood-poisoning in some shape or other, not necessarily from surgical operations or from the presence originally of pus in the system, but blood-poisoning such as occurred in those cases of typhus which I mentioned, the presence of a blood-disease leading to this particular form and development, which proved fatal to so large a number of cases of typhus in the Glasgow Fever Hospital. I believe you will find it to be so whereever there are the same or analogous conditions.

The debate was again adjourned till the next meeting.

MEDICAL SOCIETY OF LONDON.

MONDAY, FEBRUARY 9TH, 1874.

S. O. HABERSHON, M.D., F.R.C.P., President, in the Chair.

A FERTILE SOURCE OF VENEREAL CONTAGION, DEMONSTRATED BY EXPERIMENTAL RESEARCH AND DIRECT PROOFS.

BY JOHN MORGAN, ESQ., DUBLIN.

In speaking of the results of the Contagious Diseases Acts, Mr. **Morgan** said that the results of their adoption had been to cause a very marked diminution of the disease in those districts protected by them. The War Office Return of 1872 stated that the percentage of soldiers diseased had fallen from 108 per 1,000 to 54 per 1,000 in the protected districts; while in the unprotected the percentage had increased to 123 per 1,000; and it was a most remarkable fact that in the protected districts the disease was of a milder character; or, in other words, that in these districts the soft or chancroid sore had replaced, to a great extent, the true or chancre sore. The author then called attention: 1. To the working of the Contagious Diseases Acts; 2. To the explanation of the attainment of the milder form of the disease by the enforcement of the Acts; 3. To the question of the duality of the venereal disease; 4. To the possibly curative tendency of the introduction of a milder form of the disease by artificial means. He pointed out that the great source of the propagation of the milder forms of the venereal disease was the inoculation by contact of the vaginal discharge (muco-purulent or purulent, as the case might be) of women when suffering from a syphilitic taint. He had been forced to this opinion from the result of a large number of testings he had made. These were performed by means of inoculation as practised by Ricord, and the virus was taken, not from the sores, but from the vaginal discharge of patients in whom no sore was discernible, and who had been weeks, and even months, confined to the hospital, where the possibility of recent infection with soft sores was impossible. The patients had all been over and over again examined with the speculum, and in other ways. It might be said by some of the speakers that only those patients who were already syphilitic were inoculated; and this was the case, but it was clearly inadmissible to inoculate a healthy person, and he showed that the result of the inoculation of the vaginal discharge was, as a rule, much more active and more intense than inoculation with matter taken from the primary sore or its resulting pustule, and he inclined to the opinion that the frequent occurrence of the soft sore in the male was explicable by its being a derivative of syphilis proper or a modification by descent, and one which left the system in very many cases unscathed. He believed in the unicity of syphilis, but that it was capable of modification by descent, and that the non-infecting sore so frequently followed a definite course as practically, in the male, to constitute a distinct disease and require a different treatment. In the Dublin Lock Hospital, on the female side, less than ten per cent. of the sores were indurated, yet fully ninety-five per cent. of the patients suffered from constitutional signs. He had recorded accurately ninety-one cases of primary disease, as the patients entered the hospital. He auto-inoculated ten, all had constitutional signs; four, who were auto-inoculated and had bubo, all had signs; three, auto-inoculated, had none before leaving; the remainder were not auto-inoculated, and five only out of the ninety-one had induration. In reply to inquiries made by the author, the surgeon of the Curragh Lock Hospital stated that "any and every form of primary sore, whether with or without induration, may be succeeded by constitutional signs; induration in the female is exceptional." The surgeon of the Cork Lock Hospital for females stated, "I have not met with more than two or three sores which could be considered in any way indurated; in fact, they all had the character of the soft sore." Attention was next drawn to the activity of the vaginal discharge, or the mucopurulent secretion of syphilitic females, in producing the inoculation pustules. In the patients from whom this discharge was taken, sores were carefully sought for by the speculum; and, as some of the patients had been under strict hospital *régime* for two or three months before the inoculation-test was put in practice, the existence of an internal sore must have been all but impossible. The comparative disappearance of the hard or infecting sore in protected districts was also explicable, if it were remembered that the result of the inoculation of the vaginal discharge of syphilitics on syphilitics was the production of a sore which conducted itself as the chancroid, with its comparative constitutional noninfection; and it might fairly be concluded that, if communicated to a nonsyphilitic male, it should result similarly, and, though derived from a syphilitic stock, was so modified by descent as usually to expend itself locally. Mr. Morgan had frequently tried the secretion from mucous patches, and, as a rule, failed, though he had succeeded in the young, and produced an indurated sore of the same chancroidal aspect. He had not tried the pus of an ordinary abscess or other source, as, though he would not have any hesitation in using the specific pus of syphilis or of gonorrhœa, he would shrink from using that from ordinary sources, fearing what must be admitted to be the mystic dangers of pyæmia. The writer had inoculated gonorrhœal matter in six cases, and failed to produce a pustule in each case, and, therefore, he drew the inference that it was not any condition within, but clearly outside the patient, which led to the formation of the specific pustule and sore capable of reproduction in its kind, and capable of becoming the scolex or head of an endless reproductive chain, each joint of which was in turn (when cast off) capable of becoming the head of a series. The author concluded his paper, which was fully illustrated by models in wax, diagrams, and printed notes, by observing that he was not an arguer in favour of the adoption of the inoculation cure. There were many arguments against it on the ground of inconvenience, repulsiveness, and uncertainty; but when it seemed evident that from an intensely tainted and syphilitic source the milder and usually admitted harmless variety of sore could be obtained, it formed the basis, at least, for a possible and rational line of treatment.

Mr. **Acton** felt personally indebted to Mr. Morgan for demonstrating the advantages of the Contagious Diseases Acts in Ireland. Surely, if vaginal discharges were so easily inoculable, it was an additional reason why women suffering under these affections should be compelled to enter hospitals and remain there till cured. Mr. Morgan had assumed that a woman suffering under secondary syphilis was liable necessarily to an inoculable vaginal discharge. Mr. Acton asked whether pure uncomplicated secondary syphilis was not, on the contrary, generally unattended with vaginal discharges. A vaginal discharge need not necessarily arise from secondary syphilis. When studying inoculation in the wards of the Parisian hospitals, he was accustomed to collect the secretion of primary sores, and keep it in closed tubes. It acted almost as well at the end of considerable periods of time as did fresh collected virus. If syphilitic poison were placed upon the sound skin, or upon a mucous membrane where the epithelium was uninjured, no effects would be produced. Mr. Acton, therefore, did not look to constitutional symptoms of syphilis as the cause of the inoculability of Mr. Morgan's vaginal discharge; but believed that the success of his inoculation depended upon the deposition on the vagina of secretion of a primary sore coming from an infected man, which secretion had not been thoroughly washed away, although the woman might have been in hospital some weeks. The sources of error met with in practice were numberless. Positive evidence was still wanting corroborating the statements that all parts of secretions of secondary symptoms were contagious. Primary syphilis was a very inoculable disease; but Mr. Acton had yet to learn that the secretion from secondary syphilis was an easy medium of communicating the affection from one individual to another. His own private practice led him to no such conclusion. In private practice, statements could be well observed, tested, and corroborated by personal observations, and these did not tally with the opinions of some writers who appeared to have collected their cases at dispensaries or hospitals. The statements of these patients were often misleading. In the wards of Ricord, nothing was taken for granted, and everything connected with the subject was treated as doubtful till tested. In some cases, misstatements were due to ignorance; in others, to deep cunning. One often had to do with an intriguing woman, a scapegrace of a man, a lying nurse, a child unable to speak, and with the further sensational items of adultery, seduction, and illegitimacy. Yet some, without much personal experience, professed to be able at once to decide upon the most complicated cases. It was impossible in a discussion like the present to enter upon the abstruse questions started in the paper, and he should prefer carefully examining the cited cases before coming to any conclusion.

Mr. HENRY LEE said that the Society was deeply indebted to Mr. Morgan for having brought under their notice a very remarkable series of facts. Some of these facts were partly confirmed by Mr. Lee's own experience. He had inoculated the secretion from the mucous membrane of a syphilitic patient, and produced what appeared to be a specific pustule. But were the results of all syphilitic inoculations the same? Now, in order to clear up this subject, those inoculations must be observed in uncomplicated cases; and Nature would, under the same circumstances, always give the same answer to the same question. The secretion of the local suppurating sore, if inoculated, would always, when uninfluenced by any other action, produce a strictly local disease. The inflammation would not extend beyond the immediate neighbourhood of the inoculated point; a pustule would form, accompanied by loss of substance, and a well defined circular pock-mark would be left. On the other hand, if the secretion from a real syphilitic affection were inoculated upon a patient who had not previously had the disease, some local irritation might follow, but the real effects of the poison would not manifest themselves until after the lapse of some days, and then would appear one of the well known forms of the primary manifestations of the constitutional disease. But if this same secretion from a syphilitic patient were inoculated upon a patient who had at the time constitutional syphilis, then the sore which resulted might have no period of incubation, and would probably be unaccompanied by any induration either at the seat of the inoculation or in the corresponding inguinal glands. It would be modified by the existence of previous disease, and that disease might be roused into action not only by the inoculation of the secretion of a syphilitic patient, but from the inoculation of common pus. He (Mr. Lee) had shown to the Society last year a very well formed pustule, accompanied by some amount of ulceration, which had been produced by inoculating the pus derived from a case of excision of the knee-joint in a child. This inoculation was, however, made on a syphilitic patient, and the virus was not in the pus inoculated, but in the patient inoculated. Now, in all Mr. Morgan's cases, the experiments were performed upon patients already syphilitic, and, therefore, there was the twofold action of the virus inoculated, and of the disease already in progress in the patients' systems; and, in accordance with this twofold action, the results which Mr. Morgan had demonstrated by the casts and drawings before the Society were very different from those which he (Mr. Lee) had seen as the result of the inoculation of the secretion of the local suppurating sore upon patients who had not previously had syphilis. In Mr. Morgan's cases, as illustrated, there was a halo of inflammation extending a considerable distance from the seat of the puncture; there were in several cases irregular and somewhat extensive superficial ulcerations; and in one case a well-formed pustule had been formed within twenty-four hours. These results differed, he repeated, very materially from those of the inoculations from the simple suppurating sores, and the difference must be attributable to the twofold action which was set up. Mr. Morgan had proved that the secretion from the vagina was inoculable. Now, this might be the only secondary manifestation in a syphilitic woman, and he (Mr. Lee) would ask Mr. Morgan whether any amount of physical examination would enable him to say whether any given patient under those circumstances was syphilitic or not, if she had well washed herself previously to being examined? M. Ricord had formerly laid it down as a rule that no patient could contract syphilis except from a primary syphilitic sore; and many cases of most cruel injustice had happened in consequence. A man who had had syphilis before his marriage sometimes found that his wife became subsequently diseased. Acting upon the opinion given by Ricord and those that followed him, and being not only accuser, judge, and jury, but also sometimes the author of the mischief, he treated his wife, upon the medical evidence alone, as if she had been unfaithful to him. Mr. Morgan had now shown experimentally that which he had long upheld—that the secretions from a syphilitic person, whether accompanied by an open wound or not, would communicate constitutional syphilis. Mr. Lee concluded that the illustrations given by Mr. Morgan were examples of syphilitic inoculation modified by the patients upon whom the inoculations were made being syphilitic at the time; and that the effects produced differed in their essential characters both from those produced by the inoculation of the secretion from a local suppurating sore, and also from the results of the inoculation of the products of secondary manifestations in uncomplicated cases.

Mr. DE MÉRIC stated that the Society could not but be grateful to Mr. Morgan for the trouble he had taken to come and lay his important experiments before them. Yet, the inferences drawn from those experiments were open to criticism. He would first allude to an experiment in which it was sought to prove that the chancroid may have a long incubation. Here inoculation was followed immediately by a pustule, and sixteen days afterwards by an ulcer. There was no incubation there, the pustule was evidently the positive and rapid result of inoculation. One of the main assertions of the author was the frequency of the indurated sore in men and its great rarity in women. This was a pretty common belief, which had, however, been rectified by Fournier, who, like Mr. Morgan, wrote from a Lock Hospital for women. M. Fournier, in his admirable lectures, had proved that the proportion of hard sores in women was pretty considerable. He (Mr. de Méric) had, in his hospital practice, seen a good many hard sores in women. Now, Mr. Morgan, struck by this supposed disproportion, had asked himself whence the male portion of the population took their hard chancres; hence the numerous and highly important inoculations with vaginal fluid which he had undertaken, and which placed his name by those of Carmichael and Wallace. And here the evident leaning of Mr. Morgan towards the doctrine of unicity must be mentioned, because the value of the inoculations just mentioned rested on the belief in that doctrine. The author was inclined to think that the infecting chancre and the chancroid were derived from the same virus; and he drew the conclusion that the chancroids which he produced with the vaginal discharge upon patients already suffering from syphilis would have turned out hard or infecting chancres, had the subjects upon whom the inoculations were undertaken been in a perfectly healthy condition. To this, however, all those professing dualistic opinions must demur. Granting that the sores produced by the vaginal discharges were really chancroids, which Mr. Henry Lee had questioned, it did not follow that on healthy people true chancres would have been generated. Mr. Morgan thought that syphilis could be communicated by such discharges, and at once applied this hypothesis to the Contagious Diseases Act, insisting that inspectors should pay considerable attention to the leucorrhœal state of the women brought under their notice. That a chancroid, however, existing upon a patient already suffering from syphilis might convey the latter disease, was a melancholy fact, an example of which Mr. de Méric had seen in private practice. The case would be found in the BRITISH MEDICAL JOURNAL, January, 1874, and was that of a gentleman who had had syphilis before marriage, and conveyed no disease to his wife and children for twelve years, when he contaminated the former by means of a soft chancre. Mr. de Méric was sorry to find that Mr. Morgan considered there was something in the inoculations he had performed, by which the syphilitic symptoms of the patients seemed to have been diminished, and was inclined to put some faith in the curative power of such inoculations. Boeck's system had been condemned in this country by the very surgeons who, at the London Lock Hospital, had powerfully assisted him in his experiments; and it was to be hoped that such men as Mr. Morgan will not lend the weight of their name and reputation to a practice which was both repulsive and ineffectual.

Dr. C. R. **Drysdale** had long been familiar with Mr. Morgan's work on syphilis, and with his important experiments, which he (Dr. Drysdale) considered to be unassailable. He had made some attempts to verify Mr. Morgan's conclusions, and had inoculated female patients affected with syphilitic eruptions on four occasions from their own vaginal secretions. In three of these cases no result took place; but on the fourth a pustule was produced under the right breast, similar to those he saw during the inoculations made by Professor Boeck in London. He, therefore, thought it most probable that such vaginal secretions in public women might produce both syphilitic and ordinary sores on healthy men. The question of duality was rather practical than theoretical. In the male, he used to notice at the Midi Hospital of Paris, that, perhaps, four-fifths of the sores seen could be distinctly called soft or hard; but even then, the prognosis as to the appearance or non-appearance of syphilitic eruption was sometimes doubtful. Mr. Morgan's experiments seemed to explain well the great uncertainty observed to obtain as to the results of confining women in hospitals under the Contagious Diseases Acts. Syphilitic secondary eruptions lasted usually eighteen months or two years, and, during all this time, it was likely, according to Mr. Morgan, that vaginal discharges in syphilitic women might infect; so that, in order to prevent the contagion of true syphilis, a prostitute should be logically confined for two years in prison when she had once had syphilis, which was out of the question, and quite a *reductio ad absurdum* of the Acts. Finally, as to the curative effects of autoinoculation, it was now well known that in most instances secondary eruptions tended to pass away spontaneously, so that these inoculations merely gave time for natural processes to run on.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MARCH 3RD, 1874.

SIR WM. JENNER, Bart., M.D., F.R.S., President, in the Chair.

DISCUSSION ON CANCER.

MR. **CAMPBELL DE MORGAN** opened the discussion on cancer with the following remarks.

It was with a feeling of great reluctance that, when I first received the invitation which you, Sir, and the Council of the Society did me the honour to make, I undertook to open a discussion on Cancer. I now regret that I did not leave this work to other hands; for, on reviewing the subject, I find that I can do little more than repeat opinions and arguments and surmises which are already familiar enough to members of this Society. It would, I think, have been better had the opening of the discussion been entrusted to some one out of the many who have been occupying new ground in their investigations on cancer.

The feeling, too, presses on me, that in all that relates to the nature and cause of cancer we want sufficient and accurate data on which to base our arguments. Experiment fails us; and we know nothing of the disease in its earliest stages.

Again, I felt and feel the difficulty of condensing within a reasonable compass the questions which I would submit to your consideration. It is, however, a matter of satisfaction to me that, imperfectly as I may perform my task, the Society will have the benefit of a discussion on the subject of cancer by others who have given deep attention to it.

But the subject of cancer is a wide one—far too wide to be embraced within the limits I would assign to myself; and I propose to confine myself to the question—a sufficiently large one in itself—"What are the relations of cancer to the organism, whether in its natural or its morbid condition?" Interesting, then, as is the search into the histological characters of cancer, and their likeness or unlikeness to those found in other tumours, I propose to exclude this part of the subject. Nor do I know that for our present purpose it signifies whether cancer be a development of epithelium or of connective tissue. It is of more consequence to determine the points of contact and divergence between cancer and other tumours in respect to their behaviour as living growths, and between these generally and the normal structures of the body. Nor do I propose to touch at all on the subject of the treatment of cancer: this would lead far beyond the limits which must be imposed on our discussion. I may state, also, that I have omitted all reference to names. I give my own notions, or those I have adopted from others; but I do not wish to make myself appear as tilting against observers whose opinions are more entitled to respect, perhaps, than my own.

It will be well, before considering the nature of the disease, to define what I mean by cancer. I should say that it is a malignant growth consisting of a delicate fibroid stroma, containing within its meshes aggregated but not coherent cell-elements—cells, nuclei, or granules—generally ununiform, though often similar to natural cell-elements. By "malignant," I mean that which tends to continued spread and multiplication, irrespective of the tissue invaded—to progressive ulceration and ultimate poisoning and exhaustion of the system. These definitions are imperfect. Cancer is not of necessity malignant; for it will sometimes retrograde, without showing any of the signs which we attach to malignancy. On the other hand, tumours which we usually consider innocent show sometimes the characters of malignancy. Under no circumstances would I limit the term "malignant" to cancer. Sarcoma, myxoma, and other forms of tumour, are often as malignant as cancer; in some forms, perhaps, more so.

Between cancer and other forms of tumour the main, or one main, difference is, that its component cells are free, and that they do not present an uniform type. Practically, I may observe that I agree with those who would regard any infecting growth as a cancer; and I surely believe that whatever argument applies to the subject of the origin of cancer, applies equally to that regarding the origin of any infecting tumour, perhaps of any true tumour, be its nature what it may. But I believe, also, that structural peculiarity is a main factor in that destructiveness which specially characterises cancer; and in the present argument I would limit the term "cancer" to those forms of disease which are specialised as medullary cancer, scirrhus, epithelioma, and rodent cancer. I cannot see any reason for dissociating epithelioma from cancer.

Let me say, too, that when I speak of the origin of cancer, I speak only of its place of origin, whether in tissue, or blood, or elsewhere; not of the conditions which determine its special form of development. These conditions we may be prepared to reason on when we have found out why one atom in the germinal membrane becomes muscle, another bone, another brain. I cannot help thinking that whatever determines the special forms of development of natural structure is in operation in the development of what we call morbid growths.

The views which have been entertained as to the origin of cancer are various. We may, I think, embrace them under the following heads.

1. A cancer-tumour is the expression of a specific blood-condition; standing in the relation to this blood-condition of a secretion to its gland.
2. A morbid material is present in the blood, which, coming into relation with an appropriate tissue, enters into combination with it, and causes the growth of the tumour.
3. The disease has its origin in the constitution at large, the tumour being only the local manifestation.
4. The disease is in its origin purely local.
5. Though local in development, there are general or constitutional conditions favouring its occurrence.

Of these, the first three may be regarded as the prevalent opinions of surgeons.

As I shall have to use the term constitutional as distinguished from local, it will be well to define my meaning. But this it is not easy to do clearly. The constitution is the man, all that gives him his individuality. In that sense, what we should in ordinary language call a purely local affection is really constitutional—a common lipoma, for example. But that is not the sense in which the term is used in this connection. What is meant here is an all-pervading condition, which will sooner or later find its local expression in altered nutrition, in new growth, etc., which will, in their turn, be evidences of the constitutional state. All would admit a practical difference between clubbed fingers and fatty tumours.

I have omitted "parasitism" from my list of assigned causation, as I suppose no one would now maintain that the cancer-elements are, in the first instance, altogether alien to the body, as they should be to justify the use of the term. That, in its progress, malignant disease resembles parasitic growth may be fully admitted.

There are strong grounds for regarding cancer as something more than a local disease. The all but certainty of its recurrence, remove it as we will; its hereditability; its frequent association with other forms of irregular growth; its often rapid diffusion; its power of infecting the system—all, in fact, that we see in the life of cancer naturally lead to a belief that the disease must, from the first, be more than a mere local tissue-change. And, in one sense, and to a certain extent, I must admit that this belief is well founded.

I have mentioned hereditariness as one of the grounds for regarding cancer as not a mere local disease. I believe that cancer is more frequently inherited than is generally admitted. We find the proofs of inheritance quite often enough to allow us to reckon this as one of its factors. In a large number of cases, moreover, in which no proof can be found of the existence of the disease in a progenitor, we can trace it in collaterals; and it seems to me reasonable to conclude that, in such instances, though the common parent may not have lived long enough to develope the disease, it was present potentially. Nor is it contrary to reason to conclude that the constitutional disposition, whatever that may be, is often present without the disease becoming developed. This must be the case where a disease or peculiarity has skipped one or more generations. The peculiarity of the grandfather may reappear in the grandson, though the father may not show it; yet the father must have something in him which he can transmit, though it never be seen in himself.

I may pass now to the consideration of the view which I would maintain; that, though it be local in its origin, there is in some, perhaps in all cases, a predisposition to the disease, which may possibly be distributed through the system, but which more probably has its seat in some among the tissues of the body. I would question, therefore, the evidence of there being any special disease in the blood, which either alone produces cancer, or co-operates with tissue specially fitted for the development of the disease.

Let me mention here that I doubt the existence of cases of simultaneous outbreak of primary cancer. Now and then, but rarely, more than one primary cancer may form, but at different periods of time.

Before giving my reasons for attributing a local origin to cancer, it may be well to state the difficulties which lie in the way of my reception of the blood-hypothesis. These are:—1. That all the facts in the history of a cancer can be explained without resorting to it; 2. That there are some facts which militate against it; 3. That, if we receive it, we must admit either that the same blood-poison aids in the formation of simple tumours, or that each tumour has its own special poison.

I will take first the facts which appear to me to militate against the blood-hypothesis. And I now speak of the blood as a whole; I shall presently refer to the possible influence of the white blood-corpuscles.

Now, supposing that the blood were a poison-holding fluid, we should expect, inasmuch as the poison must be present before the tumour which it aids in producing appears, that there would be some previous indication of such diseased blood-state. But, if there be one thing more noticeable than another in the early history of the majority of cases of cancer, it is the wonderful health enjoyed by its victims. Is it not the common story—"I did not think there could be anything in the lump, because I was feeling so particularly well"? Generally, our patients have the build which would point to long life, and come of long-lived families. This is by no means an invariable rule. Many cancer-patients are, and always have been, delicate, and come of consumptive families; but they do not become more delicate; indeed, they often improve in health before the cancer is discovered. We should expect an opposite condition were the blood the seat of disease.

Again: a growing cancer is removed, and the disease may never return, the patient remaining in perfectly good health. What are we to assume here, if we adopt the doctrine of blood-disease? Is it that, though the cancer was growing, the removal took place at the moment when the blood-poison had all been eliminated? or that the poison remained in the blood, but that the only tissue in a fit state to cooperate with it in the formation of cancer had been removed, and hence no fresh cancer-matter appeared? Either solution is difficult of acceptance. It is difficult to understand that, though the blood must at first be in a diseased state, yet a cancer, when it has formed, may grow and spread, though the blood have returned to its natural healthy condition. On the other hand, it is difficult to understand that a patient may remain free from local disease altogether, though the essence of the disease remain in the blood. The cases are rare in which cancer has been removed once and for ever by operation; but those in which it has remained undeveloped for years after operation are by no means uncommon, and the same remarks apply equally to them.

There is nothing which seems to contraindicate the presence of a blood-poison in cancer more than the well known fact that the disease, after operation, rarely returns in any of the ordinary seats of election. Scirrhus of the breast, for example, while it returns constantly in the skin, in the connective tissue, in the lymphatic glands, and in muscle, seldom returns in the opposite breast. This is as true of cases in which there has been a long immunity after operation, as of those in which the disease returns rapidly. Were the disease seated in the blood, should we not probably find recurrence in those organs which we recognise as the ordinary seats of primary cancer? The same remark applies to medullary cancer of the testicle, to epithelioma of the lip or tongue, and to disease of symmetrical parts generally. Surely, as more than half of all external cancers are seated in the breast, we should expect to find the second breast more frequently the seat of the disease if the blood-condition were a determining cause.

Another objection is that, while cancer is growing and infecting the neighbouring tissues, or even causing the cancerous cachexia, injuries inflicted on other parts of the body may, indeed usually do, run their ordinary course; wounds will heal, and repair go on, just as though the blood were in the purest condition. It may be said that the cancer-poison is being eliminated by the tumour; but new growths will spring up elsewhere, while healthy action is going on in the wound.

While, then, some of those characters which are usually present in blood-diseases are wanting in cancer, we do not meet in the latter with any which specially distinguish blood-disease. I propose, further on, to endeavour to show that whatever there may be in common between cancer and blood-diseases will be found between these and most forms of tumour.

The reasons which make us hesitate to receive the hypothesis of the blood, as a circulating fluid, being the seat of a poison, may be brought against the view that the poison resides in the solid elements, the white corpuscles, or that they have any special influence in determining the growth of cancer.

Whether the white corpuscles form or take part in the formation of the cell-structure of cancer, is a point on which I shall not enter. We know that they pass out freely into the tissues, and that they probably perform some important part in nutrition. But it is difficult to conceive that each white blood-cell has a special property which fits it for some special work; that one belongs to muscle, another to brain, another to cancer-tumour. Yet, on the supposition that the white cells possess peculiar properties in reference to cancer, we must either admit this, or we must conclude that every cell is a conveyor of cancer-influence—a view more difficult of acceptance than that under which the poison is supposed to be distributed through the fluid blood.

Surely the simpler view is, that each tissue, each active element of that tissue, has its own vital property; and that the blood, a common fluid, is distributed to all alike, each taking and appropriating what it wants. Of course it will be evident that impairment of the nutrient fluid will cause an unhealthy state of the tissue to be nourished; but is it not also the case that, if the tissue be impaired, the purest blood will fail to induce healthy nutrition? What else is the meaning of the degeneration of muscle from disuse? The pure blood is brought to it, but it will not thrive. The same is seen in the vegetable kingdom. The branch of a healthy plant trained in the dark will be sickly, and aphides and parasitic growths will abound in it. The sap, which rises freely and healthily to other parts of the plant, is not taken up and utilised by the sickly branch. I cannot help here referring to those strange phenomena observed by Dr. Brown-Séquard in guinea-pigs with partially divided spinal cords. As is well known, they become epileptic; the fits occurring, however, only when a small area of skin near the angle of the jaw is pinched. But the point to which I would draw attention is this, that the area of special sensibility is also the area of some obscure change which seems to render the part acceptable to lice; for on this space, somewhat larger than a shilling, they cluster in remarkable abundance. There is no perceptible change in the skin or the hair; the temperature is not materially altered; the blood brought to the part is the common blood; there may, perhaps, be a change in secretion. Let us pass to a simple tumour—a fatty tumour or a wart. Here, in the one case, we have a common blood circulating through all the fat in the body; but in one part there forms a separate overgrowth, due, surely, to some nutritive or formative change in the part. So, in warts, the increased development of the cells of the rete mucosum must be due to the part, not to the blood. If the part is capable of initiating those changes which lead to tumour-formation, why assume that in tumours which show more characters of tissue-change there must be some additional agency in operation outside the tissue?

And this leads me to the question, Is there any essential difference between cancer and other malignant growths, or between these and any tumour whatever? I mean, of course, genetically; for structurally there will be differences in abundance, and in behaviour perhaps still more. But the acarus folliculorum and the trichina spiralis differ from one another more widely, though both are simple parasites. We may take a lipoma. We find that in the midst of the ordinary fat of the body a separate mass is developed, which continues to grow indefinitely, which may at last thin the skin and cause its ulceration. We find that the tendency to this form of tumour is sometimes hereditary; that sometimes there are two or many more; that sometimes they are recurrent. The tissue is of pure fat, and we cannot generally detect any difference between it and the ordinary fat in which it is imbedded. But there must from the first have been some property in the tissue from which the fat was developed, different from and in excess of what existed in the normal fat layer. Here the history of the fat tumour ends; nothing more comes of it. We recognise the fact that the more the structure of a tumour resembles a natural structure the less is its power of doing harm. This is especially the case with fat-cells, which, when once formed, cease to perform any active function. But it may be said there is an essential difference between a cancer and lipoma in regard to similarity to natural tissue. Histologically there is, but as to mode of genesis there need be none. Admit that the elements of any tissue may take on independent action, and no line can be drawn between the mode of origin of the simplest and most malignant of tumours. We may take another tumour, enchondroma. Here, springing up usually, though not always, in a part of which cartilage forms, or has formed, one of the natural constituents, we find a tumour which may grow indefinitely, and which often remains, like a lipoma, fixed to its original seat of growth. The texture may be at first indistinguishable from pure cartilage. So far, there is no material difference between the modes of growth in a lipoma and in an enchondroma. But a cartilage tumour, having once formed, may go on to further changes. There may be from the first an indication of some difference from normal cartilage. Instead of remaining stationary as cartilage, it may go on to form bone, or may break down into cavities containing nuclear and fibrillated and jelly-like substance; and then we may have dissemination to an extent. The original tumour may have become converted into a cystic growth, more sarcomatous than enchondromatous in its character; but the secondary growths will often revert to cartilage-structure, while sometimes they will appear as sarcoma. It is not difficult to understand why an enchondroma differs from a lipoma. The fat-cells of a lipoma have reached their full term of activity. Cartilage-cells are multiplying and active. In the disseminating tumours there is no cyst; their elements may become free and may enter the lymphatics or blood-vessels, and be transported into distant parts and grow there. We may have all varieties of activity of growth, from the nodule of cartilage, which goes on to form a simple exostosis, to a structure in which the cells seem to be set free from all restraint as to number, or form, or change of character. In these latter cases we get into the regions of malignancy; but who can draw a line separating a class which resemble lipomata in simplicity from those which are allied to cancer? We have no proof of the power of natural cartilage-cells to increase and multiply when detached from their natural position; but we have it in the case of the allied structure—bone. Here experiment has shown that the periosteal cells, if scraped from the inner surface of the membrane and imbedded in muscle or connective tissue, will form bone-nodules. The experimentation is rough as compared with that which is worked out in the body in the case of disseminated cartilage or osteal growths. Once admit that the cartilage-cell-holding tissue can throw off the laws which regulate natural growth, and I do not see where or why it becomes necessary to invoke any other aid.

It is certainly impossible to say *why* one enchondroma should remain as pure cartilage, and another go on to softening and dissemination. It is, we know, the tendency of tumours to deviate from those fixed laws of growth which regulate the size and form of our natural structures. Even tumours most resembling natural organs show this. An adenoma of the breast, for example, may vary in character from a compact gland-like structure indistinguishable from that of a natural mammary gland, to a soft flickering substance containing proliferating cysts and merging into a cystic sarcoma. Surely in such cases one can only recognise a disposition, more or less pronounced, to perverse development in an atom of natural tissue. No one would, I presume, consider a special quality of blood necessary to account for them. But the fat-tissue, or the cartilage, or the gland-like substance will grow alike indefinitely and irregularly, and their ultimate texture may present as many deviations from that of natural tissues as does their gross mass. And so with regard to sarcoma or fibroma in all their varieties: they do not differ more from forms seen at one time or another in natural development than do enchondroma or adenoma in their advanced stages. Many of these prove to be fearfully malignant; their elements will be carried away and form new centres of growth, and destroy their possessors as surely as will scirrhus. But what line can be drawn between perverse local development and this development *plus* blood-poison?

Can it be said that there is something in cancer which is not contained in those other forms of infecting disease which I have mentioned? Surely not; for though scirrhus may, as a rule, contaminate the system more certainly and thoroughly, yet as much cannot be said for epithelioma, and it does not apply at all to rodent cancer, which, according to all recent authorities, must be regarded as a modification of epithelioma. As we shall see, the mere structural peculiarities will explain the differences in the degree of malignancy found in the various forms of cancerous and other tumours. In most cases, the first notice we have is the appearance of a tumour; and in those of internal cancerous or other allied tumours, the new growths may have attained a large size, and have spread and infected many other parts before any sign is shown of their existence. This is widely different from what we see in blood-diseases generally, in which some symptoms, inflammatory or other, precede or immediately follow the outbreak of local disorder. But what symptoms of cancer in its early stages can we find beyond those afforded by the mere existence of the tumour itself? Is it not rather the case that our suspicions are aroused by the very insidiousness of the local disease? There are some things, indeed, which do make us suspicious of a cancerous future; but they are purely local conditions, and may exist for years before any real malignant disease shows itself; when, for example, with cancerous antecedents, we find an undeveloped testicle, or a breast which is unable to perform its functions; or when the skin is the seat of brown scales or moles, which, as we advance in life, become larger or perhaps irritable; or when the tongue is ichthyotic. So, too, we shall see, without surprise, a cancer grow when the lip has been long irritated by the pipe, or the tongue by a jagged tooth, or the scrotum by soot. In regard to this latter source of irritation a curious question arises. Chimney-sweeps' cancer used to be a very frequent disease. The disuse of climbing and the cleanlier habits of the sweeps have greatly diminished the number of such cases. If, then, epithelioma be a blood-disease at all, the probability is, the number of cancerous persons remaining the same, that if the local seat be not found so often in the scrotum, it must be established elsewhere; consequently, we ought to find an increase in the frequency of cancer in other situations.

We may now come to the question, Why should malignant growths, some cancers especially, when once formed, infect neighbouring and distant parts, and ultimately contaminate the system? The knowledge we have of late years acquired of the independent actions of cells renders a solution more easy, though I admit that it is not free from difficulties. It has long been known that cells are dispersed around a cancer tumour, the direction and rapidity of the dispersion varying according to the density of the tissue, and the abundance of connective tissue spaces, or of lymphatic or vascular networks in which it lies. It is now known that the white blood-corpuscles can wander from their vessels; more recently it has been seen that cancer-cells—like the white corpuscles—show amœboid movements, and can thus travel independently in tissue-spaces, or even permeate delicate membrane. There is no doubt, I suppose, that these cells, whether the matter that forms their nuclei, or the free granules, are the active agents in the reproduction of cancer. We can understand that these cancer-germs may thus travel through their own power, or be carried along in the vascular system, or connective spaces, in every possible direction. And it must be remembered that cancer is, for the most part, a structure infiltrating itself among the tissues in which it lies—not surrounded by a capsule or limitary membrane of any sort, as are many non-infecting tumours. The newly developing and active cells are always in direct contact with the healthy tissues on which, in fact, they are living. Once set free, the cells may travel in the three channels I have indicated. First, and chiefly, they may travel along the lymphatics to the glands, where they will form new centres of growth, and by continual invasion affect a series of them, and perhaps contaminate the lymph itself. Or, secondly, they may travel through the surrounding tissues, their direction being often determined by the density of the tissue. Thus it is often noticed that, after breast-operations, the disease will reappear above or below the cicatrix, and will travel on the same plane, not passing across the dense cicatricial tissue. The disease will seem to prefer the easier course, but the densest tissue will not prevent this permeation. In malignant intraocular growths, the germs are found at times extending through the dense sclerotic, and then bursting out into new growth in the free periocular structures. Thirdly, they may pass into the blood-vessels, and thus into the general current of the circulation; hence, we may get infection of internal organs, or of parts widely removed from the original tumour. We have evidence of this mode of conveyance in many recorded cases of sarcoma and enchondroma; and the secondary cancer growths in the lung and liver, so like, in many respects, to the deposits we get in pyæmia, point to the same mode of origin. Besides these principal modes of conveyance, we meet at times with evidence of conveyance in free cavities by gravitation, and sometimes, but rarely, of implantation by auto-inoculation.

There are some tumours of which the elements are disseminated far more rapidly than are those of cancer; on the other hand, some cancers show little tendency to dissemination. A small melanotic sarcoma, for example, will often give rise to numberless secondary growths in a marvellously short space of time. This is, perhaps, due to the great activity of growth, and the abundance of granular matter, which often characterise this form of tumour. If we look to epithelioma, on the other hand, we see that, great and destructive as may be its local action, yet its area is usually limited to the first part invaded, and the contiguous lymphatic glands. The structure explains this. The component cells are coarser, have less independent movement, are more packed together, sometimes becoming coherent. They may pass into the lymphatics—coarser matter will do that; but, like the cells from which they originate, they are little disposed to wander; the tumour grows more by continuity, less by dispersion. This is still more marked by rodent cancer, where the cell-activity is at a minimum, and the ulcerative keeps pace with the formative processes.

It seems to me, then, that we can account for the diffusion of cancer, when once formed, without calling to our aid a pre-existing or concurrent disease of the blood.

Admitting that cancer, like other infecting tumours, is reproduced by the growth of germs which have been conveyed from it to distant parts, the question arises, how can we account for the fact that after removal there may be no reproduction for years? Can it be imagined that during all this interval the germs of disease deposited from the original tumour have remained inactive? Is not this contrary to the nature of cancer, and does it not show that there is a cancerous poison in the system? I admit the difficulty; but it is not removed by assuming that the blood or the system is primarily diseased. My conviction is that cancer and other tumours may remain in a rudimentary state for an indefinite length of time. In the case of recurrent cancer, we often see that an enlarged and hard gland, which is left after the removal of the main tumour, will remain quiescent for years, and that then active growth will set in. The same will take place in a cicatrix which has perhaps remained hard. It may be said that this is only an evidence of the return of the blood to a cancerous state. But it is as difficult to understand the quiescence of the blood during this long time as of the cancer-germs. Many facts, both in normal and in morbid development, are indicative of the possibility of tissue remaining unchanged for long periods, and then taking on new phases of growth. Such are, for example, the change of epiphysial cartilage to bone after twenty years; the change in the female breast at the period of puberty; the shedding of the milk-teeth and the development of the second set. Still more to the point are, perhaps, such instances as the frequent enlargement of the prostate gland in advanced age, or the growth of hair on the female face from follicles which had existed, but in an inactive state, for sixty years. It is not at all improbable that what is here seen as a result of advancing degeneration often plays its part in cancer development. It is probable, too, though it may not admit of proof, that in those cases, which are so common, of hereditary lipoma, or sebaceous or dermal cyst, the rudiments are present from the first. We know, as a fact, that such tumours will remain small, only just perceptible perhaps, for twenty or thirty years, and will then take on active growth. In the imperfect structure of an inefficient mammary gland, or of an abortive testicle, is there not present, from the earliest period, some form of indifferent tissue prone to irregular development, but quiescent during the active periods of life? This is rendered the more probable from what is so frequently found in connection with epithelioma. We have here on the surface what may be hidden in the case of the deeper glands. Scales, or warts, or moles, and some imperfect epithelial growths, may remain without change for fifty years, and then may become the seats of a cancerous growth. If such a scale or other imperfect tissue were persistently irritated, it would doubtless become cancerous at an earlier period. Cancer has been there potentially for years, but its time has not come. Such, I believe, is the explanation of the fact that cancer-germs, which have wandered from the parent tumour, may remain quiet for indefinite lengths of time. I can see no other way of accounting for such a case as this. A tumour is removed; a year afterwards, a small nodule, not so large as a split-pea, is discovered and removed, no other nodule being perceptible after careful search. After another long interval, another small nodule is found and removed, and again there is quiescence. This may be again repeated. Can we suppose that there are continual reproductions of a blood-poison followed by periods of healthy condition?

While I believe it probable that the germs of cancer may thus remain in a sort of dormant condition for long periods of time, I would by no means imply that there is not in cancerous patients a special disposition to tissue-change located in some, but not in all the structures of the body. The general tendency to degeneration may give rise to the primary local change; so may local irritation. Thus, out of a hundred chimney-sweeps or clay-pipe smokers, a certain number may have chimney-sweeps' cancer or lip-cancer, the number varying, perhaps, according to the duration and extent of the irritation. But the majority will not become cancerous, irritate how you will; and of the remainder, few probably would have cancer unless irritation were applied. The same remark may be made as to such ordinary growths as warts. In some, the least irritation will produce them; in others, they never will appear. Like other tumours, too, they have their seats of election, and their favourable period of life, and they often appear to be inherited.

There are other facts observable in the later course of a cancerous disease, which are difficult of explanation either on the hypothesis of blood-disease or of localisation. For example, a local cancer in an ordinary situation may give rise to a general disease of a structure totally different from it. We meet, for example, with a widespread disease of the osseous system following a breast-cancer, and the disease may not show itself as cancer-deposit, but as entire absorption. This may be seen in many of the bodies of the vertebræ, which may totally or partially disappear without any cancer-growth being detected, and while yet cancer-deposit is taking place in other bones. These, no doubt, are exceptional cases. We find, however, that natural tissues are at times disposed to undergo changes which are equally inexplicable. The changes taking place in some out of all the muscles of the body, the fibrous growths on a number of the nerve-cords in multiple neuroma, and other cases, show that local tendencies to tissue-change exist in detached parts of general tissues. They may be allied to the degenerative changes which pervade unequally particular tracts of the arterial system. We cannot as yet account for these and such like facts; but whatever may be the local condition which thus determines special tissue-change, whether its seat be in the parenchyma or in the nervous system, the same may possibly determine a preference for deposit or degeneration under the conditions of progressive cancer. We have, in fact, to solve the question, Why have diseases seats of election at all?

Another remarkable and not very explicable phenomenon is the arrest of cancer-growth and the gradual wasting of the diseased mass. This is an occasional event which is very important, as it encourages us to hope that a cure may yet be found for the disease. Although this recession of cancer is sometimes coincident with the development of tubercle, I doubt whether we have sufficient data on which to establish the conclusion that the one disease is antagonistic to the other. It is, however, worthy of note that, frequent as is the occurrence of cancer in consumptive families, the coexistence of the two diseases in one member is not a common event. But cancer is a disease of the middle and later periods of life, and tubercle generally of an earlier one. Those who live to be victims of cancer have passed the period when tubercle would be most likely to set in. That this arrest or recession is not due to any exhaustion of the cancerous element in the body is shown by the fact that, while the disease is retrogressive in one part, it is in active growth in another. The retrogression differs from the degeneration of the earlier formed cells, which is constantly going on in the interior of tumours, as shown by the presence of fat-granules, compound granular cells, and such like. In the case alluded to, the activity of the whole mass is arrested, new cells cease to be formed, and the tumour fades. I doubt whether this can be from the plugging of the vessels feeding the tumour. This, no doubt, often takes place, and the death of some portion of the mass may be the result. But when we find a widely spread mass becoming quiescent, and then fading throughout its whole extent, we must, I think, look to some other cause; for cancer is so far like a parasite, that it draws its nourishment largely from the tissues in which it lies. When, for example, a nodule of enchondroma or of sarcoma is detached and floated off in the current of the circulation, and afterwards grows in the lung or the liver, it must, in the first instance, obtain its nourishment from surrounding tissues. We must look elsewhere for an explanation. It only shifts the difficulty back a stage or two, as I have so often done before, to suggest that the recession of cancer takes place in obedience to the law which under local atrophy, independent of inflammation, or disuse, may occur; or that it may be due to some want of organising power inherent in it from the first, as some cancers seem born to be atrophic. It is, under any circumstances, a most important subject for investigation.

Lastly, I would suggest the question—Why is it that cancer, if a blood-disease, should be so pre-eminently a disease of women? Taking all cases together, I suppose we should not be far wrong in saying that the uterus and the mammary gland are the seats of the disease in ninety per cent. Does it not look as if the mere tissue-changes depending on the peculiar vital condition of these organs were the starting-points of the disease? Were it not so, and if the disease were from the first in the blood, surely we should find that men were as prone to cancer as women. Other forms of tumour are nearly as prevalent in the one sex as the other. It is a point worthy of consideration.

I must now apologise to the Society for having so long occupied its time in a mere enunciation of opinions, of which many must be considered as now commonplace: some may be regarded as vague and shadowy. Long as my remarks have been, I have felt that, without overstepping the bounds of your forbearance, I could not do justice to any one of the subjects on which I have entered. I have, however, the satisfaction of feeling that, without reference to my shortcomings, they will afford ample material for discussion by those who differ from or who agree with me, and who will, by giving us the aid of their experience, their observation, and their reflection, throw a light upon the nature of this fearful enemy, and thus upon the means by which we may accomplish its overthrow.

The PRESIDENT said this was a very important and interesting paper, and full of suggestions. He hoped it would elicit some observations from members of the Society who had given special attention to the subject. If he might be allowed to ask one gentleman present to address them, he would call upon Mr. Simon.

Mr. Simon : Sir, I rise in answer to your summons, but it is the last thing I should have thought of doing, except in obedience to you. Not because I should not wish to argue some of the points which have been raised in this paper, but because I feel that so very thoughtful and so well prepared a paper can hardly be dealt with in extemporaneous argument. In reading Mr. De Morgan's thesis, I have noted certain points put forward by him ; but I feel that it is almost impossible to deal with them adequately otherwise than in an essay almost as complete, deliberate, and careful as his own. But, at least, I am very glad to have the opportunity in rising of saying how very deeply indebted I think the science of this subject is to the clinical study of cancer which has been made at the Middlesex Hospital and eminently by Mr. De Morgan himself. Mr. De Morgan has referred to doctrines which I think the researches made at the Middlesex Hospital have entirely put out of question—the notion of any direct organisation of cancer in the so-called blood-poison. That doctrine was, a quarter of a century ago, put forward by various writers on grounds that probably, even then, were insufficient for what they pretended to support, but which now certainly are disposed of. Probably, however, in those days the writers who argued for the blood-source of cancer did not so much mean the blood alone as the influence of the total system, the total material constitution ; and, if they had been pressed on the subject, they might have stated that they meant more than the blood taken quite separately from the solids of the body. But I think, perhaps, that Mr. De Morgan, in putting aside the blood quite effectually as an exciting cause of cancer, has not done justice to the influence that the total constitution of the body has on the development of cancer in the sense of predisposition. When one looks, on the one hand, at the hereditariness of the disease, fully established as I suppose it is in a large proportion of cases ; and when one looks, on the other hand, at the insusceptibility of bodies generally to the inoculation of cancer, I think one is justified in assuming that a specific predisposition is necessary ; and that we may suppose that this specific predisposition is hereditary—not like the germs which, as Pascal has observed, make the fibrine of the silkworm hereditary, germs traceable through the ovum, and so on—not hereditary, perhaps, in that sense, but the predisposition is hereditary as affecting the quality and general constitution of the body. I feel it extremely difficult to follow so well considered a paper without asking the meaning of particular parts of it. But it seems to me that Mr. De Morgan rather combated the doctrine of the specificity of cancer, that he attributed a great deal to an almost accidental mobility of its elements. First of all, as regards cancer, I may say that I would use the word in the old fashioned sense, not in the modern and, I think, inconvenient sense, the strictly anatomical. I think we have rather come to grief in using the word in that restricted sense. We want a word that shall cover what our forefathers meant ; we want a word that shall cover scirrhus of the breast, medullary sarcoma of an extremity, glioma of the globe of the eye, epithelioma of the penis. We want a generic word to cover those cases, and "cancer" is a convenient word. I do not know any other that we can use. We want a word that we can turn into an adjective. Has cancer in that sense of the word a specificity, or does it differ from what I would call common tumours in the mobility of its elements ? Speaking, of course, in Mr. De Morgan's presence with great diffidence, I would say that I believe in the specificity of it. I believe that there is an absolute difference between tumours which will be classed as monstrosities and tumours which are zymotic, which are contagious. I fully agree with Mr. De Morgan, that the differences between those two great divisions of disease are not always expressed in a form, or in differences of form, that we are able to trace. Some rough approximation to distinctions may be made ; but, broadly, we cannot, in a general way, distinguish them in form, and for a reason that, I think, is obvious. Perhaps, to that reason I may give a word or two. The anatomical characters of cancer are, speaking in very general terms, signs of local irritation. Whatever stimulus is applied to the part, the part can only give certain vegetative results. We know what changes a part can go through in the way of its products. It cannot give bricks and mortar ; it cannot be heterologous in that sense ; it can give over-growths that shall be more or less embryonic ; it can give, in the more or less embryonic tissue that it produces, evidence that its process is more or less tumultuous ; it can give forms that are more or less abortive. When one has gone through a few heads of that sort, one has exhausted the possibilities of variation in nutritive processes. The tumours which may be called mere monstrosities, which are as truly in that pathological class as the supernumerary finger or toe, are, it is true, more apt to have what one may call adult tissue, and to have that adult tissue without a quantity of abortive forms. That is a question of degree ; but there is—I entirely admit it—an absence of complete anatomical distinction. This stimulus of cancer, whatever it may be, goes to the part, and the part, according to its own structure, undergoes change. Then you get, according to the structural type of the part, the alveolated structure, if the organ be a glandular or epithelial one ; if, on the other hand, it be one of the connective tissue series, you get a stromatoid tumour—one of its many possibilities ; but, if the part be subject to mere hypertrophy, you get the same sort of thing. Again, relapsiveness is not the test of cancer. The monstrosities may relapse—the mere textural hypertrophies. I remember, a great many years ago, to have removed a little bit of fibroid tumour on the top of a lady's chest. It had been removed before, but it had come again. Her relative, who was an eminent member of our profession, not being very young, doubted whether his eyes were sufficient to deal with the case, and he asked me to deal with it for him. I removed the tumour, going widely into the surrounding parts, and I brought the edges together with three hare-lip pins. After a while, the case recovered. A few weeks afterwards, I was again called to see this young lady. I found that the tumour had grown again, and that, in addition to that, each of the six pin-holes had grown a tumour. I treated the case with cold. The tumour shrank, and the lady is at the present moment alive and a joyful mother of children. Relapsiveness only indicates, I apprehend, that the hypertrophic tendency occupies a larger area than the hypertrophic manifestation. We cannot say to what extent it reaches, but, as regards the comparative insignificance of it in relation to what we are talking of, it is enough to refer to a book that is full of all sorts of curious information—Mr. Darwin's book—in which he collects cases that have been from time to time published, chiefly in the medical journals, of the relapse of supernumerary fingers that have been amputated. That is a case in point—it is a monstrosity that relapses after operation. Nor is original plurality a test of malignity. There, again, you get, and very often hereditarily, a textural peculiarity, an affection of one texture, a unitextural peculiarity. You get a plurality of permanent cartilaginous tumours. I recollect seeing a boy with seventeen on his two hands. Or you get a scalp covered over with sebaceous tumours ; or you get any number of fatty tumours scattered about the body. These are not common cases ; but here you have one texture affected at a great number of parts, a great number of separate parts with simple hypertrophic processes. A vast number of spots in one texture are, in this wild way, hypertrophic. But that is not malignant disease ; that which is malignant is, I think, *sui generis*, and it is not a matter of mobility of elements. But consider what it is. One cannot confine one's self to the part, I think. I confess, like Mr. De Morgan, that a part puzzles one. One cannot work at it only in part. One has to look a stage further on, and what one sees there is certainly *sui generis*. The part exercises on the tissues which receive its juices an influence which I would call—I can hardly use another word for it—an impregnative spermatic influence ; that is to say, the part causes these other organs to develope after its deranged pattern. Mr. De Morgan thinks that that is transplantation, and the growth of the transplanted thing. Well, a great deal turns upon that as a question of fact. Some very thorough observations which have been made by a friend of mine, who is in the room, are in a very different direction. I will not say that there is no possibility of growth of a transplanted bit of sarcoma or cancer—I use cancer to cover sarcoma—I will not say that there is no possibility of the growth of a bit of such tumour. No doubt there is ; it would be very odd if there were not. But some observations which have been made by Dr. Creighton on the formation of secondary cancerous tumours have shown something very different from that ; they have shown bits of structure undergoing changes in their own elements ; not a bit of transplanted tumour growing in them, but the epithelial cells themselves undergoing transformation. Well, it seems to me that, if one is to interpret cancer, one must take it with kindred processes. It seems to me that it is part of a very large subject, and that one has no more right to deny the specificity of cancer because the material forms of cancer are not always to be separately identified, than one would have to deny the specificity of small-pox because the fever of small-pox does not materially differ from the fever of measles or scarlatina. I think it is part of a very large subject, the subject of dyscrasis due to local infection. For a good interpretation of cancer, I think we must look, not at the monstrosity tumours, but we must look at tubercle and at syphilis. The studies that have been dwelt upon in this room, the admirable discussions of last year, and indeed for many years past, on the subject of tubercle, have thoroughly altered old impressions in relation to that disease ; and the researches of the last year or two have shown that which used to be spoken of as constitutional disease to be in most intimate association with contagious processes—have shown that, in fact, to be indubitably contagious from body to body, as for many years it has been known to be contagious in the body which it possesses, and have traced it into intimate connection with the septic ferments. Far be it from me to say that it always arises from causes outside the body, but that it can arise from a contagium outside the body is quite certain. One sees in the case of tubercle the immense influence of, if I may use the expression, the personal predisposition. I do not pretend to say what the external cause of tubercle is. Of course, we know that it is, in intimate connection with septic ferments, the causes that produce septicæmia and pyæmia. Dr. Sanderson has quite established that. Let some animals be exposed to its influence, and they scarcely suffer at all; let the rodent animals be exposed to that, and they suffer almost universally. There you have, on a large scale, as a quality of race, as a peculiarity of a whole set of animals, the constitutional susceptibility to a particular morbid poison illustrated. Then, look at syphilis: a chancre, inoculation on the lip, with affection of the gland and with tertiary gummosities throughout the body after a certain number of years. Take that as one case. Take as the other, an epithelial cancer on the lip, with a swelling, probably a softening, fungation of the glands, and affections perhaps, after a while, in the lung or liver. Do those two cases differ more from one another than one might reasonably expect two species of morbid poisons to differ? Well, do I say that cancer comes *ab extra*, that cancer is an inoculation in the part where it occurs? No, I am a long way from saying that. In the present state of knowledge on the subject, I think we are driven to the doctrine that Mr. De Morgan has so well defended and illustrated of the unilocal origin of cancer. We are driven, I think, first of all, to recognise that the essence of the disease is the development, as I said, in that spot of a specific impregnative influence. Such an influence is developed in a single spot of the body—What has developed it? We have to choose between two positions. On the one hand, that there has arisen in that spot of the body a property entirely *sui generis*, something for which we have otherwise in the body no analogue; or that there is a contagium from outside. It seems to me that we can hardly escape that alternative. I do not venture to insist upon the doctrine of an external contagium in cancer; but the point I have wished to insist upon very imperfectly—for this matter ought to be discussed far more deliberately if one wished to do justice either to the argument of Mr. De Morgan or to the one I am stating—the point on which I wish to dwell, is that the process followed from first to last is one which brings cancer into relation with tubercle evidently, and with syphilis less evidently, but I think certainly, as members of a family of diseases as definite as the family of infective fevers, the family, namely, of chronic dyscrasis that arise in local infection. Then, whether that local infection in cancer is a local neogenesis, is a spontaneous product, something indigenous to the body, or is a contagium *ab extrâ*, is, as I say, a question on which I would not pretend to speculate.

Mr. JONATHAN HUTCHINSON: I think it is a pity that the moments should be wasted, although I should very much prefer to remain silent and hear what others have to say on this important question. I have listened with extreme pleasure to the very able paper which Mr. De Morgan has read to us, and my pleasure perhaps has been increased because his views are very much those which I entertain myself. Some fourteen or fifteen years ago, I read a paper before the Hunterian Society on a similar subject, contending for the local origin of cancer; and I have, ever since that time, taught this doctrine to the students with whom I have come into contact as earnestly as I could, because I think that in the belief of the local origin of cancer rests our only hope of dealing satisfactorily with it as surgeons; and I also believe that our patients' interests are prejudiced most seriously by the sort of hesitancy in the belief of this doctrine by a large section of the profession. It must happen, sir, to you, and to all members of this Society, very frequently indeed to see cases which, if treated on the theory of the local origin of cancer at an early stage, might have been satisfactorily cured, but which, having been neglected, have been allowed to get possession of the body, to infect the blood, to infect the glands, and a disease which was curable in the early stage has become in the end totally incurable. I quite concur with the concluding remarks of Mr. De Morgan's paper, that it is in this direction that we must hope to fight this foe. I fear not on a very large scale, because there will still remain a great proportion of the number of cancer-cases in which the disease is local at first in a position in which it cannot be attacked. But, putting those aside, we still have a very considerable number which we can attack most satisfactorily if we will believe that it begins as a local disease. Now, in contending that cancer is, for all practical purposes, a local disease, and that it is very important for surgeons to believe that it is such, I by no means wish to put aside the argument of those who say that it is also constitutional. I think Mr. De Morgan hit the point very exactly. So far as I understood his argument, it was that cancer is not a blood-disease. To use the expression "a blood-disease" is to mislead us. I was glad to hear a remark which came from Mr. Simon, to the effect that those who, in former years, perhaps somewhat erroneously, used this expression, had done so without any intention of excluding the solid elements of the body. No doubt it is, so far as it is a constitutional disease, a disease of the solid tissues, and not of the blood. I think the sooner we get rid of the expression "blood-disease", and use the term "constitutional" or "disease of tissues", the sooner we shall get to clear ideas on the subject. Then we come to the very difficult subject which Mr. Simon has just been arguing. Here, again, I thank him most sincerely for protesting against the right of modern histologists—to whom we owe so much (and no one is more thankful to them than I am for their work in a special branch of the subject)—to give a new meaning to the term cancer. I think it is far better to keep our old words in their old uses. Although histologists may classify the various diseases which make up morbid growths, and cancers more minutely, according to their histological structure, still I think it is far better that they should not take either the terms carcinoma or cancer, and give to them restrictive and completely new meanings. I know there are difficulties, and I was glad to see that it was a difficulty also to Mr. De Morgan, who, I believe, adopts the new classification, to continue the use of the term always accurately. He used it several times in the modern sense, and several times, I think, in the old and much more comprehensive sense. It would be in the comprehensive sense that I should like to use it, as denoting all forms which can be classed as malignant diseases. To return, then, to Mr. Simon's question as to whether to say cancer is specific or not, I confess I do not attach so much importance to it as Mr. Simon appeared to do, because, after all, specificity is a relation. If I say a thing is specific, I mean that it is specific in relation to something else; and I have to define what each of these things is from what, I say, it specifically differs. There is no doubt cancer has peculiarities, otherwise we should not need to have any name for it; and there is no doubt, again, that almost all the morbid processes in the human body have also relationships, and what we have to define is rather the degree of relationship which they have to each other, than to contend that this and that are so absolutely distinct, that we can say that this is one species, and that another species. We must define species before, as it seems to me, we shall gain any practical good by arguing as to whether cancer is a separate species or not. A separate species from what? Because it enters, I think, by degrees, which it is very difficult to distinguish, into relationships with several other diseases, which have been already alluded to this evening. Illustrating its relationships, I would mention one which, I think, has escaped Mr. De Morgan's attention, and that is, the occasional transmutation in hereditary transmission; and this is a line of argument which, I think, may be applied in elucidating many other diseases besides cancer. I believe we might prove conclusively the essential relationship of different disorders or diseases, which have different names, by observing whether any hereditary transmission could get them transmuted. Say you get rheumatic gout transmuted into gout, or, in the transmission of gout, you get rheumatic gout as the product; then I hold that those two things stand in very close relationship to each other. Now, take the case of the transmission of what I would ask permission to call the cancerous tendency or proclivity which, I suppose, consists in some kind of morbid mobility of slow growth—a tendency to go into insurrection amongst the cells—an unwillingness to submit to continuous government, exhibiting something of the difference which (if I may use such an illustration without offence), exists among the different races of mankind. Amongst the stupid Teutonic race, there is a willingness to submit, even to a certain amount of oppression, rather than rebel; while, amongst the more vivacious and more freedom-loving Celts, there is a proneness to rebel, an unwillingness to submit continuously for a long period to any systematic government. So I think we have, in different individuals, some sort of different mobility of tissue. In one person, the tissues are held together by a somewhat slighter tie than they are in others, and, under certain kinds of irritation, they rebel, and the cells set up on their own account, and establish a little *imperium in imperio*, and to that rebellion of the cells we give the name of cancer. Then I wish to ask, as a matter of purely clinical fact, whether we do not sometimes observe, in the hereditary transmission of the cancerous tendency, transmutation; and whether we do not, in the fact of transmutation, get a proof of relationship? I allude especially to the distinction between innocent tumours and malignant tumours. I rather put the question to those who have more experience on the point than myself, whether it is not tolerably common to notice this. I believe the most definite instance of it is in respect of common warts. It has chanced that I have had some remarkable instances myself. I believe that patients who are liable to common warts, in immense and unusual numbers, will generally be found to have relatives who are suffering from cancer. I believe this is an observation which came first from that home of observation in reference to cancer—the Middlesex Hospital. Mr. De Morgan will correct me if I am wrong. I think it has been noticed there—and I can affirm it—that in several remarkable cases, in which patients were covered from head to foot with warts, there were near blood-relations who had been suffering from cancer; and there has certainly been observed, in hereditary transmission, the same proof of relationship between the various forms of innocent growths and those strictly malignant. Then, as regards hereditary transmission, there is another interesting series of facts which should be carefully collected—that is, as to what becomes of the offspring, of children born from parents who were cancerous at the period of birth or conception of the child. I should think that we might easily collect a considerable number of instances of that kind, and I feel sure we may get some interesting facts from them. It has happened to me to investigate these facts, in several cases in which very young children became the subjects of cancer. I recollect, especially, one young lad, remarkably healthy and well-grown, who, at the age of eighteen months, became the subject of cancer of the testis. In his case, there was a most definite history of cancer in near relatives; and in several other instances I have seen the same thing. It may be observed, also, that the kind of cancer is often changed; that the mother, who has suffered from cancer of the breast, has a child who, perhaps, suffers from one of the various forms of cancerous action which attack different tissues of the eye. In passing, let me remark, that I suppose we have come pretty much to the conclusion, that the differences in the cancers and malignant tumours depend on the tissue which the cancerous action commences in. The cancerous action, if we may be permitted to use such a term, is pretty much one and the same, and the differences depend upon the cell-tissue in which that action begins. I think we very often see a transmutation in hereditary transmission—that which was scirrhus in the mother becomes, perhaps, a soft cancer in the child. I think these are most of the observations I wish to make, but I cannot help again thanking Mr. De Morgan for his very able paper, and for directing the attention of the profession to a most important subject. I headed a short article that I wrote, ten years ago, in the *London Hospital Reports*, "The Successful Cultivation of Cancer," and I resolved on giving precise directions to those who wished to let their cases pass into cancer, how they should do it; how they should neglect the little ulcer, and let the patient go on, saying that he had nothing but a little wart on the lip; how they should let him go on smoking, and so cultivate cancer; or tell a man, with a little nodule on his eyelid, to put a little cream on, and that it was of no consequence, and that he might pick it from time to time, so that, trusting to the local origin of cancer, he might breed for himself some of the most malignant forms of that disease. My reason for adopting that title, and for using the style I did, was that I desired to direct the attention of students, and of the profession, to the practical importance of acknowledging the local origin of a great number of forms of cancer, and the importance of very early treatment, if we wished to secure our patients against becoming constitutionally affected.

The debate was then adjourned.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, MARCH 4TH, 1874.

EDWARD J. TILT, M.D., President, in the Chair.

THE PROPOSED ADMISSION OF WOMEN TO THE SOCIETY.

A SPECIAL meeting of the Obstetrical Society was held on Wednesday evening to take into consideration the question of the admission of women as Fellows of the Society.

The PRESIDENT said: Gentlemen, this is a special meeting called to consider the subject respecting which you have been summoned. Many of those who, like myself, have signed the nomination paper of Mrs. Garrett Anderson, had no wish that women should form a part of our Society; but they felt that the question must inevitably come before us sooner or later, and rather sooner than later, and that the question had better be settled in the ordinary way by "Yes" or "No" at one of our ordinary meetings. When Mrs. Anderson came to me and presented a paper signed by two good names, I took care to ascertain whether she was prepared for the disagreeable alternative of being black-balled; and I took upon myself to act as a prophet, and to tell her that such would inevitably be the case. After more mature consideration, I felt that the question was one of too great importance to be decided by an exceptional case; that it was a matter of principle, and ought to be decided upon its own merits, independently of any feeling of respect that we might have for a lady who, by English pluck and perseverance, had actually fought her way not only up to, but into, the *Register*. I therefore withheld the nomination paper, although it had been signed by many esteemed names, and I submitted the question to a special Council. The special Council also felt the importance of the subject, and thought it better to let the Fellows themselves consider the question, speak upon it, and decide it. That being so, the Council issued the circular which you have all received, and now you are called upon to interpret the bye-laws which were framed some thirteen or fourteen years ago. In order that you may know what you are called upon to decide, it will be as well that I read to you the paragraphs in the first and second chapters that bear on the subject you have to discuss. In the third section of the first chapter it is said, "All medical practitioners registered, or, if practising abroad, possessing a British qualification, shall be eligible for election as Fellows of the Society." Then at chap. 2, the first paragraph runs: "Candidates shall be balloted for at the meeting foll wing that on which the certificate has been read and suspended. No gentleman shall be declared elected unless two-thirds of the votes be in his favour, fifteen Fellows at least being present." Then, again, the last paragraph of the chapter says: "If any person shall fail to comply with the regulations for the admission of Fellows within three months from the time of his election, his election shall be void." Now, gentlemen, on the one hand it may be said that if women become medical practitioners, and get on the *Register*, they are entitled to be elected fellows of the Society; and it might be urged in favour of that being done, that the word "candidate" is a word of indefinite meaning, and may refer to one or both sexes, and that the same thing may be said of the word "person". On the other hand, the word "gentleman" coming after "candidate" in the second paragraph of chap. 2, may fairly be taken as an interpretation of what our laws mean. If "candidate" means "gentleman" at paragraph 2, chap. 2, so the same meaning must attach to the other paragraphs. I hope, gentlemen, that in the numerous comments that will be made upon our bye-laws you will bear in mind that when they were framed there was no lady on the *Register*, and it was not supposed that ladies would get on the *Register*. The framers of our laws only contemplated gentlemen candidates. That is what I ask you to bear in mind. Before opening the discussion, it is my duty to give you, as far as I can, the opinion of our esteemed country Fellows upon this important question. Many of them were anxious to be here, but they have been detained by avocations of a pressing nature that you can easily understand. I am the more desirous to let you know what their feeling is, because I do not consider myself entitled to record their opinions as votes. There might be technical objections to taking their opinions as proxies in the voting. You yourselves will, I am confident, be able to decide the question; but it will be interesting to you to know that the circular that you have received has been answered by ten medical practitioners, eight of whom oppose the admission of women to our Society. [The PRESIDENT was about to read the names of the country practitioners from whom letters had been received, when an objection to such a course was raised by one or two Fellows. Ultimately, however, the names were read, and the President continued.] There is one point that I wish you to bear in mind. This is a numerous meeting, and the subject will interest many of you. I shall feel it my duty to limit each speaker to ten minutes; and I must remind you that it is not customary for a speaker to speak twice on the same subject. I understand that Dr. Murray has a motion to make on the subject, and, if he will now make it, we shall be in a position to begin the discussion.

Dr. MURRAY: I have but very few words to offer to the Society. The simple question for us to settle is, whether our laws admit of the nomination of women. That is the matter at issue—whether women should be tolerated here. I must say that I am individually very much against the idea of admitting lady practitioners.

The PRESIDENT: Perhaps Dr. Murray will move his resolution first.

Dr. MURRAY: I will do so if you will allow me to make a very few remarks. Let me refer to the paragraph which you, sir, have read, in which the word "gentleman" occurs. It reads, "No gentleman shall be declared elected unless two-thirds of the votes be in *his* favour"; and in a succeeding paragraph, chap. 5, we find, "*his* name shall be suspended in the meeting room." I think that clearly shows that there was no contemplation of the admission of any woman into our ranks. If section 3, chap. 1, ever admitted of any doubt, I think it is removed by the subsequent framing of your laws. I beg now to move—"That the laws of this Society do not admit of the nomination of female practitioners to the Fellowship of the Society."

Dr. SAVAGE: I second the motion. It seems to me that Dr. Murray has clearly shown that, according to our laws, ladies cannot be admitted. I therefore need say no more on the subject.

Dr. STEELE (Liverpool): It seems to me that the Council have placed the Society in a somewhat difficult position. We are asked to-night to say what is the proper interpretation of our laws. I always thought that when a Society was founded, and made its own laws, so far as the interpretation was concerned its responsibility ceased; that it remained for the Executive, the President, and Council, to carry out those laws, and not to come back to the Society, and say, "Gentlemen, what is the interpretation of your laws?" But the question has been brought before us, and, as it is a very important question, we must deal with it fairly and thoroughly. Now, although I entirely agree with Dr. Murray as to the admission of women, I cannot agree with his interpretation of the law. It appears to me to be perfectly beyond controversy that if your statutes say that every medical practitioner shall be eligible as a Fellow of the Society, and if Mrs. Garrett-Anderson is a medical practitioner, she is clearly eligible for admission here. As to the gender and the pronouns that follow, is it to be supposed that such a matter as that can overrule the principle that you will admit for nomination every qualified practitioner? But the fact of nomination is one thing, and the fact of admission is another. If Mrs. Garrett-Anderson, or Mrs. Anybody-else, be nominated, she will have to run the gauntlet of the ballot, and she will not be elected a Fellow of the Society unless she have the required majority of votes. We cannot altogether evade the general principle. That is my view. To me the law is perfectly clear, and I submit that you cannot refuse to receive the nomination of any qualified practitioner. With regard to the policy of admitting ladies as members of this Society, that, of course, is a different question. On that point I have endeavoured to make myself acquainted, as far as I could, with the feeling of my professional brethren in the provinces, and it seems to me to amount to this—that it would be undesirable that ladies should become members of the medical profession in any numbers. We think it extremely unlikely that that will ever be the case; and we think that the best mode of discouraging it will be not to offer any opposition to individual cases; but if any lady, properly qualified, come here properly nominated, let her run the gauntlet of the ballot. Individually, I should be very much disposed to vote for the admission of a lady, especially of Mrs. Garrett-Anderson, because we know that she has exceptional qualifications for carrying on the profession. When we meet with a Joan of Arc, or a Maid of Saragossa, or a Grace Darling, we recognise their courage and their ability; but in doing that, we do not say that we wish to throw open the army and navy to women. So when an extraordinary case comes before us, an exceptional case which proves the rule that the female sex are not adapted for the profession, I do not know whether we should not be adopting a wise policy in admitting the candidate to our Society. I am afraid that the Society will subject itself to some severe criticisms if we decide that we cannot allow a female to be nominated as a member, when our laws tell us that every qualified practitioner is eligible.

The PRESIDENT: Allow me to remind you that the very nomination concedes the principle. That is why I withheld the paper, because, on studying the bye-laws, I had doubts whether we had a right to nominate. If the meeting decide that the bye-laws mean women as well as men, then only will it be right to nominate, then only will Mrs. Anderson's nomination be worth anything more than the paper on which it is written. I hope it will be borne in mind that the nomination concedes the principle. You are asked by Dr. Steele whether the bye-laws justify that.

Dr. CLEVELAND: The question is simply as to the interpretation of bye-laws. It seems to me as clear as possible that when the bye-law was formed, it was never contemplated to admit women into the Society. If such had been the intention, it would have been expressed very differently. We must now, after the lapse of fourteen years, take the spirit as well as the letter of the bye-laws; and the taking the spirit of it, it seems to me as clear as possible that it was never contemplated to admit women. The whole question of nomination hangs upon this. It is surprising to me how the bye-law can be interpreted in any other way than that which I have mentioned.

Dr. WYNN WILLIAMS: I go further than that, and I say that the framers of the law could not have intended that women should be admitted, for there were no women on the *Register*, neither were there any means by which they could get on the *Register*. Mrs. Anderson has managed—I admire her spirit—to get on the *Register;* but no other woman can be placed on the *Register* until the medical laws are altered. It is necessary that they should attend lectures in the usual way. Mrs. Anderson did not attend lectures; but somehow or other she was smuggled through Apothecaries' Hall. That cannot happen again; and until the laws of medical education are altered, women cannot be put upon the *Register*. There is but one woman on now, and she was not on then.

Dr. GRAILY HEWITT: As one of the original secretaries of this Society who assisted in the construction of these laws in the first instance, it may perhaps be as well that I should say a few words upon the subject. It is certainly a fact that those who framed the laws of the Society never for an instant anticipated the admission of women into the Society. I do not think that the matter was even the subject of deliberation, or that it was even mentioned on any one occasion in the deliberations which took place in respect to the formation of the laws. I agree with what Dr. Cleveland has said, that we must look not simply to the wording, but to the spirit of the laws. I say nothing as to the personal merits of the lady who has been the means of originating this discussion; but I do say that when the Obstetrical Society was formed, I do not think it was ever intended to admit ladies into the Society.

Dr. SQUIRE: I understood that we were invited to consider not what the law literally meant, but what was the intention of the founders of the Society in drawing up this law. I am glad to hear from the gentleman who was secretary at that time, such an authoritative statement of what the intention was when the laws were formed. As to the literal wording of the law, it seems to me that a slight error has been made in considering that the word used in the first sentence is quite as general as "candidate". "Candidate", we know, can be masculine or feminine. The only word I know that is like it in the English language is "probationer". "Probationer" certainly is meant for males only; it is used in reference to monastic orders, and "novitiate" or "novice" is used for the other sex. If we are to have female medical practitioners, some other word had better be invented by the time that state of things arrives. I maintain that the word "candidate", by a forced departure from its usual meaning, does not, even in its literal sense, mean that women are to be admitted as members of this Society.

Dr. H. SMITH: There are two points before us—the letter and the spirit of the law. With regard to the letter, we have to consider whether the regulation allows simple nomination. With regard to the spirit, the question is as to the admission of women altogether. Now, though I am not in favour of the admission of women to the Society, there seems not to be the least reason why there should not be a nomination. It is all very well to say that the founders did not contemplate the admission of women, The thing was not contemplated by the profession generally. The word "candidate" or "practitioner" would admit both sexes; and I do not think that the use of the word "gentleman" or "person", or "his", will in the least militate against that. We know how the word is used in all documents. Even in one's early grammar, we find that the male gender is more worthy than the feminine, and the feminine than the neuter. For the sake of convenience, one pronoun is used; and in all documents the masculine word would be used in reference to what has gone before. Therefore it seems to me that there is not the least reason why a nomination should not be allowed. With regard to the principle, it is true there is only one person yet able to be admitted; but we know not what steps may be taken within a year or two. Therefore I think we ought to embrace the present opportunity to discuss the whole matter. As to the admission of women, the difficulty would be this. It is quite a different thing from the women meeting by themselves in an Obstetrical Society of their own. In a meeting like this, we can imagine subjects being brought forward for discussion when, though the women might not feel the objection, many of the members would not like to be present. As to the interpretation of the law, I do not see any reason why, simply because the male pronoun is used, Mrs. Garrett-Anderson should not be nominated. At the same time, I think the spirit of the Society is against the admission of women.

Mr. GODSON: The last speaker has said that the male is more worthy than the female, and the female than the neuter. I should like to know whether he refers to the English, Latin, or French Grammar. I remember it in my Latin Grammar, but not in my English.

Mr. J. SCOTT: I think, in all legal documents, where it is intended to specify both sexes, the words "he or she", or "him or her", are invariably used, so that no mistake can possibly arise. Looking at our rules, they could not have anticipated a state of things which did not exist. At that time, there were no female doctors to legislate for. The rules could not be applied by any strained interpretation to a state of things which did not then exist. Such a thing was never then contemplated.

Dr. AVELING: I think, if the Fellows desire that women should enter our Society, the bye-laws may be interpreted so as to allow it. The British Medical Association framed laws long before we did, and they found no difficulty in interpreting their laws so as to admit Mrs. Garrett-Anderson as one of their members, on the nomination of some of the best members of our profession. I am not standing up to plead the cause of women as obstetricians, because I think that, if there be one occupation for which they are less fitted than another, it is that of attending the emergencies of obstetric practice. At the same time, having a personal knowledge of Mrs. Garrett-Anderson, I was induced to sign her nomination paper, knowing that she is the only medical woman in England, and that it is probable she will remain so, and knowing also that she would not obtrude herself upon the Society when papers were likely to be read, during the reading of which her absence would, perhaps, be an advantage. Under these feelings, I was led to sign her nomination paper. My friend Dr. Murray takes a broader view of the question, and, in a very determined manner, puts it upon the admission of women into the Society. I think that question might be put off a short time, and, until medical women actually exist, we might have dealt with the one. As the broad principle is raised, I shall certainly vote against women being admitted to the Society; but, if it had been simply the question of the admission of Mrs. Garrett-Anderson, I should have voted in its favour.

Dr. Routh: As I read the circular put into our hands, the true question to be submitted to the special meeting is, what shall be "the proper interpretation of the actual bye-laws and regulations"? But, it is added, "or so to alter the bye-laws and regulations as to express clearly the intention of the Society as to the admission of women". I presume, if anybody in this room be disposed to move that these bye-laws should be so far modified as to admit women, he could do so.

The President: Yes, of course.

Dr. Routh: According to the statement put forward by Dr. Murray, it would imply that we are come here merely to put an interpretation upon the laws.

The President: No, it does not. If I correctly understood Dr. Murray, he did not mean that at all. He proposed a motion to the effect that our bye-laws do not admit the nomination of female practitioners. It is open for you, or any other gentleman, to propose that they do, and then the sense of the meeting will be taken. If anybody like to move an amendment that women are admissible, let it be done.

Dr. Routh: I understood that resolution as a definite statement that our laws mean a certain thing. If it were merely a question on that point, I should be disposed to doubt it, and to put it to any members of the Society. Supposing anyone were to make a will, and in that will were to use the term "to his heirs, executors, administrators", etc., and there happened to be no males, would it not go to the females? Indubitably it would. Therefore, I think Dr. Heywood Smith is quite right as to the meaning of the word "his", that it indubitably includes the female. I, for one, have not that fear which seems to have pervaded a part or the whole of the profession, that women, if they are admitted, will supersede us. There seems to be a fear of women being brought in. Is it so, or is it not? [*No, no.*] I noticed that Dr. Aveling thought women were quite incompetent, from their physical position, to perform difficult obstetric operations; and I see, when I look over to France, that, out of the large array of women who can be there brought forward, there are just two who are able to compete with men. As far as position goes, I must confess I have not the slightest fear on the point. I do not think the women of England themselves—that is my experience of them—will go to female practitioners when they can get male practitioners; and therefore, as far as that question is concerned, I really have not the slightest fear whatsoever as to the position which they may take. They will altogether occupy a secondary position. I do not know whether it is wise to bring forward this resolution, to the effect that women be admitted. I for one would not do it simply because I know the feeling of the members of the profession to be against it. I signed that paper of Mrs. Garrett-Anderson's because I believe she is a talented woman, and is perfectly as conversant as many of us with the branches of her profession. Although I could not refuse to sign the paper, I was perfectly certain that, if her name were proposed in the Society, she would be black-balled, and, therefore, I should be very sorry to make any modification in this law. The only point I wished to raise was this. It appeared to me that we were in error in giving too exact and definite an interpretation to these bye-laws, because circumstances might alter at some future time. Remember, we ourselves stand up for the education of women. We want to make a class of educated women, whom, perhaps, at a subsequent time, we might be willing to admit as Associates.

Dr. Galton: There is but one way to bring this matter fairly and decisively to an issue, and that is by some member of this Society proposing that the bye-laws be so altered as to admit women. I myself will propose that the bye-laws be so altered as to permit the admission of women into this Society, and I do so on this ground. I think we have hitherto been discussing the letter, and not the spirit of this Society. We have been discussing the interpretation of bye-laws, and not really the very *raison d'être* of the Society, which is the advancement of the art of obstetric medicine. If that art of obstetric medicine can be shown to be possibly advanced by the admission of women within these walls, it surely is our duty, acting in the interests of this Society, not to exclude them by any decisive vote on this occasion. That it may so benefit the Society, and further the immediate end of this Society, I think, has already been shown by the existence of the French ladies whom Dr. Routh has instanced. That it might not have done so when these bye-laws were framed, is true, because no women were then registered medical practitioners. Why do we confine the admission of Fellows to the list of registered medical practitioners? It is because, as I imagine, we want some guarantee that the observations which are brought before this Society by these Fellows shall have been founded on some experience, and some education specially in disease. One lady has already become a registered medical practitioner, and the question hinges upon her admission. I think that this question is really a very great one, and it is one which we ought not to decide hastily. The progress already made, for some years, in these matters has been steady and uniform. I do not mean with reference to the admission of women into the profession. I hold the opinion that women are quite unfit for the profession; but, having women already in the profession, and the probability being that we shall have more, should we not be excluding one great means of advancement of the obstetric art by the exclusion of those who have the opportunity, the ability, and the power to make observations which might redound to the credit of our Society? If we, for instance, had an English Madame Boivin, how could we possibly exclude her from this Society? Would it not be a loss and a reproach to the Society to exclude such a woman? By voting in favour of this amendment we do not express any opinion upon the desirability of women engaging, as a general rule, in the practice of the obstetric art. We are dealing with those who are already medical practitioners; they must be in a position, not only to make observations, but, being in practice, they will have the power, possibly, of bringing before the Society some cases of interest which may occur to them, and not to other members of the Society, and we shall be shutting out from ourselves a source of great benefit and advantage to the Society. I therefore propose that the bye-laws be so altered as to admit of the admission of women.

The President: Or that the bye-laws be so understood as to admit—that would be the same thing.

Dr. Galton: I think the interpretation of the bye-law refers to the subsequent expression of "gentlemen", and "him", and "his", and in order to avoid all misconception it would be better to alter the law.

A Member: I think there is a motion before the meeting at present. Are you going to take the sense of the meeting on that motion or on the amendment?

The President: This is the amendment. I was going to ask if anybody seconds it.

Dr. Wynn Williams: This is hardly an amendment on the previous motion: which is, whether women are to be admitted.

The President: If that be the case, I should suggest to Dr. Galton to make his proposition an amendment to the motion moved and seconded.

Dr. Galton: I proposed that to be an amendment.

Dr. Wynn Williams: It is not an amendment; it has nothing to do with the previous question. The previous question is to decide, as I read it, whether they are admitted on the present laws, not to alter them.

The President: This is the motion before the meeting—"That the bye-laws of the Society do not admit of the nomination of female practitioners to the Fellowship of the Society."

Dr. Wynn Williams: Exactly so.

The President: Excuse me, one moment. If Dr. Galton will move as an amendment that the bye-laws of the Society admit the nomination of female practitioners, it will express his views and be perfectly in order.

Dr. Steele: I ask for information. Am I to understand, from what is going on this evening, that the interpretation of the laws of this Society is to be turned first one way and then another, according to the resolutions and amendments of meetings? Surely, the bye-laws are before us.

The President: No; we have the letter before us.

Dr. Steele: It seems to me a very dangerous precedent.

The President: If it be a novel thing for Dr. Steele to know that the letter of a law may not explain itself, you have only to appeal to our courts of law, and you have only to appeal to a far nobler code of laws, the Bible, which is printed in exactly the same way, and interpreted in different senses by I do not know how many people. It is necessary to interpret our bye-laws: it would be easily done by "Yes" or "No" to the amendment that is now being moved, and to the motion that has already been moved.

Dr. Murray: As mover of the resolution, may I make one observation? It is simply that I have brought forward a resolution to the effect that we consider that the bye-laws which we have been called upon to think over do not admit of the admission of women. I think if you will put this to the vote and the Fellows present do not carry it, that it will mean the reverse.

The President: Yes, it would.

Dr. Murray: I do not think any amendment is necessary. The question is simply as to our interpretation of this bye-law, and if we do not agree as to its meaning that women are not eligible for the fellowship of this Society, then it is for us to frame another law in accordance with that determination. The case before us is simply to be taken by a vote.

The President: Whenever a motion is moved, I believe it is optional for anybody to move an amendment, and the amendment is taken first.

Dr. Squire: That is not an amendment. If the motion be lost, then comes the time for Dr. Galton's amendment.

The President: You know the motion of Dr. Murray. It was proposed, and I must consider it an amendment, that the bye-laws be understood to admit the admission of women into the Obstetric Society.

Dr. Savage: I really cannot understand the arguments that have been adduced; they are perfectly unintelligible. We are told by the gentleman who proposes the amendment, that there would be a great loss of obstetric knowledge if women are excluded: and then we are told by another gentlemen that he would not trust them with a severe case of midwifery on any consideration. What can we hope with regard to the advance of obstetric knowledge by the accession of ladies?

The President: You have spoken on the subject.

Dr. Savage: Would Dr. Galton explain the amendment, for I do not understand it?

Dr. Wynn Williams: It should come on after the motion is decided, not as an amendment, but as a second question.

Dr. Charles Taylor: May I ask if the amendment has been seconded?

The President: No; you thoroughly understand the motion of Dr. Murray—it is simply this: that our bye-laws do not allow us to admit women. Now, the gentleman who has placed this paper in my hands moves, as an amendment, that our bye-laws do not admit women.

Dr. Galton: No.

The President: That is the pith of what you say. Has anybody seconded it?

Dr. Squire: You cannot entertain it until it is seconded.

The President: I have not yet been allowed to seek for a seconder. I ask if any member is willing to second the proposition of Dr. Galton?

Mr. Kisch: I beg to second the amendment before the meeting. I am aware that this amendment must be lost in the present temper of the Society by a very large majority; but I am sure, when the members come to consider the matter some years hence, when the existence of female practitioners will have been confirmed, it will be considered a discredit that the Society should have admitted that subjects are discussed here in such a manner as that they could not be discussed before other persons. [*Question.*] As to the spirit of the bye-laws, it is clear that, as the existence of female practitioners was not contemplated when the Society was founded, it is merely a verbal quibble and nothing more, to say that, because the word "his" occurs, the spirit of the Society is against the admission of women. It is quite clear the thing was never brought before the Society at all.

Dr. H. Smith: I wish to explain, with reference to the immense majority expected to overwhelm this amendment, that the question of the advisability of admitting women as Fellows is not, in the least, before the Society; it is simply as to the interpretations of the bye-laws, whether it is possible that the bye-laws could be so interpreted as to admit them.

Dr. Charles Taylor: As one of the original members of the Society, many years since, I think it is a very fortunate circumstance that Dr. Galton has given us an opportunity of having an amendment put to that motion. From what he has said, I gather that, when it is put to the vote, he will vote against his own amendment, as he speaks strongly against the admission of lady-practitioners as Fellows of this Society. It appears to me, that those who have spoken are pretty well unanimous in their opinion with regard to this, and I think the original members certainly are also unanimous. When the Society was established, we did not anticipate the pleasure of having ladies coming amongst us, or the unpleasantness of their presence. I think we all agree to that, and the gentleman is a very bold man who comes forward with the opinions that he has enunciated, almost saying that he decidedly is of a contrary opinion. I think it is a great thing for this Society that this matter should be brought forward, and finally settled. We, I believe, are almost unanimously of opinion that our bye-laws do not admit, and were never intended to admit, lady-fellows of this Society. Let it be once settled, and we shall never have them again offering themselves as Fellows, or even being nominated by those gentlemen who are so polite as to have the ladies' cause at heart. I think there is very little doubt of that. This amendment is sure to be lost, and the original motion is sure to be carried. Then, it appears to me, if there should be any further doubt about it, the best thing will be so to frame the laws, or alter them, as to show that the admission of ladies is quite out of the question. I have mentioned the matter to several friends, Fellows of this Society, and to other medical men, and the universal opinion is, that the Society would be very greatly damaged if we admitted lady-fellows. I believe a large number of men, pleased as we are to meet the ladies upon other occasions, would be anything but pleased to meet them here, and that they would decidedly withdraw from the Society.

Dr. Wiltshire: Dr. Taylor has hit the pith of the matter. We are not to consider Mrs. Garrett-Anderson's interests, excellent and clever woman though she may be, but the interests of this Society; and I may venture to say, in the interests of this Society, that her election would be ruinous. I do not hesitate to say, from what I have heard from many Fellows, that there would be a very large secession of members. That would be very damaging to obstetrics; and, as we neither want to damage obstetrics nor this Society, I think the best thing we can do will be so to amend our laws, if they require amendment, or so to interpret them, that the possibility of ladies being nominated as Fellows of this Society shall not occur again. The introduction of one lady—and it is said that there is only one—might be a questionable benefit to herself, but it would be an unquestionable damage to the Society; and if we are interested in the Society, and in obstetrics, the best thing we can do is to exclude women altogether.

The amendment was put and lost, only four hands being held up in support of it.

The original motion was then carried, with but one dissentient.

The President: You understand how the question has been decided, and I congratulate you upon the business having been so quietly and so admirably disposed of.

Dr. Wiltshire said he was afraid that it would be open to any member to reopen the question at a future meeting.

The President said it was, at any rate, settled for the present. No alteration in the laws could be made without a special meeting.

The proceedings then terminated.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Wednesday, January 7, 1874.

P. D. Handyside, M.D., Retiring President, and afterward Rutherford Haldane, M.D., President Elect, in the Chair.

Instruments.—1. Dr. G. W. Balfour exhibited a cast of the hand of a patient suffering from congenital disease of the heart with cyanosis. It illustrated beautifully bulbousness of the fingerpoints, and aduncation of the nails. Constriction of the pulmonary artery was the most important element in the complicated pulmonary lesion.

2. Dr. Matthews Duncan showed the galvanic cautery of Professor Spiegelberg of Breslau. He regarded it as a great improvement on the instrument of Middeldorpf, still he believed it is capable of still further improvement. He remarked on the curious phase in medical history of the change of ideas regarding the cautery, which used to be thought a horrible and painful method. Dr. Duncan had used this instrument in two cases of extensive malignant disease of the vulva, which could not be excised with the knife, and found it most successful. Not a drop of blood was lost, and the wound left was not a painful one.

Pathological Specimens.—Dr. Heron Watson showed an interesting series of pathological specimens. 1. A spleen weighing nearly twelve pounds, which he had removed by gastrotomy. 2. The base of the lower jaw and the soft parts forming the floor of the mouth, with the muscles of the base and body of the tongue, which he had excised for epithelioma. 3. A similar case, but rather smaller in extent, which he had removed also for epithelioma, commencing in the frænum linguæ. 4. An osteoma of the angle of the lower jaw, which he had removed subperiosteally without opening into the cavity of the mouth. A remarkable reproduction of bone had taken place in three weeks. 5. A tumour which he had recently removed from the pterygo-maxillary fossa. It projected into the pharyngeal cavity, and pushed the parotid gland outward beyond the angle of the jaw. The operation was performed in the same manner as in the case operated on some years ago by him, by making an incision from the angle of the mouth to the parotid, cutting the jaw near the angle, turning up the jaw, and then removing the tumour by dissection. 6. A penis removed for epithelioma, commencing in the frænum. This was interesting with regard to the question of phimosis being a predisposing cause of such tumours, as in this case there was no phimosis till after the disease commenced. 7 and 8. Two calculi removed by lithotomy from boys aged 8 and 10 respectively.

President's Valedictory Address.—Dr. Handyside then delivered an interesting valedictory address, in which he took occasion of the fact that the Jubilee Year of the Society occurred during his presidency, to enter into the early history of the Society, and recall the various services rendered by its member to science, by the production of important papers on medical and scientific subjects. He also traced the chequered career of the Society as to its habitat, no fewer than eighteen separate places of meeting having been used in the first forty years.

Dr. HALDANE having taken the chair, and returned thanks for his election, Dr. Matthews DUNCAN proposed, and Professor SPENCE seconded, a vote of thanks to Dr. Handyside, and a request that his address should be printed at the expense of the Society.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IRELAND.

WEDNESDAY, JANUARY 14, 1874.

JAMES F. DUNCAN, M.D., President, in the Chair.

Climate and Vital Statistics of Tasmania.—Dr. J. W. MOORE read a paper, which had been suggested by communications to the Royal Society of Tasmania in 1872, by Mr. Francis Abbott and Dr. E. Swarbreck Hall. Having considered in general terms two facts of paramount importance in the study of the vital statistics of a given place or country, namely—1. The birth-rate; 2. The death-rate—the author described the climate of Tasmania, with the physical features of the island. The average mean annual temperature at Hobart Town, the capital (latitude, 43 deg. S.), was 54.70 deg., 5 deg. higher than that of Dublin. The mean of the warmest month (January) was 62.7 deg., that of the coldest month (July) 46.1 deg., or nearly 7 deg. higher than our mean temperature in January. Frost and snow were rare in the lowlands, and the summers were in general mild, the heat being tempered by the prevailing south-easterly, or polar, winds of that season. In winter (May to August), on the other hand, the cold was mitigated by the prevalence of a north-easterly or equatorial current. The air was for the most part clear and dry, and there was an absence of fogs. The average annual rainfall at Hobart Town was 22.71 inches, and this was distributed over a hundred and forty days, only twenty-five of which fell within the summer months, January, February, and March. In the western districts of the island, the rainfall was, however, much greater. In Tasmania, then, all the conditions of climate were favourable to life; a mean annual range of only 17 deg. Fahr., an open winter, a temperate summer, ozone-laden sea-breezes at all seasons of the year, a moderate and evenly distributed rainfall, and an absence of damp and fog in winter. The population had increased from 81,492 in 1857, to 99,328 in 1870, and to 101,869 on June 30, 1871 (estimated). Of those persons living in 1870, 59,119, or nearly two-thirds, had been born in Tasmania; 6,600 were aged sixty or upwards, and forty-six had passed the age of ninety. The birth-rate had temporarily declined from forty per 1,000 in 1857, to thirty per 1,000 in 1870; the cause being emigration of adult males to the gold-diggings. The average annual number of births in sixteen years was 3,063, in the ratio of 105.5 boys to 100 girls. The death-rate varied from 17.5 per 1,000 (in 1857) to 13 per 1,000 (in 1865), the average of the years 1869, 1870, and 1871, having been 13½ per 1,000 annually. In all classes of the community the death-rate was low. Among children under five years of age, it was 29 per 100; whereas, in Dublin, in 1869, the healthiest year since 1864, the death-rate in this class was 68.2 per 1,000, or more than double that in Tasmania. The average death-rate of children under one year had been 100.4 per 1,000 in Tasmania, as compared with 165.5 in England. The zymotic death-rate, in four years ending 1871, averaged less than one-sixth of the general death-rate. In Hobart Town, in 1870, fifty-two out of 500 deaths were attributed to zymotic diseases. This gave a percentage of only 10.4. Small-pox was as yet unknown in Tasmania, a circumstance which had unhappily led to great neglect of vaccination. Measles caused two, and scarlatina ten, deaths in four years; but epidemics of both diseases had been experienced. Diphtheria had been endemic since 1859, Croup caused sixty-nine deaths. Whooping-cough was epidemic in 1868 and 1869 (119 deaths). Typhus, infantile and typhoid fevers caused ninety-nine; dysentery, seventy-two; diarrhœa, two hundred and fifty-one deaths in the four years. Asiatic cholera was unknown in the country. A remarkable immunity from scrofula and phthisis was enjoyed; and bronchitis caused but two hundred and fourteen deaths in the four years. The number of deaths from phthisis were only one-third of those of the disease in England. Lastly, the longevity of the inhabitants was remarkable. In conclusion, the points which principally established the salubrity of this southern climate were summed up as follows:—1. The very low general death-rate, which is probably without a parallel; 2. The low death-rate of children; and 3, the tendency to longevity—both accounte for, in a great measure, by the mild winters and the temperate summers; 4. The comparatively low zymotic death-rate; 5. The lessened mortality from bronchitis, pneumonia, and other pulmonary affections—due almost exclusively to the open winter season.—The PRESIDENT observed that possible fallacies might creep into conclusions based on a comparison of the vital statistics of an old and a new country.—Dr. GRIMSHAW agreed with the President as to the fallacious nature of a comparison between a new and thinly populated country like Tasmania, with its open towns, and England or Ireland, with their dense city-populations. He would ask, what was the peracreage population of Hobart Town, as density of population was the most important disturbing cause of the death-rate.—Dr. STEWART spoke of the climate of North America.—Dr. HENRY KENNEDY asked what were the vegetables and crops of Tasmania; and referred to instances of longevity in parts of England—notably, Devonshire.—The PRESIDENT pointed out that persons settling in a new country were generally able-bodied and well-to-do.—Dr. J. W. MOORE, in reply, said that but a comparatively small portion of Tasmania was inhabited, and that the comparison between it and the healthiest parts of England was, therefore, fair. The remarkably low death-rate from bronchitis and phthisis proved the salubrity of the climate. The population of Hobart Town was 20,000, scattered over a large surface. But within the precincts of the town were gathered the sick from all parts, and the destitute and intemperate. Tasmania was a land of extraordinary fertility, but, owing to neglect, the soil was temporarily exhausted. The crops were the same as those grown at home.

Bromide of Potassium in Epilepsy.—Dr. HAYDEN read details of three cases. The first case was of a young woman, aged 25, who had been more or less subject to fits, from the age of 14. The first occurred a year before menstruation, and was mild *(petit mal)*; after this there was a cessation of fits for two years. They then recurred severely at each menstrual period, and latterly in the intervals also. In October 1872, twenty grains of the bromide were given thrice daily. Within the next eleven months she had only six seizures, the medicine being given only before each menstrual period. Since October 1873, she had had no fit, her monthly health had become regular, and she was about to be married. She was at one time in a state of bromism. In the second case, the circumstances were somewhat similar, and the results equally satisfactory. The patient, a girl, aged 22, had had no fit since last July, Among the symptoms of bromism in this case, was *green vision*. The third case was that of a clergyman, aged 60, who suffered from *le haut mal*. There were well-marked arcus senilis, atheroma of the superficial arteries, and an occasionally intermiting heart. The patient took the bromide, in doses, at first of twenty grains, then of forty, and even sixty grains, thrice daily, almost continuously for two years. The intervals were prolonged, and the attacks were generally of the *petit mal*, occurring always during sleep. Vertigo and intermission of the pulse sometimes necessitated the temporary suspension of the medicine. The bromide would undoubtedly appear to control epilepsy, although not to cure it. Through its agency the fits were mitigated in severity, the intervals were protracted, and the nutrition of the nerve-centres is promoted. These results coincided with the experience of Drs. Anstie and Hughlings Jackson. With Dr. Clouston, Dr. Hayden agreed that the dose need seldom or never exceed thirty grains three times a day.—The PRESIDENT mentioned an example of improvement, under the use of bromide of potassium, in an elderly insane lady. The fits were greatly postponed, and the mental condition of the patient was ameliorated. There was no uterine affection.—Dr. PURSER thought it remarkable that the bromide diminished or stopped epileptic attacks, whether these depended on central organic disease, on peripheral irritation, or merely on functional derangement. His uniform experience was, that the drug diminished the number of fits, or even temporarily arrested them, and that they invariably recurred on suspending it. The only ill effects noticed were eruptions of acne, or drowsiness.—Dr. QUINLAN mentioned a case, where the seizures depended on depressed fracture of the cranium. The patient remained free from the fits since he had commenced taking the bromide, now some months ago. It was most useful as a preventive.—Dr. GRIMSHAW had noticed that epileptics more or less improved under the bromide, but only temporarily.—Dr. HUGHES said that, in his hand, the drug had succeeded in continued but moderate doses—ten to fifteen grains—the patient being kept under its influence. There was no permanent cure.—Dr. HENRY KENNEDY had used the bromide as a hypnotic, in ten-grain doses, in elderly persons, with the best effects.—Dr. DARBY alluded to the employment of bromide of ammonium in the menstrual fits of young women. He thought some cases did well without the bromide.—Dr. FITZPATRICK considered that cases of *petit mal*, occurring in sleep, and those depending on uterine irregularities, or on seminal irritation, were most amenable to treatment. He warned medical men against the use of the bromide in cases of weak heart, with embarrassed respiration.—Dr. H. BENSON narrated a case of epilepsy, with chloro-anæmia, in which the bromide increased the fits in number and intensity, by acting on the nervous centres through the vaso-motor system.—Dr. HAYDEN replied, and the Society adjourned.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 7TH, 1874.

THE DEBATE ON PYÆMIA AT THE CLINICAL SOCIETY.

THE discussion on pyæmia marks a new era in the history of the Clinical Society, and inaugurates, we may hope, a period of usefulness for that young and vigorous body in a field hitherto new, but which promises the richest fruit. We mean the investigation of private experience, as distinguished from that of public practice. Hitherto, although scattered cases have been brought forward at our societies from the private practice of the members, no systematic attempt has been made to compare the results of private practice as a whole with those obtained in hospitals. The chief merit of the discussion originated by the energetic President of the Society, is that it brings this most important question prominently before the body which is, of all other societies in London, the most fit to deal with it. No question can be more essentially practical, none more worthy of the attention of a Society which devotes itself to the study of clinical, as contradistinguished from medical, chirurgical, or pathological subjects. Hence this discussion would of itself furnish a sufficient answer to those who doubted whether there was room for the Clinical Society beside its Medico-Chirurgical and Pathological predecessors. It is clear that such a subject as the general success of surgery or medicine, considered as healing arts apart from their results in special cases or classes of disease, is the most important and the most appropriate which can come before a Clinical Society. Nor can it fairly be denied that the present discussion has obtained a large measure of success. One of the first steps towards learning how to succeed is to know why we fail; and as every surgeon admits that blood-poisoning is one of the great sources of failure in the practice of surgery, it is of the most vital importance to know what is the origin of the various forms in which blood-poisoning manifests itself, and of which the most striking, though not perhaps the most frequent, is pyæmia. That pyæmia was met with only in hospitals, used some time ago to be almost assumed as an axiom by many practitioners—and a good number of them would have added, in town-hospitals only. But the frequency with which, of late years, histories of blood-poisoning have come out in private practice, has led most clinical teachers to admit that such cases do occur outside of hospitals, whilst the strongest proof has been offered that, at any rate in hospital practice, there is no proved superiority in the country over the town. And now it appears that some go further than this, and suspect not only that private practice has no immunity from blood-poisoning, but even that the rate of occurrence of such cases does not, *cæteris paribus,* much differ in the two classes of practice. Those who hold the latter doctrine are supported by no less authority than Sir James Paget, who stated broadly that, as far as his experience and observation extended (and no man's can be more extensive or more acute), he had seen no such superiority as was claimed for private practice in the matter of pyæmia. Mr. Prescott Hewett's paper also showed very clearly that such cases occur not only in the best situated houses in this city, but in the residences of rich people in the heart of the country, far away from any possible contamination of sewage-gas or any other atmospheric influence; while Mr. Jonathan Hutchinson carried the proof still farther by showing that not only the country gentleman, but even his cattle, are not exempt from attacks of pyæmia.

It is true that other speakers, such as Mr. Erichsen and Mr. Cadge, have somewhat controverted these facts, or rather have questioned their frequency. Mr. Erichsen, by saying that though he has seen pyæmia occurring after other causes in private, he never saw it after an operation; and Mr. Cadge, by stating that in his private practice pyæmia has been unknown, except in one dubious case, whilst it has been rife in the Norwich Hospital. But such negative criticism as this can hardly upset the positive testimony of such distinguished surgeons as those who have spoken to the occurrence and the relative frequency of pyæmia in private. And, so much, we think, may be assumed as proved by the discussion, viz., that pyæmia prevails, to some extent, in all classes of persons, both in town and in country. What has not been proved, and, in the present state of our information about the results of private practice, cannot be proved is, whether the occurrence of pyæmia in private is a very rare, and, so to say, accidental occurrence, or whether it bears any proportion to the frequency of the disease in hospitals. Even on the prevalence of the disease in hospitals, though tolerably definite information has been supplied by the authorities of various hospitals, it is clear that very mistaken ideas prevail. Some of the speakers appeared to imagine that our hospitals are so full of pyæmia, that its germs can be carried about by the surgeons in the same way as the physician of a fever or small-pox hospital might convey the infection of those diseases. Others have spoken of pyæmia as originating in local lesions of some special tissues; others, as excited by the poisonous influence of foul air or of drainage; and, in fact, it has been rendered abundantly clear, that we do not know either what is the poison which engenders the pyæmic condition, or how it finds its way into the system. Nor, to take a subordinate point, is there any agreement as to the identity, difference, or relation to each other of the various forms in which blood-poisoning manifests itself.

While, therefore, we recognise, with all due gratitude, the great service done by surgeons in the eminent position of Mr. Prescott Hewett and Sir J. Paget, who venture on stating to the world the realities of their practice—even when they happen to be less favourable than is perhaps expected by the public, and while we admit that the present debate will do much good, and furnish a starting-point for more definite knowledge of this great subject, it is clear that much remains to be done, and that in two directions, scientific and practical. The scientific part of the work is that which a society like this might perhaps carry out with success, but which is more likely to be successfully undertaken by some of its members working from their own individual points of view; viz., to define the various forms of blood-poisoning—a subject on which, as yet, such wide difference of opinion exists—and to construct a theory of their origin, which shall embrace all recorded experience.

But, if we cannot look forward with very sanguine anticipation to seeing this great object attained in any reasonable time, the second practical desideratum is one which all of us, both in town and country, can do our part to attain—*i. e.*, simply to observe and record cases with more care, to take more pains to obtain the *post mortem* examination of those who die with anomalous symptoms, and to be more careful in following up to their termination cases in which we are only casually concerned. Let it be remembered that cases of pyæmia are absolutely rare even in London hospitals, though, from the great number of severe cases which are there aggregated, they appear to be very common. Thus Mr. Holmes has stated in our last number that the ratio of fatal cases of pyæmia in three of the largest London hospitals during a given period, taken at hazard, proved to be hardly more than one in a thousand patients. Now, in any one man's private practice, the ratio would probably be less, even if all other matters were equal, since the average severity of the cases is hardly ever so great in private practice as in the large London hospitals. It is only the great consulting surgeons whose practice can compare in this respect with that of a London hospital. There is no difficulty, then, in seeing how a case here and there might easily escape notice. Pyæmia is not really always marked by very definite symptoms, or it would not so long have escaped the notice of surgeons. Many a case in country practice may have escaped the notice of a medical man in the present day, who probably never makes a *post* *mortem* examination except on the coroner's order; just as the very existence of the disease was unknown to his greater predecessors from the want of *post mortem* examinations. And those of our readers who are hospital surgeons or physicians can also help in the same direction, by keeping careful records of the cases which originate or are admitted into hospital, and of the circumstances under which they occur. When we reflect on the number of cases of acute periostitis or necrosis in which the condition of the bone is but the first stage in a general pyæmic state, and which are sent into the medical wards of our hospitals by medical men as cases of fever or of acute rheumatism, we cannot but question the memory of those who profess never to have met with cases of pyæmia in private; and we are much disposed to think that greater accuracy and more frequent necropsies would show that the number of these cases is much larger than is generally believed. But, if this be true—*i. e.*, if slight causes frequently lead to pyæmia in private—is it possible that operations, as Mr. Erichsen seems to say, are almost or quite exempt from the danger? We wish we could think so, but our faith is not sufficiently robust. At any rate, the debate has set on foot an inquiry which touches us all too nearly to be allowed to drop, and which is only one of the many similar investigations in which we hope to see the Clinical Society engaged.

THE SOHO HOSPITAL FOR WOMEN.

We publish in another column a statement from the Committee of the Hospital for Women in Soho. It will be seen that it places the course pursued by Dr. Protheroe Smith in a different light from that in which it might have appeared from the version of the facts of which we were in possession; and we very gladly note the statement in that important particular. The statement, however, omits the fact which we have since learned, that the amended bye-law came down to the medical staff in the form in which we stated it, on December 6th, but appeared in its amended form on December 21st, requiring then the whole staff to present their resignation within ten days. How it came to pass on the one date, and to be amended on the other, is not clearly stated. In its original form, however, it would, we believe, have included in its immunity Mr. Scott as well as Dr. Protheroe Smith. And possibly that gentleman, if not entirely submissive to the will and pleasure of the Committee during the year, might not have been equally sure of annual re-election with the originator and founder of the hospital.

On the general question, the Committee do not now enter. That, however, is of course a most seriously important one. The form of government established, and sought to be strengthened, at the Hospital for Women, is one of unmixed and irresponsible despotism. It is one to which no body of medical gentlemen ought for a moment to assent. A self-elected Committee at a special hospital propose to assume the absolute right of annually dismissing their medical staff, *en bloc* or individually, without question asked, without appeal to the governors, or without notice given. Such pretensions are absurd, irrational, and go to the root of all good government. The Committee will undoubtedly consult the interests of the hospital by revising such rules. No medical staff of repute will, we are satisfied, be found willing to submit to them. If they did, they would certainly incur a loss of self-respect and of the respect of the profession.

In the present crisis, we gather from the statement of the Committee that Dr. Protheroe Smith has not thrown in his lot with his brethren by resigning his hospital post, but that he has left his post at the Committee by resigning the place which he has so long held there. Now this is, we venture to think, precisely the reverse of the right course. It amounts, in one sense, to a double desertion. He deserts his professional brethren in the vindication of their claims to proper treatment, by isolating himself from co-operating with them in the only effectual mode by which they can vindicate their position and the respect due to their services; he deserts the post which his function as founder of the hospital has assigned to him, by quitting the committee in which he alone represents the professional interests. We venture to recommend to him precisely the opposite course; namely, to remain at his post as a member of the committee, on which he must undoubtedly exercise a most powerful influence, and there to fight the battle of reason, and to assist in reorganising the regulations relating to the election of medical officers, and put them on the more usual and proper footing; but to tender his resignation of his position of medical officer, together with his professional brethren, and to have it understood that he will not withdraw that resignation, or re-enter office, until the election of the medical officers has been placed on a proper basis. We think so highly of Dr. Smith's just influence with his Committee, that we cannot doubt that if, instead of absenting himself from the Committee at this important crisis, and leaving to others the right guidance of the hospital of which he is founder, he were to employ his influence in guiding the Committee to a right conclusion, there would be but little question of his success.

A WEEK OF SOCIETIES.

The very great interest and high scientific importance of the formal discussions initiated at the Clinical Society of London on Pyæmia, and at the Pathological Society of London on Cancer, have induced us this week to devote a considerable space to the report of debates unexampled in professional history in this country for their extent and value. The arrangements which we have made allow us to present the reports to our readers in the most complete and accurate form, and to place the most distant member of the profession in the same advantageous position as if he had been present at the discussions. Mr. Morgan of Dublin has been at the pains to bring before an English audience his valuable experience on some of the most important facts bearing on the doctrine of syphilis; and of this also we present a full report. The interest of the discussions at the Obstetrical Society and the Harveian Society is of a more polemical sort; but they may possibly appeal more directly to many minds, as including questions of personal bearing. Altogether, this has been a week of Societies, and our pages faithfully reflect this unusual professional movement.

We understand that a second vacancy for an Assistant-Physician at the London Hospital, will shortly be created by the resignation of Dr. Morell Mackenzie.

CREMATION OF THE DEAD.

Sir H. Thompson's paper on Cremation has been translated twice into German; once in Cologne, and once in Gratz in Austria; in the latter case with an introduction by Dr. Kœpl, formerly physician to the late King of the Belgians. In consequence of this joint publication, the Communal Council of Vienna has adopted, by a large majority, the proposal of one of its members to establish in the cemetery the necessary apparatus for cremation, the use of which will be optional and open to all. Following this, the Communal Council of Gratz, which contains a population of 100,000, has decided to consider a like proposal. A veritable agitation of the question has arisen in both places.

THE NEW DENTAL HOSPITAL.

The new building in Leicester Square was formally opened on Monday night, the event being celebrated by a *conversazione*, to which a number of distinguished visitors were invited by the Managing Committee. The ordinary monthly meeting of the Odontological Society took place at 8 o'clock; and the President, Edwin Sercombe, Esq., delivered an inaugural address that was of unusual interest on account of the occasion on which it was given, and still more remarkable for the very great ability of which it gave evidence. During the course of the evening, six or seven hundred visitors inspected the rooms of the new building, and were shown by the office-bearers of the hospital and the Odontological Society the various arrangements that had been made for the accommodation of the staff of dental surgeons and students, as well as of the lecturers at the School of Dental Surgery. A number of objects of interest were exhibited in the principal rooms; and a very beautiful series of microscopical subjects, illustrating the development of the teeth, was shown in the library by Mr. Charles S. Tomes. Altogether the evening was a great success; and the visitors, both professional and non-professional, evinced the greatest interest in the proceedings. On the completion of this building, we feel that Mr. Edwin Saunders may be fairly congratulated, for to that gentleman's munificence and energy the success of the enterprise has been mainly due. At the same time, the entire dental profession have readily responded to the appeal made to them for help; so that an important and very valuable institution for the alleviation of pain amongst the suffering poor has been handed over to the trustees for the public, ready for immediate use, and entirely free of debt.

THE SIR JAMES PAGET TESTIMONIAL.

We are asked to state that the engraving of the portrait (which was intrusted to Mr. Burton, A.R.A.) is now completed, as well as the necessary arrangements for distributing the impressions. In consequence, a communication has been made to the subscribers. The honorary secretaries—Mr. A. Willett, 36, Wimpole Street, W., and Mr. J. Langton, 18, Harley Street, W.—will thank any subscriber who has not received the Executive Committee's circular, to inform them of the omission.

OVARIOTOMY IN HOSPITALS.

The annual report of the Samaritan Hospital includes a proposition for preparing a separate house for ovariotomy cases, and it states the following grounds for that conclusion. "The operation called ovariotomy is acknowledged to be one of the most hazardous, critical, and trying the surgeon can have to encounter; while the patients are highly sensitive to the influence of any impurity in the air of the room, and immediately suffer from any want of scrupulous cleanliness. In the Samaritan Hospital, every such patient, after operation, is kept in a ward by herself till the result is known, and is then moved into a convalescent ward. General hospitals, as at present constructed, are certainly not fitted for such cases as these; the rate of mortality in them is seventy-six per cent. as compared with twenty-one per cent. in the Samaritan Hospital. This comparison is enough to warrant the adoption, as completely as possible, of the system of isolation contended for. The ovarian cases come chiefly under the care of the surgeon, who states, as his decided conviction, that a system of isolation more complete would be followed by still better results; and there are abundant reasons for thinking he is right." The report states that hitherto the hospital has been altogether free from hospital plagues, and it ascribes this immunity to good sanitary conditions.

THE NEW CONJOINT EDUCATIONAL SCHEME.

The following resolution was unanimously passed at a meeting of the Medical Board of the Liverpool Royal Infirmary, held February 28th, 1874. "That, in the opinion of this Board, the duties of clinical clerk and surgical dresser should be performed at a recognised general hospital; and the Board desires to urge on the medical authorities the desirability of so modifying 'Note M, clause 23', of the Report of the Committee of Reference, as to make such performance of the duties referred to compulsory in every candidate presenting himself for examination." This resolution confirms the views which we have already expressed as prevailing at the Birmingham School of Medicine on the subject of the clinical instruction clause in the new scheme.

IMPORTANCE OF VENTILATION.

Dr. H. Mac Cormac, of Belfast, writes to Professor Rutherford: "You are reported as stating that 'an open window can seldom be endured in the night in this country'. In reply to this, I have to observe that I sleep every night, winter and summer, betwixt the open door and window, both widely open, the draught rushing backwards and forwards as it lists. I do so when in London, as elsewhere, and during the very coldest weather. All my family do so. I did so last night; the temperature could not have been much above freezing point. I might cite the corroborative testimony, numerous testimonies indeed, of persons, both here and in London, who sleep constantly with open windows. I can assure you that the practice is not only perfectly endurable, but most enjoyable as well; and, further, as I maintain, it would cause an approximate, if not entire, cessation of the ravages of consumptive tubercular disease now and hitherto so disastrously prevalent."

THE DANGER OF SELF-DOCTORING.

A melancholy instance of the danger attending the self-administration of potent medicines, even by medical men, occurred on Monday of last week at Swinton, near Manchester. Mr. Henry Pearson, a gentleman thirty-six years of age, in practice there as a surgeon, had suffered from acute rheumatism some years ago, which had left heart-disease; and for the relief of the symptoms attending this, he had been at one time in the habit of taking hydrate of chloral in excessive doses, which brought on delirium tremens, from which he recovered. On the night preceding his death, being troubled with a spasmodic cough, he desired his wife to bring him a bottle of chlorodyne from his surgery, and took two drachms of it. In a little time afterwards, he sent for his subcutaneous injection syringe, and injected solution of morphia (probably seven or eight drops, or about two-thirds of a grain) under the skin of the chest. At 11 in the morning—apparently about ten hours after he had taken the chlorodyne—his wife, not being able to awaken him, called in Dr. John Williams, who found him comatose, with feeble pulse, livid countenance, contracted pupils, and stertorous breathing. He died at about 4 in the afternoon. At the inquest, the jury returned a verdict of death from misadventure.

THE PROVIDENT SYSTEM AT MANCHESTER.

We have from time to time kept our readers informed of the remarkable movement in favour of provident medical institutions in Manchester and Salford. It has now advanced a further stage. A comprehensive scheme, drawn up by the Subcommittee appointed for the purpose, was laid before the General Committee on the 16th ultimo, and was approved. The *Manchester Guardian* gives a detailed account of the plan proposed. The following are some of its main features.

The Subcommittee are decidedly of opinion that provident dispensaries ought ultimately to be self-supporting; but, after careful consideration, have come to the conclusion that, until they become generally known and accepted by the working classes, it will be necessary to include honorary as well as ordinary members in their constitution. That it is desirable to divide Manchester and Salford into districts, and to establish a provident dispensary in each district, so as to place medical relief upon the provident principle within the reach of each member of the class eligible for membership. That no provident dispensary shall accept as members persons residing outside its own district. That a member of a provident dispensary who shall remove from one district to another shall have the privilege of being transferred, free of charge, to the provident dispensary of the district to which he has removed. That no medical charity shall receive as an out- or home-patient any person residing in a district in which a provident dispensary has been established, except upon the recommendation of such provident dispensary. But during the two years following the adoption of this scheme by the Committee of the Medical Charities of Manchester and Salford, any person suffering under disease showing urgency shall be at once prescribed for on the statement that he is unable to pay for medical aid. That any member of a provident dispensary who may, in the opinion of his medical attendant, require a consultation or treatment at a hospital, shall be entitled to a recommendation to the hospital most suited to his case. That it is desirable that the scheme, as approved by the Committee of the Medical Charities of Manchester and Salford, should be laid before the managers of the medical charities by their respective representatives on that Committee. A council shall then be immediately formed, and each medical charity concurring in the scheme shall be requested to send representatives thereto.

The members of the provident dispensaries shall be artisans and others in receipt of weekly wages whose average family earnings do not exceed thirty shillings per week, and who are not in receipt of Poor-law relief. But the Committee may admit any applicant for membership if they think the case a suitable one. Any applicant for membership must attend at the dispensary at such time or times as the Committee may determine, and deposit two weeks' subscription, which will be returned if the depositor be not accepted as a member. If found eligible, he shall be enrolled and receive a ticket of membership. No application from a married man or woman shall be entertained unless all the children of the family under thirteen years of age join at the same time. Children under thirteen years of age cannot be admitted (except orphans) unless entered with one of their parents or a guardian. The payments shall be made weekly, fortnightly, or quarterly, in advance. In the event of any member, who has paid his subscription, becoming a recipient of Poor-law relief, he shall be entitled to receive the benefits of the institution until his subscription shall again become due. Every member shall pay one penny per week, but the subscription for all children under thirteen in any one family shall never exceed twopence per week. There shall be an entrance fee of sixpence for an individual, or one shilling for a family. Any applicant for membership actually suffering from illness shall only be admitted upon payment of an entrance fee of five shillings. The whole of the family of the applicant must also join at the same time and pay one month's subscription in advance. Any member shall be considered sick, and pay accordingly, if he apply for medical aid within fourteen days of membership. Any sick person unable to pay the dispensary charges shall be referred to the Poor-law officers, or be recommended to one of the medical charities, as circumstances may require.

The honorary members shall be those who contribute money to the support of a provident dispensary without having the privileges of ordinary members. The honorary members shall have the power of voting at annual meetings, and be eligible to serve on the Committee of Management.

Each dispensary shall be managed by a Committee composed of four ordinary members, four honorary members, and four members of its medical staff. The Committee shall be elected at the annual meeting of members.

Any medical man qualified to practise under the Medical Registration Act, upon applying to have his name placed upon the staff of the provident dispensary in the district in which he resides, shall be so placed by the Committee at their next meeting upon his undertaking to perform, for a year at least, the duties as set forth in the rules of the dispensary. No medical officer shall have more than 1,500 members or families on his list.

NEW BRANCHES OF THE ASSOCIATION.

WE have much pleasure in announcing the formation of another new Branch of the British Medical Association. At a meeting held on February 26th, the North Staffordshire Medical Society, a body containing thirty-three members, resolved on joining the Association under the name of the "Staffordshire Branch." The organisation of the South Hants Branch is making satisfactory progress. The county of Dorset is included within the Branch; and district centres are in course of formation. A code of rules has been agreed on, and will be discussed at a general meeting of the Branch.

MEDICAL ADVERTISEMENTS IN THE DAILY JOURNALS.

AMONGST the special meetings of Societies held during the past week, that of the Harveian Society has not been the least interesting, for it gave prominence to the important question of advertising in the daily journals. The meeting was called for two purposes: of the one, the framing of rules concerning the Trustees of the Society's property, and the property itself, it is not necessary to say much. The rules recommended by the Council were adopted without a dissentient voice, and the Society may be congratulated on having a reserve fund of more than £300. To the thriftiness of the late respected Treasurer, Dr. H. W. Fuller, this cheering condition of the Society's affairs is due; and the appointment of Trustees was also his own proposal shortly before his death. This pleasant introduction finished, the Society's accustomed serenity was disturbed by the reading of the following accusation against Mr. Harry Lobb.

"February 19th, 1874.

"We, the undersigned members of the Harveian Society of London, having had our attention directed to certain advertisements respecting books on *Curative Electricity* and *Hypogastria in the Male*, written by Mr. Harry Lobb, a member of the Society, consider that, in thus advertising his books, Mr. Lobb has been guilty of an offence against the established usages of the profession, which (in accordance with Section V, paragraph 1, of the Laws of the Society) shall be considered a valid ground for proposing the expulsion of any member. We therefore request our President to call an Extraordinary Meeting of the Society, at which we may propose the expulsion of Mr. Harry Lobb from the Society." (Signed by Nine Members.)

The whole-column advertisement, which appeared in the *Times* of February 13th, 1873, was then read, also a letter from Mr. Lobb, in which he threatened legal proceedings in the event of expulsion. Several amendments to the proposition for expulsion were made, but were all at length withdrawn in favour of one proposing a vote of grave censure. This amendment being lost by the casting vote of the President, the proposition to expel was put to the meeting, and the votes, in accordance with the laws, were taken by ballot. Nineteen ayes and eleven noes were recorded; but, as a majority of three-fourths of the members voting was necessary for expulsion, Mr. Lobb remains in the Society. The accusation was based upon the ground that the advertisements were "wilful offences against the established usages of the profession;" and a calm perusal of the same in the *Times*, *Globe*, etc., would appear to be enough to convince anyone of the accuracy of the charge. "Usages of the profession" is an elastic phrase, and many esteemed practitioners have undoubtedly sailed very close to the wind in the matter of advertising; still, the advertisements discussed at the Harveian Society would seem to pass all bounds of professional propriety. If they do not offend against the established usages of the profession, it would be difficult to say what can be considered to do so. The stringent rules of the Odontological Society, on this very question, are worthy of adoption elsewhere. They are as follows. "Persons who advertise in the public journals, or by circular, either their profession, or their professional attainments or public appointments, or anything relating to their mode of practice or charges, or who expose for public inspection specimens of operative or mechanical dentistry, or conduct their practice in a way which, in the opinion of the Council of the Society, is derogatory to the respectability of the profession, shall not be considered eligible for nomination as members." Again: "Should any member, in the opinion of the Council, have been elected contrary to the spirit of Bye-law III" (that just quoted), "his election shall be void; and should any member, after election, act in such manner as in the opinion of the Council renders it necessary that he should be expelled, the Council shall have the power to suspend such member, and to recommend to a General, or Special General Meeting, his expulsion from the Society." Armed with such laws, societies could find no difficulty in either refusing to admit as members or in expelling all offenders of the advertising type of Mr. Lobb. A strict interpretation of them would undoubtedly tend to the maintenance of a high professional tone, and to the elevation of the profession in public esteem.

IRELAND.

CARMICHAEL SCHOOL OF MEDICINE, DUBLIN.

THE following changes have taken place in this school in consequence of Dr. Purser's promotion to the School of Physic. Dr. Yeo has become senior lecturer on physiology, and Dr. Reuben Harvey has been appointed junior lecturer on physiology. We believe that Drs. Yeo and Harvey will prove worthy successors of Dr. Purser.

INCREASE OF SALARY OF A HEALTH-OFFICER.

THE Local Government Board have approved of the increase of £20 a year to the salary of Dr. R. Saunderson, medical officer of the Clonelly and Pettigo Dispensary Districts, lately recommended by the Board of Guardians.

CITY OF DUBLIN HOSPITAL.

DR. FINNY has been appointed physician to the City of Dublin Hospital, in the room of Dr. Purser, recently elected to the chair of Institutes of Medicine in the School of Physic in Ireland, and physician to Sir Patrick Dun's Hospital. Dr. Finny is a Fellow of the King and

Queen's College of Physicians, and a distinguished graduate of the University of Dublin. He has for several years been demonstrator of anatomy in the School of Physic, and has been a very successful private teacher. He has contributed many interesting papers on practical medicines to the *Dublin Medical Journal*. Dr. Finny's appointment has met with the universal approval of his professional brethren, among whom he is most deservingly popular.

LOCAL GOVERNMENT BOARD INQUIRY AND THE DUBLIN WATER SUPPLY.

A VERY important inquiry has just been held by Captain Robinson, one of the inspectors of the Irish Local Government Board, with regard to the alleged pollution of the water supply of Dublin, by the sewage of the village of Roundwood. As the inquiry is the first of its nature held in Ireland, and presents many important points, we beg leave to refer to it at some length. Many of our readers are no doubt aware that Dublin was, in the year 1868, supplied with water from a system of works constructed at an expense of about half a million of money. These works are considered to be only second in the United Kingdom to the celebrated Loch Katrine works, which supply the city of Glasgow. The great storage reservoir is situated on the river Vartry in the Wicklow mountains, at a distance of about twenty-five miles from the city of Dublin, and about seven hundred feet above the sea level. The area of the reservoir, which presents to the tourist the appearance of a moderately sized mountain lake, is four hundred and ten acres, and is capable of containing a seven months' supply for the city. It is about two and a half miles long, and half a mile wide at its widest part. It is now known by the name of the Vartry lake. Since the works were constructed, there has been an increasing demand for water, owing to the extension of the Dublin suburbs, which, with the exception of the Rathmines district, are supplied from the Vartry lake. The village of Roundwood is situated on a gentle slope at the upper end of, and a quarter of a mile distant from, the lake, with high ground beyond, so that the drainage of the village and its immediate vicinity *must* gravitate towards the lake. The corporation of Dublin, under the Dublin Water Works Acts, are owners of the Vartry and its tributaries and all waters contained therein, subject to the then existing rights of the riparian proprietors. At the time the Dublin corporation constructed their works, there were no water-closets, and very few, if any, sewers in Roundwood, and there must, therefore, have been comparatively little (we are afraid there was some) pollution of the tributaries of the Vartry which passed through Roundwood. The case, therefore, of the Dublin corporation is that, at the time of the construction of their works, there was no pollution of the streams flowing into the lake; that since then, in the year 1870, the drainage of Roundwood was improved, and that several (three in all) water-closets were constructed discharging into these improved drains; that several wet privies (*i.e.*, privies reached by streams) were constructed, and that all these were made directly or indirectly to discharge into the streams, thereby rendering the waters of these streams (three in number) so foul that the waterworks authorities had to intercept them by special works constructed for that purpose, and conduct them past the reservoir to the river below the filter-beds, thus losing water to the amount of half a million of gallons per day, and to the annual value of over £1,000. The corporation further affirms that the present sanitary state of Roundwood is sad, and that, owing to the large number of tourists who stop at the two hotels in Roundwood, there is the additional danger of contamination from the discharge of contagious fæcal matters into the streams. The corporation, therefore, pray that the Local Government Board will issue an order to compel the Board of Guardians of the Rathdrum Union (in which Roundwood is situated) to provide Roundwood with proper sewer accommodation, and prevent the pollution of the streams in question. The defence of the Rathdrum guardians is, that the sanitary condition of Roundwood is good; that the pollution of the streams is no more than it was at the time the Dublin waterworks were constructed, and that it was at that time that the Dublin corporation should have complained; and lastly, that the Local Government Board have no power in the matter, and the guardians are not liable. The evidence as to the bad sanitary state of Roundwood was abundant. There were heaps of manure, filthy privies, untrapped and unpiped sewers, under houses (even under the dispensary!), water-closets discharging into open drains, dirt in every direction, pumps beside privies, and, in fact, these and all other abominations with which those who are accustomed to investigate the sanitary state of country villages are familiar. All this dirt went into the rivers. The only counter-statement was that the health of the district was good, the mortality low, and epidemics scarce. The legal question we will not discuss, but we do not see the use of any recent legislation with regard to local government matters in Ireland, if this case does not come within the jurisdiction of the Local Government Board. The inspector will report the evidence to the Local Government Board, and we may expect the judgment of the Board upon the question in a fortnight or three weeks.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE annual meeting of this Society was held on Monday, March 2nd, at 8 P.M.; C. J. B. WILLIAMS, F.R.S., President, in the Chair.

Dr. McIntyre, of Odiham, and Dr. C. Theodore Williams were nominated Scrutineers of the Ballot for the new Officers and Council.

The Treasurer's Account of the income and expenditure of the Society for the year 1873 was read.

The Report of the President and Council was read. It stated that, while the average number of deaths among the members for twenty years had been 15, in 1873 the number was 27—being more than in any previous year. Of newly elected Fellows, there were 29; viz., 5 honorary, 15 resident, and 9 non-resident. The total number was 654. The total amount of receipts (£1,406) was but slightly below the average. Several former sources of income had ceased, and the payments were exceptionally large; hence, the balance in hand was small in comparison with that of previous years. The excess of expenditure was caused by the publication of a larger and more profusely illustrated volume of *Transactions* than usual, by the addition of a larger number of foreign journals and important books to the library, by the payment of the insurance of the Society (which is made once in seven years), and by the increase of the salaries of the sub-librarian and other members of the establishment. The question of altering the present scale of composition fees had been considered by a Committee appointed by the Council, and it had been decided that a change was not advisable. It was stated that a *conversazione* would be given at the close of the session. It had been decided to keep the library open to 6 P.M. The number of books added during the year was 427—218 English, and 209 foreign; and the total number of volumes was 27,500.

Mr. HENRY LEE moved, and Dr. BEGLEY seconded, the adoption of the report. This was agreed to unanimously.

The Proceedings and Transactions.—Dr. SIEVEKING moved the adoption of a proposal which had been agreed to by the Council—"That in future the *Proceedings* and *Transactions* be incorporated in one volume; and that all papers be printed, in chronological order, in the *Transactions*, either in abstract or entire, together with the reports, President's address, and other matters now printed in the *Proceedings*."—Dr. A. W. BARCLAY seconded the motion, which was strongly opposed by Mr. Charles Hawkins, Mr. Durham, Mr. Curling, Dr. A. P. Stewart, Dr. McIntyre, Mr. Brooke, and Mr. Savory. The opponents of the motion disapproved of the deterioration of the *Transactions* by the insertion of all papers in them.—The proposal was defended by Dr. SIBSON, as a member of Council; and, on being put to the vote, was rejected by a large majority.

President's Address.—The PRESIDENT, in commencing his address, remarked that, while nothing of special note had occurred to the Society during the year, there had been a good supply of useful and practical papers. He then proceeded to give biographical sketches of the members who had died during the year, viz.: Dr. S. W. J. Merriman, Dr. E. L. Ormerod (Brighton), Mr. R. Partridge, Dr. G. Hamilton Roe, Baron Justus von Liebig (foreign honorary Fellow), Dr. Bence Jones, Dr. Tyler Smith, Mr. C. Robinson, Dr. C. C. Ritchie (Manchester), Dr. G. F. Evans (Birmingham), M. Auguste Nélaton (foreign honorary member), Dr. J. Thurnam (Devizes), Mr. W. D. Michell, Mr. R. Cole, Mr. C. C. Smith, Dr. J. J. Ledsam (Scarborough), Sir Henry Holland, Bart., M.D., Dr. R. W. Smith (Dublin), Dr. J. Torrie (Aberdeen), Mr. T. Turner (Manchester), Dr. H. W. Fuller, Mr. H. T. Lomax (Stafford), Mr. T. Wormald, M. Louis Agassiz (foreign

honorary Fellow), Mr. J. Grantham, Dr. G. Beaman, and Dr. P. Allen. M. Agassiz had been elected a foreign honorary Fellow only five days before his death. The President remarked that at least five of the deaths had occurred prematurely from overwork, the consequence and concomitant of success. Success was a great temptation to exertion. He himself had been subject to this; but, after ten years of professional and hospital duty, he had retired, and had had his strength restored by a comparative rest of twenty years. He urged the Fellows of the Society to send in papers early. He believed that some were unwilling to contribute papers from an idea that the referees acted as censors. This was not the duty of the referees; it was not for them to reject papers because they did not agree with the opinions of the authors. He expressed regret at the failure of the attempt to amalgamate the Societies; but believed that all were working for the common good.

Votes of Thanks.—Mr. John Gay proposed, Dr. Fayrer seconded, and it was unanimously resolved, that the President be thanked for his address, and that he be requested to allow it to be printed.—On the proposal of Mr. Curling, seconded by Mr. W. Mac Cormac, a vote of thanks was given to the retiring Officers and Council.

Officers and Council.—The following were declared to be elected for the ensuing year. Those to whose names asterisks are prefixed did not hold similar offices last year. *President:* Charles J. B. Williams, M.D., F.R.S. *Vice-Presidents:* E. H. Sieveking, M.D.; *Sir W. W. Gull, Bart., M.D., D.C.L., F.R.S.; W. White Cooper; *Luther Holden. *Treasurers:* W. Wegg, M.D.; John Birkett. *Secretaries:* E. Symes Thompson, M.D.; J. Cooper Forster. *Librarians:* F. Sibson, M.D., F.R.S.; T. Holmes. *Other Members of the Council:* *J. Burford Carlill, M.D.; *W. H. Dickinson, M.D.; C. J. Hare, M.D.; *W. O. Priestley, M.D.; *Hermann Weber, M.D.; William Adams; Thomas Bryant; *George W. Callender, F.R.S.; *John Gay; *John F. Streatfeild.

ASSOCIATION INTELLIGENCE.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

A meeting of the above Branch will be held in the Board Room of Addenbrooke's Hospital, on Tuesday, March 10th, at 3 P.M., to receive communications from the Council of the Branch respecting the place of meeting for 1874.

J. B. Bradbury, M.D., *Honorary Secretary.*
Corpus Buildings, Cambridge, February 25th, 1874.

YORKSHIRE BRANCH.

The spring meeting of this Branch will be held in the Council Room, Halifax, on Wednesday, March 11th, at 2 P.M.

The members will dine together after the meeting, at the White Swan Hotel, at 5 P.M. Tickets 6s. 6d. each.

Gentlemen intending to bring forward any communication, or join the dinner, are requested to communicate with the Secretary.

W. Procter, M.D., *Local Secretary.*
York, February 24th, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

The next meeting of the above Branch will be held at the Midland Institute, Birmingham, on Thursday, March 12th, at 3.30 P.M.

T. H. Bartleet.
Balthazar W. Foster, M.D. } *Honorary Secretaries.*
Birmingham, March 2nd, 1874.

EAST SUSSEX AND WEST KENT DISTRICTS OF SOUTH EASTERN BRANCH.

A conjoint meeting of the above districts will be held at the Infirmary, Tunbridge Wells, on Wednesday, March 18th, at 3 P.M.; Dr. Wardell in the Chair, who will read a short paper on the "Progress of Medicine".

Dr. Wardell invites members and their friends to lunch at 1.30 P.M., at his residence, Calverley Park.

Dinner will be provided at 5.0 P.M., at Terry's Restaurant, opposite the Railway Station. Charge, 5s., exclusive of wine.

Notice of intended communications, etc., is requested by the Honorary Secretary before Tuesday, the 10th instant, in order that they may be inserted in the circular convening the meeting.

Thomas Trollope, M.D., *Hon. Sec.*
35, Marina, St. Leonard's-on-Sea, Feb. 24th, 1874.

LANCASHIRE AND CHESHIRE BRANCH.

A special general meeting of the above Branch will be held in the Medical Institution, Liverpool, on Wednesday, March 25th, at 4 P.M., to consider the Report of the Subcommittee of the Parliamentary Bills Committee on the Instruction and Registration of Midwives.

Dinner at the Alexandra Hotel, Dale Street, at 6 P.M. Tickets 7s. 6d. each, exclusive of wine.

Gentlemen intending to dine are requested to notify to the Honorary Secretary as early as possible; in any case, not later than Monday, the 23rd instant.

A. B. Steele, *Honorary Secretary.*
Liverpool, February 28th, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

The third meeting of the Session was held on Friday, January 30th, 1874. Present: J. Manley, Esq., in the chair; and twenty-six members.

New Members.—Four Members of the Branch were elected Members of the Section.

Communications.—1. Mr. Vincent Jackson exhibited a young man, aged 25, whose right foot (for disease principally affecting the synovial membrane) had been amputated through the ankle-joint by Pirogoff's method. Mr. Jackson pointed out the importance, especially when synovial disease exists, of slicing the tibia and fibula above the articulation existing between those bones.

2. Mr. Hugh Kerr exhibited a case of Removal of the Fibula for Necrosis. Louisa W., aged 12, a nail-maker, living at Cradley, received on February 3rd, 1873, a kick over the outer malleolus of the left ankle, and periostitis supervened. On February 17th, a free incision was made over the malleolus, and a little pus escaped. On April 3rd, a portion of the lower end of the fibula, about an inch in length, appeared to be loose, and was removed. On April 24th, more bone was found to be loose. Mr. Kerr enlarged the original incision, and removed a second portion of bone; this proved to be the whole remainder of the fibula except its upper articulating end. From this date, the wound rapidly healed. On June 18th, she was able to walk without crutches; and early in August returned to her work. A good deal of new bone was formed in the situation of the lost fibula, especially at the upper end. The action of all the muscles was perfect, as also walking and the contour of the limb.

3. Mr. West showed the bones removed in Excision of the Knee-Joint. He also read notes of the case.

4. Dr. Russell exhibited a Brain with a Large Clot in the Posterior Lobe or Left Hemisphere nearly of the size of a small orange. The patient, aged 30, died two hours after his seizure, unconscious, but retaining motor power. The motor tract was not involved.

5. Mr. Bennett May showed the articulation resulting from an old Excision of the Elbow-Joint. Three years before, Mr. Pemberton had excised the joint, removing a considerable amount of bone, which was extensively diseased. In spite of prolonged treatment and rest, a loose flail-like joint resulted; and, at the request of the patient, a man aged 38, Mr. Pemberton amputated the arm. The specimen exhibited the rounded ends of the bones, the interval between which, about one inch and a quarter, was filled up by a softish fibroid tissue.

6. Dr. Carter showed a portion of the small Intestine, the seat of Tubercular Ulceration.

7. Mr. Arthur Bracey read notes of a case of Optic Neuritis following exposure to a flash of lightning.

8. Dr. Malins showed an Ovarian Tumour, which he had removed on January 14th. The patient, aged 29, had suffered from it for five years past, had been tapped twice, being pregnant on both occasions, but had resisted all persuasion to have ovariotomy performed. There was at the time of operation great emaciation, abundant ascites, and evidence of anterior parietal adhesions. None could be detected in the pelvis, and the uterus moved freely on the sound. Ether was given; an incision four inches long was first made, and thirty-five and a half pounds of fluid allowed to escape by a small opening. Anterior adhesions were separated, the incision was enlarged to twelve inches, and attachments to the stomach and colon were divided by Richardson's toothed scissors. A drainage-tube was placed behind the uterus through the vagina. The patient rallied well; but died on the following day, twenty hours after the operation, somewhat suddenly, from cardiac syncope. The necropsy showed no clots; about thirty ounces of sero-sanguinolent fluid in the abdominal cavity, none in the pelvis. The contents of the tumour were semisolid; its weight was twenty-three and a half pounds; it was polycystic.

CORRESPONDENCE.

THE HOSPITAL FOR WOMEN.

SIR,—In the last week's number of your JOURNAL there is a leader, headed "The Soho Hospital for Women", which has been brought under the notice of the General Committee of that charity, as it reflects upon them and two of the medical officers; and I am directed by the committee to request your insertion of the following brief statement, referring not to your comments upon their action as the governing body of the hospital, but to a misstatement of facts, which you will no doubt gladly rectify. You state that "Dr. Protheroe Smith, who is one of the committee who have passed this degrading rule, had, we believe, previously secured his own position by arranging for himself an absolutely permanent tenure of office. The contrast between this and the terms which he has assisted to impose upon his colleagues is so striking, that it must be hoped he has some explanation to offer, which may modify the very ugly look of the part which he appears to take in this transaction."

The explanation is exceedingly simple. The statement here put forward is not only inaccurate, but, in its essential particulars, the *exact reverse* of the facts.

The bye-law, No. 19, applicable to "Honorary Medical Officers", under which all the present members of the medical staff, to whom the writer of the article refers as "disposed to resign their office on professional grounds", accepted and have held their respective offices for a succession of years, runs thus:

"On 31st day of December 1854, and on 31st day of December in every alternate year from that date, all acting honorary medical officers (excepting officers appointed before the year 1850) shall go out of office".

Under this rule, established more than twenty years ago, it so happens that Dr. Protheroe Smith, the originator and founder of the hospital, and whose appointment therefore, dates anterior to 1854, is not affected by it, and does not vacate his office every alternate year.

But, when notice was given that it was proposed to strike out the word "alternate", making the vacation of office annual, Dr. Protheroe Smith, being a member of the General Committee, moved that the clause, by which he had been heretofore exempted from the operation of the law, be omitted, and the amendment was accepted by the committee. He, at the same time, tendered his resignation as a member of the committee.

It will be manifest, therefore, that so far from Dr. Protheroe Smith having "previously secured his own position by arranging for himself an absolutely permanent tenure of office", as erroneously assumed in the article in question, he not only himself moved the rescinding of the exemption clause, giving him that permanence of tenure, that he might stand on the same ground as his colleagues, but desired to withdraw from the committee, and he has not attended or taken any part in the subsequent acts of that body.

So far, therefore, as Dr. Protheroe Smith is concerned, he stands free from all implication in the proceedings of the General Committee, and they trust to your sense of justice to give immediate insertion to this rectification of the facts.

As to the propriety or justice of the measures taken by the committee in regard to the alteration of the bye-law, and the bearing of such act upon the position or status of the medical staff, together with your comments thereon, I am to state that they have no remark to make; but, in fitting time and place, they will be prepared to vindicate the course adopted.—I am etc., EDWARD D. STEAD, Secretary.

Soho Square, London, March 4, 1874.

DR. SNOW BECK ON PERCHLORIDE OF IRON IN *POST PARTUM* HÆMORRHAGE.

SIR,—In a paper in your issue of to-day, Dr. Snow Beck says—"In September 1872, I forwarded to the Secretary of the Obstetrical Society, Dr. W. S. Playfair, some of the following cases, with a commentary. After a few weeks, I was informed that the President, Dr. Braxton Hicks, considered the paper to be 'of a controversial character'; and, as the statements contained in it differed from those which Dr. Barnes had previously made on the same subject, the paper could not be allowed to be read."

Permit me to say, that this gives an entirely erroneous impression of what actually occurred. The paper was declined, not because the President considered it to be of a controversial character, but because the referees of the Society's papers judged it to be entirely unfit for presentation to the Society. They came to that conclusion, partly on account of the many offensively personal remarks which it contained, and partly because a large proportion of the cases seemed to be merely based on the hearsay evidence of monthly nurses, or other unqualified observers, which they therefore deemed to be quite valueless for any scientific purpose.

Those who are acquainted with Dr. Snow Beck's controversial amenities, will, I am sure, feel grateful to the referees for their decision.

I am, etc., W. S. PLAYFAIR,
Late Secretary to the Obstetrical Society.

5, Curzon Street, Mayfair, Feb. 28th.

SIR,—In your impression of the 28th ultimo, there is a paper on Perchloride of Iron, in which Dr. Snow Beck mentions that, when Dr. Heywood Smith's paper on that subject was read last year at the Obstetrical Society of London, "all expression of opinion contrary to the views of Dr. Barnes and Dr. Hicks, was endeavoured to be suppressed by noisy clamour."

Allow us, sir, to assure your readers that this statement is erroneous. The discussion on the value of perchloride of iron in the treatment of *post partum* hæmorrhage, was singularly welcome to all those who were present at the two best attended meetings of the last session. Not the slightest attempt was made to interfere with the most complete freedom of discussion.

Dr. Graily Hewitt, Dr. Routh, and Dr. Bantock, could tell you, sir, that on the first night of the discussion, they were very attentively listened to while advocating views opposed to those of Dr. Barnes; and at the adjourned meeting, while the President limited all speakers to fifteen minutes, he actually allowed Dr. Snow Beck to speak for nearly an hour, during which he was listened to with most commendable patience. A reference to pages 50 and 65 of the fifteenth volume of the Society's *Transactions*, will show how freely and carefully the subject was discussed. We are, etc.,

THE HONORARY SECRETARIES.

Obstetrical Society of London, 53, Berners Street, March 4th, 1874.

MILITARY AND NAVAL MEDICAL SERVICES.

ARMY MEDICAL SERVICE.—List of gentlemen who competed successfully for appointments as Surgeons in Her Majesty's British Medical Service at the competitive examination, held at the London University on February 16th, 1874.

Ward, B. L.	2221	Pratt, W. S.	1540
Gallwey, J. G.	1995	Gormley, J. A.	1444
Prendergast, J.	1912	Fass, J. E. W.	1368
Hickson, G. B.	1905	Young, F. S.	1355
Miller, W. B.	1890	McCreery, N.	1350
Jagoe, B. K.	1725	Greene, J. J.	1345
Smyth, C. C. H.	1706	Martin, J.	1296
Smith, J. A.	1545	Turner, C. P.	1235

INDIAN MEDICAL SERVICE.—The following candidates for Her Majesty's Indian Medical Service were successful at the competitive examination, held at Burlington House on February 16th, 1874. Thirty-six candidates competed for eighteen appointments; and all were reported qualified.

Leckler, H. M.	2590	Lancaster, J.	1985
Corbett, J. L.	2558	Yeld, H. P.	1985
Mair, E.	2370	Warden, C. J. H.	1925
Benson, P. H.	2335	Wilkins, J. S.	1890
Browne, S. H.	2327	Smith, J. G. Malcolm	1875
Armstrong, J.	2325	King, W. G.	1840
Dawson, L. R.	2213	Fullerton, J. C.	1835
Warder, R.	2210	Patterson, D. A.	1820
Shircore, J. C.	2090	Barren, W. A.	1720

THE DIRECTOR-GENERAL OF THE ARMY MEDICAL DEPARTMENT.

WE are unable yet to state with any certainty whether Sir Galbraith Logan retires from active service at the end of the present financial year. Although we can well understand that the prospect of repose may be very pleasant after more than forty years' service, it is also not unreasonable to suppose that the present Director-General may wish to see things a little more settled before he finally takes his leave. It has been rumoured in well informed quarters that Sir William Muir, to whom the succession would naturally fall, is not specially desirous of the honour, and would certainly not accept office on the terms of retrenchment hinted at some time ago. In the event, therefore, of his declining promotion, we hear the name of Surgeon-General Mouat, V.C., C.B., freely mentioned as well qualified for the post by varied and distinguished service in the Crimea, India, and New Zealand.

OBITUARY.

NEIL ARNOTT, M.D., F.R.S.

We have to record the death of this eminent member of the profession, which took place at his residence in Cumberland Terrace, on Monday last. Dr. Arnott was born at Arbroath, in Scotland, on May 15th, 1788, and he had thus reached his eighty-sixth year. We first hear of him as a boy at the Roman Catholic College of Blairs on Deeside, five miles from Aberdeen. It was here that he began to show an active and observant mind, and an especial devotion to the study of natural philosophy, in fact, as a friend expresses it, he saw natural philosophy in everything around him. He was sent to the Aberdeen Grammar School, and among his schoolfellows was Lord Byron. He succeeded so well in Latin, that he gained by competition a bursary in Marischal College, which he entered in 1801. He here followed Professor Copeland's course of lectures on Natural Philosophy. This professor was renowned for his powers of experimental illustration. Neil Arnott proved to be one of Copeland's best pupils; and, in after life, he turned to full account the notes which he carefully made of this admirable course of lectures.

He commenced the study of medicine at Aberdeen; but in 1806, he came to London, and entered as a pupil under Sir Everard Home, at St. George's Hospital. The treatment of stricture was then a favourite subject with Sir Everard, and his pupil rapidly apprehended his method. This simple fact, in some measure, influenced the future career of Arnott. Sir Everard had as a patient the captain of an East Indiaman, and the captain wished to take to sea with him one who understood Sir Everard's method of treatment. Neil Arnott accepted the office, and he made use of his new position to add to his store of knowledge the physical phenomena connected with the sea. With an active mind always at work, he let nothing escape him, and he made full use of this experience in his excellent treatise on physics, subsequently published.

In 1811, Neil Arnott settled as a medical practitioner in London. He received the degree of M.D. from the University of Aberdeen, and became a Licentiate of the Royal College of Physicians, in 1817. The first volume of his work on *Physics* appeared in 1827, and gained for him a wide-spread reputation. In a few years, five editions were exhausted, and the work was translated into all the languages of Europe. The fresh and popular style which he adopted, and his clear explanations of physical phenomena in plain and intelligible language, rendered the book a great favourite with the general public, and, at the same time, did not prevent its having a favourable reception from men of science, such as Herschel and Whewell. The author at once took his position as a man of science, and became a Fellow of the Royal Society.

In 1836, when the University of London was founded, he was nominated a member of the Senate. In 1837, he was named Physician Extraordinary to the Queen. In 1838, he published his treatise on *Warming and Ventilating*, in which he expounded with his usual felicity the natural philosophy of fireplaces, and described the stove since called by his name. In the same year, he prepared, in conjunction with Dr. Kay (now Sir James Shuttleworth) and Dr. Southwood Smith, a report on the fevers of London, in which stress was laid upon the ventilation of dwellings as the main preventive of fever. In 1840, he was deputed by the Poor Law Commission to examine and report on the fevers in Glasgow and in Edinburgh, and gave a very full exposition of the bearing of sanitary means in preventing disease. He made known his ventilating chimney-valve, and planned machinery on a great scale for public buildings. He subsequently invented a smokeless grate, on the principle of feeding the fire from below, instead of throwing coals on the top—the greatest improvement yet made in the open grate. For a number of years the pressure of his professional work and his connection with public bodies prevented him from re-editing and completing his *Physics*, which had gone out of print. On retiring from practice, about eighteen years ago, he entirely published a new edition of the work on *Warming and Ventilating*, containing a full account of all his latest inventions. In 1861, appeared *A Survey of Human Progress*, full of interesting and enlightened views on improvement generally. In 1864, was published Part I, of the long-promised revision of the *Physics*; this was followed by Part II, which contained the subjects of Optics and Astronomy for the first time, and also an interesting supplement, entitled *Arithmetic Simplified*. His last publication was a small work on National Education, which came out in 1870.

In the year 1859, he expressed a wish to Provost Webster, of Aberdeen, to make a contribution to Marischal College in aid of a course of lectures on Natural Philosophy, to be available to young men not regular students of the University. The union of the two Aberdeen Colleges interfered with the project; and a few years later, he gave a thousand pounds to the united University, to provide a scholarship in Natural Philosophy. This was speedily followed by the same gift to each of the three other Scottish Universities, and for Aberdeen a farther gift of five hundred pounds to the Mechanics' Institution. In 1869, he gave two thousand pounds to the University of London for the foundation of a scholarship. In London, Mrs. Arnott had already given a thousand pounds to each of two colleges for young ladies, to institute scholarships in natural philosophy. Two years ago, Dr. Arnott intimated, through Dr. Lyon Playfair, that he meant to repeat his gift to the Scottish Universities; but in consequence of a fall, by which his head was severely injured, his faculties were permanently impaired, and he was no longer capable of continued thought or decision. An attack of cold in 1858 had permanently affected his hearing; but otherwise, his last years were characterised by his constitutional good health, mental activity, and flow of spirits.

Dr. Arnott's genius showed itself in a very unusual combination of inventive power with the art of popular exposition. His greater inventions include the "water-bed," for protection against bed-sores—an effectual preventive of the sloughing of the skin. He was full of minute mechanical contrivances, both in his profession and out of it. That the public might get the full benefit of his inventions, he never took out a patent.

Equally remarkable is the expository power which recommended the *Physics* as the most popular work on natural philosophy ever produced; It will long be a model of perspicuous and interesting scientific style, and, by being brought up to the latest discoveries, might still compete to advantage with the host of popular compendiums of natural philosophy.

Dr. Arnott's bent of mind was strongly towards human improvement in every department of things. He was the intimate friend of all the zealous reformers of his time, and took an active part more especially in sanitary and in educational advancement. In the University of London, he was the advocate of scientific studies as opposed to the exclusive classical system, and was one of the chief promoters of the new scientific degrees in the University, in which also he founded a valuable scholarship for Experimental Physics.

For many years, Dr. Arnott had given up medical practice, in order that he might devote himself to the scientific subjects, and enjoy more completely social intercourse. He had a large circle of friends in and out of the profession. His conversational powers, his large range of scientific knowledge, his readiness to impart this knowledge, and his geniality of manner, will be long remembered by those who knew him, and who now regret his loss.

MAJOR BUTLER MORGAN, M.R.C.S., L.S.A.

Mr. Major Butler Morgan, a member of the British Medical Association, died on February 5th, at Lichfield. For the last two years, he had been troubled with loss of appetite and nausea, which, in the last few months, had reached the extent of actual vomiting occasionally. Latterly, his symptoms gave no room for doubt that he had a cancer in the stomach. Always active, and loving his work, he continued to visit and see patients at his house till January 2nd; but on the next day he remained in bed, and never left his room afterwards. He gradually lost strength, till, on February 3rd, his ideas began to be a little confused; then the ordinary symptoms of serous effusion on the brain set in, and he died early on the morning of the 5th.

He was born in Lichfield, in 1802, and was apprenticed to his uncle, whom he joined in practice, and ultimately succeeded. He finished his medical studies at Trinity College, Dublin, having been attracted to Ireland by the comparative abundance of subjects for dissection there, at a time when the medical schools in England were very scantily supplied. In Dublin, he was a fellow-student of the late Dr. G. Evans, of Birmingham, and between them a very firm and lasting friendship ensued.

Mr. Morgan had a large mixed dispensing town and country practice, and his opinion was highly valued by his brother practitioners, especially in midwifery cases. He never lost a patient in childbirth, until he had been fifty years in practice, and attended several thousand cases.

He was one of the first practitioners in the midland counties to set the example of charging for visits, instead of only for medicines. Out of this change a remarkable trial arose, from the refusal of the executors of a patient to pay the bill. The visits had been very numerous, and the charge was made for professional attendance and advice, including medicines. The judge ruled that it was "preposterous to suppose that a medical man must send in to his patients gallons of physic, which were not really wanted, to enable him to charge such a sum as would repay him for his time and trouble;" and that the innovation was "a vast improvement on the old system." The trial was gained, and the bill paid, with costs.

Besides his professional work, Mr. Morgan was an ardent politician, and, in his earlier days, always to be found in the heart of the fray; and though he retired from active political strife, in the latter years of his life, he still remained a staunch Conservative. He twice filled the office of mayor. About twenty years ago, he was made a deputy-lieutenant for the city and county of Lichfield. The honour of an appointment as justice of the peace was offered to him, but declined, on the ground of increasing professional work. He was a trustee for many of the charities for which Lichfield is famous, and was an alderman and member of the Town Council at the time of his death.

WILLIAM VESALIUS PETTIGREW, M.D., F.R.C.S.

Dr. William Vesalius Pettigrew, who died on February 13th, aged 58, was the second son of a well-known medical man, Mr. T. J. Pettigrew, F.R.S. His grandfather was also in the profession, a surgeon in the Royal Navy, who had settled in practice in London. Dr. W. V. Pettigrew was educated at Westminster School, and, proceeding to his medical studies under the direction of his father, he attended the Windmill Street School of Medicine, and Charing Cross Hospital. He passed the College examination in April 1837, and then went to Glasgow, where, early in 1839, he took the M.D. degree. Returning to London, he established himself in practice in Chelsea, and also soon became known as a teacher and lecturer in anatomy and physiology. His first regular employment in the medical schools, in this capacity, was at Grainger's School of Medicine, in the Borough. Afterwards, for many years, he was one of the lecturers at Mr. Lane's School of Medicine, in Grosvenor Place. In 1844, he was made an honorary Fellow of the Royal College of Surgeons of England; and he became a Member of the Royal Medical and Chirurgical Society, and of the Royal Institution. For many years he enjoyed an extensive and lucrative practice. In 1866 and 1867, his health painfully yielded, both mentally and physically, so that he was compelled to retire. Although subsequently somewhat restored, he had since been obliged, by increasing physical weakness, to keep in irksome idleness, a mind naturally most vivacious and active. He died at his residence. Colebrooke Lodge, Upper Norwood, of bronchitis.

Dr. Pettigrew married first, and very early, a lady, who died within a year, leaving a son; and, secondly, Frances Mary, daughter of Thomas Moore, Esq., of 5, Dorset Square, who survives. He leaves, also, a second son (now in India), and three daughters. His first son died a few years since, whilst a medical student.

ROBERT BRETT, M.R.C.S., L.S.A., Stoke Newington.

The unexpected notice of the death of Robert Brett, of Stoke Newington Green, who died on Tuesday, February 3rd, aroused a wide-spread feeling of sorrow, such as is seldom called forth by the loss of a medical practitioner, however eminent in his profession, or however beloved by his patients. Robert Brett studied at St. George's Hospital; and soon after passing the College and Hall, in 1830, he settled in general practice in Stoke Newington, starting as assistant to his uncle, Mr. Reynolds. Here he remained steadily working, hardly ever leaving town for a day, excepting for the sake of attending the Church Congresses during the past few years, and gradually winning the hearts of those around him, until a sudden exacerbation of symptoms of failing strength and cardiac dropsy culminated in congestion of the lungs, and created a blank in the northern district of London, which was indicated by the wonderful funeral which took place on the next Saturday. Following the plain hearse was such a stream of carriages, and such a company of mourners, as has, probably, never before been seen at a doctor's funeral. The thronged and hushed church, to which admission was only by ticket, the silent crowds in the streets, and the closed shops and blind-shrouded windows, along the route from St. Matthias's Church to Tottenham Cemetery, were sufficient evidence of the respect and affection felt for the man who, for forty years past, had laboured unremittingly for the welfare of his parish, and had become one of the leading spirits of that part of London. Scores of eminent clergymen, and other distinguished men, attended from considerable distances, anxious to show their sorrowing respect for their departed friend.

Mr. Brett was, from his earliest childhood, a devoted member of the Church of England. His many published devotional works are known and highly valued throughout the extent of the Anglican communion, whilst to his efforts mainly—although never, by any means, a rich man—is due the establishment of many churches in the north of London; and, for years past, no great church gathering was deemed complete, without the presence of his fine form and cheery voice.

Perhaps the work of most interest to the readers of a medical journal, was the foundation, in 1864, of a religious society amongst medical students and practitioners, which, under the name of "Guild of St. Luke the Physician," has been quietly working on under Mr. Brett's guidance as provost, until it now numbers over seventy members. The object of this guild was to furnish students who had been trained in, or subsequently embraced, strict Church of England principles, with the means of continual religious sympathy and intercourse during their London life at the schools, and it is believed that the object has been, to a great extent, satisfactorily achieved. While referring, for fuller particulars, to the leaders and long obituary notices of our ecclesiastical contemporaries, these remarks may be fitly concluded in the words of one of our most famous surgeons:—"To have known Robert Brett, is to be reminded of one's responsibilities and deficiencies. He was indeed a type of a true Christian gentleman."

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, February 26th, 1874.

Bond, George Weddall, Pulham St. Mary, Norfolk
Pilkington, Henry Oldfield, Lime Street, Preston

The following gentlemen also on the same day passed their primary professional examination.

Collins, Henry Abdy, Guy's Hospital
Rygate, Brougham Robert, London Hospital
Sincock, John Bain, London Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

ATCHAM UNION, Salop—Medical Officer for the Alberbury District: £30 per annum.

BLOOMSBURY DISPENSARY—Resident Medical Officer. Applications, 16th instant, to F. Latreille, Secretary.

BRIDGWATER UNION—Medical Officer for No. 8 District: £56 per annum.

BRISTOL GENERAL HOSPITAL—Assistant House-Surgeon: £50 per annum, board, lodging, etc. Applications, 20th instant, to Henry Fox, Sec.

EDENDERRY UNION, King's County—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rhode Dispensary District; £120 per annum, and fees. Applications, 9th instant, to David Kerr, Hon. Sec.

EDMONTON URBAN SANITARY DISTRICT—Medical Officer of Health: £30 for one year. Applications, 14th instant, to W. Pulley, Clerk.

HOLBEACH UNION, Lincolnshire—Medical Officer for the Sutton Bridge District: £20 per ann., and fees. Applications, 16th instant, to E. G. Ayliff, Clerk.

HORTON INFIRMARY, Banbury—Resident Dispenser and Assistant Secretary. Applications to G. A. Hewett, Esq., Oxford Road, Banbury.

IDLE URBAN SANITARY DISTRICT—Medical Officer of Health: £40 per ann.

LEICESTER UNION—Medical Officer for the Workhouse: £100 per annum.

LIVERPOOL ROYAL INFIRMARY—Assistant-Surgeon. Applications, 11th instant, to Edward Gibbon, Chairman.

MIDDLESEX HOSPITAL—Assistant Physician; Assistant Obstetric Physician; Dental Surgeon. Applications, 31st March, to the Weekly Board.

NARBERTH UNION—Medical Officer for District No. 1, and the Workhouse: £35 and £20 per annum, and fees. Applications, 21st instant, to John Thomas, Clerk.

NORTH LONDON CONSUMPTION HOSPITAL—Physician. Applications, 15th April, to W. Hornibrook, Sec.

NOTTINGHAM GENERAL HOSPITAL—Physician. Applications, 10th instant, to E. M. Kidd, Sec.

ONGAR UNION, Essex—Medical Officer and Public Vaccinator for No. 1 District: £105 per annum, and fees. Applications, 24th instant, to Charles Mott, Clerk, Chipping Ongar.

QUEEN'S HOSPITAL, BIRMINGHAM—House-Physician and House-Surgeon: £50 per annum each, board, lodging, etc. Applications, 21st instant, to Walter Young, Secretary and General Superintendent.

RHAYADER UNION—Two Medical Officers: £40 per annum each, exclusive of vaccination and extra medical fees. Applications to John Jarman, Clerk.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN—Assistant to the extra Physicians: £52:10 per annum. Applications, 21st instant, to John Henry, Hon. Sec.

RUGBY UNION—Medical Officer for the Workhouse: £50 per annum.—Medical Officer and Public Vaccinator for the Rugby District: £50 per annum, and fees. Applications, 16th instant, to G. V. Hefford, Clerk.

SALOP AND MONTGOMERY COUNTIES LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, increasing to £120 at end of first year, with board (exclusive of wine and spirits) and apartments. Applications, 10th inst., to C. de Courcy Peele, Esq., Shrewsbury.

TOWCESTER UNION—Medical Officer: £60 per annum, exclusive of the usual extras.

ULVERTONE UNION, Lancashire—Medical Officers and Public Vaccinators for the Hawkshead and Coniston Districts: £20 per annum, and fees, each. Applications, 11th instant, to J. S. Sykes, Clerk.

The announcement of a vacancy in the office of House-Surgeon to the Lincoln General Dispensary, made in last week's Journal, was an error.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY ....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 7 P.M. One Hundredth and First Anniversary; Awardment of Medals; Dinner, etc., at St. James's Hall.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. G. Gaskoin, "On the Relations of Asthma to Cutaneous Disease"; Dr Haynes, "On the amount of Carbonic Acid found by experiment in the Air on board Wooden Frigates." Mr. Savory will show the Upper and Lower Jaw Bones from a case of Necrosis from Phosphorus.

WEDNESDAY.—Epidemiological Society, 8 P.M. Inspector-General Robert Lawson, F.R.C.S., "On errors in the usual method of Investigating the Causes of Epidemics."

THURSDAY.—Hunterian Society (London Institution), 7.30 P.M.: Council Meeting. 8 P.M.: Dr. Barnes's Inauguratory Address; Mr. Reeves, "Some Cases of Excision of the Hip- and Knee-Joints": Mr. Corner, "Excision of the Elbow"; Mr. Rendle, "Excision of the Hip-Joint."

FRIDAY.—Clinical Society of London, 8.30 P.M. Adjourned debate on Mr. Prescott Hewett's address on "Pyæmia"; Dr. Buzzard, "Case of General Paralysis (both sides of face, from extremities, respiration, deglutition), recovery under antisyphilitic treatment."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. WADE (Wakefield).—Duly received. Many thanks.

MR. SPENCER WATSON.—If the advertisement be repeated, it will call for comment. We incline to think it an inadvertence.

MARSEUNIENSIS.—1. Hawksley's sphygmograph is one of the best. 2. Murray and Heath.

M.B. (Stirling) will find particulars of the uses and doses of the Eucalyptus Globulus in a past number of the JOURNAL. A summary of existing knowledge, by Dr. Sydney Ringer, will be found in the *London Medical Record* of Feb. 19th, 1873.

S. C. (Looe).—We know nothing of the financial standing of the Edinburgh Life Office referred to by Mr. Garland in his proposition, "Pensions to Medical Men and their Widows", inserted in the JOURNAL of July 12th, 1873.

CONTAMINATION OF AERATED WATERS.

SIR,—The paragraph in your issue of February 14th, and the letter of M.D., F.R.S., with the analysis following, are, we think, if unanswered, calculated to cause unnecessary alarm as to the purity of the aerated waters that may be obtained in London.

We are at a loss to understand why syphons should have been selected for examination. The whole of the fittings of a syphon, as they are now constructed, are made of tin. The water, when in the syphon, is in contact with a small disc of that metal about the eighth of an inch in diameter, and in being drawn off, passes through the tin outlet as it does in being filled. We are of opinion that the lead must have been in the water prior to the syphons being filled with it. It may be said that this is of small importance; but it becomes of the greatest importance if we are to suppose that all soda-water in bottles as well as syphons is impregnated with lead to a dangerous degree. No manufacturer anxious to supply waters free from impurities is likely to use either leaden cistern or leaden pipes. Tin or silver are the only metals with which the water need remain any time in contact.

We are, etc., MAY DAVIS & Co.

*** We fear there is a geat deal of carelessness prevalent in this matter, but no doubt it is far from universal. A good many of the aerated waters which were examined for the BRITISH MEDICAL JOURNAL some years since were very carelessly made, did not correspond to their titles, and were not made with pure water.

PORTABLE HOSPITALS.

A Medical Officer of Health asks for the address of any firm that manufactures "Portable Hospitals", such as would be suitable for a rural sanitary authority to purchase, for moving from village to village, according as a case of an infectious nature shows itself.

A SPECIES OF THE GENUS "PROVIDENT DISPENSARY".

SIR,—I enclose with this note the report of an inquest held by Dr. Lankester during the past week. I desire to make the case known to you, and to point out some features of it which do not appear in the newspaper; and to explain how the unqualified person, who rendered pseudo-medical advice to the patient, has been introduced to the public in the guise of a duly qualified practitioner, and how he has been enabled in this respect to deceive—and continues to be enabled to deceive—the neighbouring poor. The explanation of these points you will find to be a contribution to the history of "Provident Dispensaries" of the most interesting kind: not, indeed, to the history of that species of Provident Dispensary which you have lately been describing to your readers, but of a kind far more numerous and worthy of the close attention of the profession.

A few months since, a corner shop in the Copenhagen Street, referred to in the report, was fitted up as a "Provident Dispensary"; so the inscription over it declared. On the windows the following notices were painted, "Surgical Operations, Midwifery, etc.", and a further inscription set forth how medical advice on these and other cases might be obtained for the very trifling sum of from one to three shillings and sixpence per week, payable in advance, and during sickness only. In addition to these notices, handbills were distributed showing the benefit conferred upon the poor by such an institution, and announcing Mr. H. Ker as "Resident Medical Officer". Mr. Ker, however, not being a qualified practitioner, was deemed to have offended the law by allowing this brevet rank to be conferred upon him; and accordingly he was summoned to the Clerkenwell Police Court and fined. It then transpired that the proprietor of the establishment is Mr. T. Massey Harding, a Fellow of the Royal College of Surgeons by examination, resident more than a mile from Copenhagen Street, and that Mr. Ker is his assistant. I shall leave you to judge from the remainder of this letter in what sort Mr. Ker can be described as the assistant of Mr. Harding.

In visiting another patient, I occasionally prescribed for the child of the landlady of the house, a poor widow, who endeavoured to support a numerous family by letting lodgings. At that time the child was suffering from a trifling general derangement, and when I had advised in the case six or seven times, the mother, feeling herself unable to discharge such fees as she anticipated I should demand of her, desired me to discontinue my attendance. I last saw the child about seven days before death. The next day it appeared to be very ill, and its mother (bearing in mind that she could obtain the advice of a Fellow of the College of Surgeons for the trifling consideration of one shilling a week) took it to the "Provident Dispensary" above alluded to. Here it was seen and prescribed for by Mr. Ker, who ordered that it should be taken home and visited there. He saw it the next day, and on the morning following his visit he was again hastily summoned to the house, when he found the patient dead. The mother demanded a certificate. Mr. Ker replied that he must send to the Registrar-General for a book of forms; call again. The mother then applied to me for a certificate, and I referred her back to Mr. Ker. He then gave one on the usual form, assigning death to: 1st cause, "Infantile laryngismus"; 2nd cause, "Convulsions"; it was signed "H. Ker" (in writing which, I believe, from comparison with letters written by him, to he Mr. Ker's writing), pro T. Massey Harding, F.R.C.S." (this in writing not like that of the "H. Ker"). This certificate the registrar refused to register, Mr. Harding never having seen the case in question. Hence the inquest.

I examined the body on the coroner's order, and I found marked congestion of the brain; and in the lungs general acute bronchitis and acute congestion, so much of the latter that only the upper lobe of the right lung yielded more than the most trifling crepitation. The account given of the death by the mother was that she took the child from its bed in early morning, that it gasped once, its breath stopped, and that with a slight struggle it died. After hearing the evidence, Dr. Lankester said that the certificate, though informal, stated the cause of death correctly: thus, any question of neglect or malapraxis on the part of the attendant was put aside. The symptoms described, to be sure, come near enough to a description of *laryngismus stridulus* to admit of death being ascribed to it, if one have any predilection in favour of that disease; but after the information afforded by the *post mortem* examination there can be no doubt but that the child was either already dead when it was taken up (when the change of position would cause an expiration), or that it was at the point of death at that time; and that the death was the result of acute congestion, chiefly accomplished during the cold hours of early morning. Pending the inquest, Mr. Ker came to me and told me that the child had been suffering from croup; that he had looked down its throat and could see no white membrane there; and that he had ordered turpentine stupes to be applied to the neck, and such other remedies to be used as he considered advisable in the case. Had this poor woman's child been subjected to intelligent treatment in the first instance, need it have died?

It must be a very comfortable reflection to the other Fellows of the Royal College of Surgeons that there is at least one of their number who, having expended much time and money (and talent, too, no doubt) in obtaining the highest surgical qualification which can be obtained in the United Kingdoms, is so philanthropically inclined that he will give the benefit of his advice to the poor for the nominal fee of one shilling a week. The medical profession is the most charitable of professions; and it only needs that Mr. Harding should render his *personal* services for that fee to add one more stone to the monument which the benevolence of his brethren has raised through successive generations, in witness of their claims to be considered the benefactors of their fellow-men.

I am, etc., J. ASHBURTON THOMPSON.

207, Caledonian Road, N., Jan. 22nd, 1874.

NOTICE TO ADVERTISERS.—Advertisements for insertion in the BRITISH MEDICAL JOURNAL, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

A WARNING.

SIR,—As I have had some years' experience of government medical work in the West Indies, will you kindly permit me to caution young medical men, who may be on the look-out for colonial appointments, against a too ready acceptance of public service in that part of the world. It has lately come to my knowledge that the Governor of the Leeward West India Islands, of which Antigua is the chief, is at this moment endeavouring, through the Colonial Office, to induce medical practitioners to go out to that colony under promise of government patronage. The bait held out, however, is, I can assure my *confrères*, by no means attractive to a man possessing either ability, ambition, or a spark of independence. The salary offered by the Governor of the Leeward West India Islands to district medical officers is, I believe, £200 a year, supplemented by the magnificent scale of fees annexed. For this the doctor is to be the absolute servant of the Governor, to do his bidding at all times, and hold himself ready to carry out whatever instructions he may receive from the local government (virtually a despotic one), his professional (?) duties perhaps varying from those of an inspector of nuisances to the functions of a monthly nurse. Such being the attractive side of government employ in the West Indies, I will now briefly glance at some of the drawbacks to professional life in those colonies. The climate, however prudent one may be, has a decidedly enervating and weakening effect on the constitution, so that, as in my own case, even should "yellow-jack", ague, intermittents, etc., be escaped, yet, after a few years' residence in the continued high temperature of a tropical climate, the system, if not timely recruited by change to a more bracing air, generally becomes permanently impaired. Living, unless the diet be limited to native produce, is dearer than in England. It is absolutely necessary to keep one, more frequently two, horses, and this entails an annual cost of from £30 to £50. House-rent would, at the lowest estimate in the country, absorb another £30, thus leaving a balance to rely on, out of the £200, of £140 or £120 for all the expenses of housekeeping, etc.

And let not the sanguine medicus delude himself with the idea of making a fortune by private practice. The West Indies are no longer the El Dorado of enterprise they were in the days of slavery. Since emancipation, money has been scarcer and scarcer, till now, with the exception of one or two planters tolerably well off, the bulk of the better classes are almost as impecunious as the "poor white folks" of Mrs. Beecher Stowe. As to the Negroes, they look to "Bucra" to supply all their wants "free gratis for nothing", and seldom dream of paying a doctor.

These being the brilliant prospects in store for those who may unwittingly offer themselves for this service, I will not trespass further on your space beyond expressing a hope that, so far from medical men being found in this country ready to sell their hard-earned professional knowledge, to say nothing of health and energy, at so cheap a rate, they will rather join me in sincerely sympathising with our unfortunate brethren, who, from circumstances beyond their control, are compelled for a mere pittance to spend the whole or best part of their lives in an unhealthy climate, cut off from much that makes life enjoyable in more favoured countries, working under a thankless and often oppressive government, for a generally unappreciative and undiscerning people.

I enclose my card, but for the present beg leave to sign myself,

Yours, etc., ONE WHO HAS BEEN VICTIMISED.

London, February 16th, 1874.

Tariff of Medical Fees offered to District Medical Officers by the Governor of the Leeward West India Islands.

A visit within a mile of practitioner's house	£0	2	0
Ditto by night, special summons	0	3	0
Ditto beyond a mile, extra per mile	0	0	8
Advice at practitioner's house	0	1	0
Midwifery, for each case	0	10	0
Ditto, instrumental, extra	9	10	0
Extraction of teeth and minor operations at dispensary	0	1	0
Treatment of compound fractures of thigh	1	0	0
,, ,, ,, or compound dislocations of leg.	1	0	0
Amputations of leg, arm, foot, or hand	1	0	0
Operation of strangulated hernia	1	0	0
Treatment of simple fracture, or dislocation of thigh or leg.	0	16	0
Minor amputations	0	10	0
Treatment of dislocations or fractures of arm	0	7	6
Hydrocele ; palliative operation	0	4	0
,, radical operation	0	7	6
Paracentesis abdominis	0	5	0

THE DAY OF REST.

IN answer to "Sabbatarian":—A Sabbath (or a day equivalent) is observed by nearly every religious sect which has attained celebrity in the world. One day in every seven was dedicated to the sun. The first, I believe, religious system of which we have any record is Sabæism or the worship of the stars, including, of course, the planets. The sun taking a natural predominance over all the others, received the chief adoration, and we find that its worship enters into the religion of both Buddhism and Brahmanism. The Egyptians worshipped the sun under the name of Rê. The Persians worshipped a first principle which they supposed existed in the sun, which they called Mithras. The Romans raised altars to Mithras. The sun was also worshipped as Apollo and Phœbus, and the Massagetæ sacrificed horses to it.

I beg to refer Sabbatarian to R. Picart's *Cérémonies et Coutumes Religieuses, etc.*, in which he will find a description of the various festivals kept in honour of the sun by various religionists, and a notice of the days set apart for its worship. M. Picart gives a full description of these religious ceremonies. I have just been reading his account of the devotion of the Singalese (Buddhists); and, with regard to the Brahmins, he says, "The beauty of the sun and the benefits which it renders to the world by its great light and by the warmth which it animates all nature, has been one of the first causes of idolatry. The Brahmins, not content with giving its name to the day Sunday, celebrate in its honour a festival which they call *Pongol*. Brahmins of the first caste only consider this as a prosperous and happy day, but the *Soudras* keep the festivals, etc."

The Arabians appear to have paid direct worship to the sun (Job, xxxi), and I need only remind the reader of Baal of the Phœnicians, Malect or Milcolm of the Ammonites, and the Hadad of the Syrians. If Sabbatarian intends to compete for the prize offered by the Swiss Society he should consult the following works: Bayle's *Dictionary;* N. Picart (to which I have referred above), *Critici Sacri on Exod.;* Heylin's *History of the Sabbath;* Buxtorf, *De Synag.;* Paley's *Moral and Political Philosophy;* James, *On the Sacraments and Sabbath;* Whately's *Thoughts on the Sabbath;* Wardlaw, *On the Sabbath;* Maurice: Michaelis; Oelher: Winer; Bähr; Kalisch; and perhaps, above all, M. Proudhon's *De la Célébration du Dimanche*, and Dr. Hessey's *Sunday*—the Bampton lecture for 1860. Nearly all these works are referred to in Dr. William Smith's *Dictionary of the Bible.*

Dr. Thos. Inman (*Ancient Faiths*) attempts to prove that the Sabbath is not of divine origin. I have read his article upon this subject, but have derived no information from it. He is an avowed Gnostic, and has not made any good use of his "much learning". I will not trespass farther upon your space. Trusting I have given your correspondent a clue from which he may work out his subject,

I am, etc., E. NOBLE SMITH.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle: The North British Daily Mail; The Blackburn Times; The Glasgow News; The Glasgow Herald; The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. Broadbent, London; Mr. T. Holmes, London; Mr. Thurston, Ashford; An Associate; Dr. Payne, London; Dr. Lewtas, Paris; Dr. Alglave, Paris; The Secretary of the Hunterian Society; Dr. Duffin, London; Dr. Greenfield, London; Dr. Tilt, London; Mr. Nelson Hardy, London; Dr. J. W. Langmore, London; Dr. Procter, York; Dr. O. T. Woods, Halton, Warwick; Dr. George Johnson, London; Dr. Edis, London; Dr. H. K. King, Welwyn; Dr. Morris, Spalding; Dr. Charlton Fox, Redditch; Dr. Carrol, New York; Mr. Wagstaffe, London; Dr. Myrtle, Harrogate; Dr. Marcet, Nice; Dr. Farquharson, London; Mr. G. Berry, Colsterworth; Mr. Berkeley Hill, London; Mr. Charles A. Rayne, Oxford; Mr. W. H. Twyning, Hereford; Dr. Steele, Liverpool; Dr. Hardie, Manchester; Mr. W. Toye, London; Dr. Wade, Wakefield; Mr. Jacobs, London; Dr. Symes Thompson, London: Dr. Jagielski, London; Mr. Spencer Watson, London; Dr. T. Chambers, London; Dr. C. H. Crawford, Stafford; A Member; Dr. R. Barnes, London; Dr. Whistler, London; The Director-General of the Army Medical Department; Dr. Spencer, Bristol; The Military Secretary, India Office; Mr. F. Gordon Brown, London; Mr. J. Hinds, Halstead; The Secretary of the Harveian Society; Dr. W. S. Playfair, London; Mr. Beresford Earle, Winchester; Dr. Bell, Nelson-on-Marsden; A. B.: Dr. Drewry, Walsall; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Bartleet, Birmingham; Dr. Squire, London; Our Dublin Correspondent; Mr. E. Stephens, Ilminster; Dr. W. Carter, Liverpool; Dr. H. Mac Cormac, Belfast; Mr. H. Kettle, Smallheath, Birmingham; The Secretary of the Epidemiological Society; Mr. R. Harrison, Liverpool; Dr. A. S. Taylor, London; Mr. W. F. Lill, Lincoln; Sir Henry Thompson, London; Mr. Oglesby, Leeds; Mr. Merriman, London; Dr. Wiltshire, London; The Secretary of the Royal Medical and Chirurgical Society; Dr. Sutherland, London; Mr. D. Kent Jones, Beaumaris; Dr. Crichton Browne, Wakefield; Mr. Lennox Browne, London; Mr. John Croft, London; Dr. Lauder Lindsay, Perth; Dr. Durrant, Ipswich; Dr. Louis Lewis, London; Mr. A. Godrich, London; Dr. Protheroe Smith, London; Mr. Willett, London; Mr. W. Brown, Callington; Dr. Bryan, Northampton; Dr. A. P. Stewart, London; Mr. Lund, Manchester; Mr. Buckenham, Cambridge; Mr. W. Bates, Birmingham: Dr. Robinson, Dublin; Dr. Wiltshire, London; Mr. Oakley Coles, London; Dr. Shingleton Smith, Bristol; X, Junior United Service Club; Mr. T. M. Stone, London; etc.

BOOKS, ETC., RECEIVED.

Observations on the Pathology and Treatment of Cholera: the results of forty years experience. By John Murray, M.D., Inspector-General of Hospitals. London: Smith, Elder, and Co. 1874.

Responsibility in Mental Disease. By H. Maudsley, M.D. London: H. S. King and Co. 1874.

A Manual of Psychological Medicine. By J. C. Bucknill, M.D. London: J. and A. Churchill. 1873.

Lectures on Fever, delivered in the Theatre of the Meath Hospital. By William Stokes, M.D., D.C.L.Oxon., F.R.S. Longmans, Green, and Co. 1873.

Report on Measures adopted for Sanitary Improvements in India from June 1872 to June 1873: with Abstracts of Sanitary Reports for 1871.

A Dictionary of Medical Science. By R. Dunglison, M.D., LL.D. J. and A. Churchill. 1873.

The Oration on the Occasion of the Centenary of the Medical Society of London. By John Cockle, A.M., M.D London: H. K. Lewis. 1874.

THE GOULSTONIAN LECTURES
ON
THE ORIGIN AND RELATIONS OF NEW GROWTHS.

Delivered at the Royal College of Physicians.

By J. F. PAYNE, M.B.Oxon., F.R.C.P.,
Assistant-Physician to St. Thomas's Hospital.

LECTURE I.—*Continued.*

Comparison of Tumour-growth with Hypertrophy and Hyperplasia.

THE formation of new growths has, doubtless, many points of contact with the process by which existing parts of the body are increased in size. In the first place, those tissues or parts of the body which are specially disposed to hypertrophy are, with certain exceptions, also very liable to become the seat of tumours. For instance, no tissue is so constantly liable to hypertrophy as the adipose; and precisely here do we find very common and sometimes enormously large tumours. No doubt, the increasing skill and confidence of surgeons has made extremely large tumours less common of late years; but the largest tumour (so far as I know) on record is a fatty tumour, of which a drawing is preserved in the museum of the Harvard University at Boston. The description of it may be not without interest.

An enlarged drawing of a woman, in whom there was formed a tumour that was, perhaps, as large as any that has ever been recorded. The estimated weight of the tumour alone, at the time of her death, was not far from 275 lbs., and the weight of the patient without it was probably not 100 lbs. The age of the patient at the time of her death, in 1854, was 36 years. In 1838, being then in the sixth month of her first pregnancy, she was kicked in the right iliac region by a cow, and to this accident she always referred her troubles. She, however, went her full time, and was confined in June, suffering afterwards habitually from soreness of the side and weakness in the loins. In September, 1840, a second child was born. Six weeks before labour, she lifted a heavy kettle, swooned, and, on recovery, found a small tumour protruding from the vagina. Her health was delicate for the next eleven months. In 1841, she aborted at the third month, after a fright. Three days afterwards, she took cold, and had tenderness and fulness of the abdomen, the right side becoming so sensitive that the bed-clothes were oppressive.

In 1843, a dead child was born at the full period, and after a severe labour. The vaginal tumour at this time projected three or four inches beyond the labia, was one inch and a half to two inches in diameter, and its attachment was beyond the reach of the finger. Subsequently to this labour, the whole tumour sloughed off. Difficulty of passing the urine also followed, and the catheter was used for some months. During this attack, a soft immovable tumour was felt a little to the right of the linea alba, and almost filling the right side of the abdomen, and from that time the abdomen enlarged pretty rapidly for a year.

About four years after the tumour appeared in the abdomen, another showed itself in the right labium, extending to the nates. This last was soft and elastic, and, for a year or two, it could be returned within the pelvis or abdomen; but, subsequently, it enlarged *pari passu* with the abdominal tumour, and both fluctuated so distinctly that the case was thought to be one of dropsy. The tumours were tapped or incised eight times, but no fluid was discharged. The abdominal tumour had produced the most distressing dyspnœa, so that she could scarcely breathe except when on her hands and knees. As the tumour of the hip enlarged, however, the dyspnœa was relieved, as well as the general anasarca, and a numbness of the lower extremities, from which she had suffered much. At the urgent solicitation of the patient, the tumour upon the hip was opened and the finger passed in, but a soft tissue only was felt, very much like the omentum.

After the relief above referred to, the patient's health improved. She again became pregnant, and, in 1848, was delivered at the full period, artificial means being required, and the child dying during the labour. When this was over, she returned to her former condition.

Before this last pregnancy, when she was in a sitting posture, which she sometimes attempted, the abdominal tumour rested upon her thighs and as far as her knees; there being no marked increase of size before delivery, nor diminution afterwards. The tumour of the hip was fifteen inches long, ten inches in diameter at its longest part, and four inches in diameter at the point of its connection with the perineo-ischiatic region.

About 1850, the patient weighed, on a platform-scale, 269 lbs. Her greatest weight before marriage, and when in full health, was 108 lbs.; and, her flesh being very much reduced, her own weight was estimated, at the above date, at 90 lbs., and that of the tumour at 179 lbs. From this time, or from the year before, she was confined entirely to her bed as long as she lived.

In June 1851, when Dr. Buckner saw her, the circumference of the abdomen was 7 ft. 8 in., and the distance from the ensiform cartilage to the pubes 3 ft. 6 in.; the form of the abdominal tumour being regular and very prominent, so that the outline, if continued, would be rather ovoid than round. The tumour of the hip extended along the thigh, and measured 2 ft. 6 in. in length and 18 in. transversely. The circumference, longitudinally, was 4 ft., and that of the neck of the tumour was 2 ft. 2 in. It was of a regular, elongated form, and considerably larger at the upper extremity than the lower. Some slight mammillary elevations, however, existed upon the surface, but these were subsequently found not to differ from the rest of the tumour in structure.

During the last year of the patient's life, there was frequently a pustular eruption upon the surface of the posterior or ischiatic tumour, leading to superficial ulceration; but this would in time dry up and heal. With this exception, and those already referred to, her general health was usually good, and her functions were well performed; menstruation being regular as to time and quantity, though painful during the last few years. Towards the close of 1853, the cutaneous affection increased, her health failed, and she died in January 1854.

A necropsy could not be had; but Dr. Smith, in order to get the body into something like a coffin, removed the ischiatic tumour in the presence of her husband. Within it was a cavity into which he passed his arm to above the elbow. The arm was then passed to about the same extent upward into the pelvis and abdomen; and, with the other hand upon the tumour externally, Dr. Smith satisfied himself that the abdominal viscera were intact, and that the tumour was external to the peritoneal cavity. The two cavities contained eight pints of fluid; the one in the ischiatic tumour being evidently, in the opinion of Dr. Smith, a process from that of the peritoneum; and the two tumours, though entirely distinct externally, being portions of one and the same growth. The communication between the peritoneal cavity and the prolongation from it he believed to be through the sacro-sciatic notch; but to this view of the case Professor Delamater thought that there were objections. The ischiatic tumour consisted mainly of a soft adipose structure, interspersed with delicate layers of fibrous tissue; and, in bulk, the tumour was large enough to fill a common wash-tub. After the removal of the tumour, the genital organs and the anus, which were fully in view, were found to be somewhat drawn to one side, but otherwise unchanged. The abdominal tumour was not examined; but there can be no doubt, as Professor Delamater remarked, that it was mainly adipose. Professor Delamater finally remarks, that "the continued growth of these tumours was unabated to the end"; and, basing his computation on the above estimated weight of the tumour, he says "we shall get 268⅝ lbs. as the ultimate of the solid and fluid constituents of these abnormal productions. Drs. Johns and Beach estimate the entire weight at 275 lbs., which I have no doubt is within the truth". (*Catalogue of the Warren Anatomical Museum*, p. 642. Boston: 1870.)

The tumour admirably illustrates several of the laws of new growths, which we have endeavoured to trace. It arose in a tissue specially disposed to hypertrophy, in a part of the body where hypertrophy of this tissue is particularly liable to occur, as witness the extraordinary development of the Hottentot women; and from its causing absolute rest, even the ordinary waste of fatty tissue was reduced to a minimum. These conditions do not certainly at all explain the gigantic development, but they must be regarded as subsidiary causes.

Again, we sometimes see that even the special parts of organs which are liable to hypertrophy are also liable to become the seat of new growth. In the skeleton, for instance, a remarkable proclivity to disease is observed in the long bones at the termination of the shaft, or close to the junction of the epiphysis.[*] This is the portion which becomes enlarged in rickets, and it is also the most frequent situation for tumours. Some remarkable cases of multiple exostoses growing from these parts of the skeleton are on record; and as they illustrate in a striking manner the transition from overgrowth to new growth, one may be worth quoting. It has been published by my friend, Mr. Arnott, in the *Pathological Transactions* for 1872.

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[*] Virchow gives, as the usual position of cartilaginous exostoses, the upper end of the tibia and the lower end of the femur. In this case he suggests that the growth may come from the residual cartilage between the bone and the epiphysis, as most of these growths occur in young persons; but this would not explain the equally common occurrence of bony exostoses at the same parts. (*Die Krankhaften Geschwülste*, ii, 14.)

A girl, aged 18, in good health, observed a small swelling on the inner side of the knee, which was found to be a bony growth, of the size of a large hazel-nut, springing from the ridge leading to the internal condyle of the femur. On closer examination, similar tumours were found on the other side of the lower end of the bone, and in symmetrical situations on all the long bones of the leg. The patient died of the consequences of an operation to remove one of these tumours; and we had the opportunity of examining the skeleton. At the *post mortem* examination, I particularly noticed the situation of the extremely numerous exostoses, which grew from nearly every bone of the body. So far as could be traced, the skull, sternum, hands, and feet were free; but each of the long bones of the extremities had one or several growths springing from the typical situation which I have already indicated; that is, near the extremity, and close to the epiphysial junction. Each rib had similar growths in two situations, namely, near the costal cartilage in front, and near the head and tuberosity behind. The lateral processes of the lumbar vertebræ exhibited similar outgrowths, which were also found upon the sides of the vertebræ, and on several symmetrical parts of the pelvic bones.

Now, the overgrowth of bone here was so general, and so conspicuously confined to the typical situations in which general hypertrophy is seen, that it is surely not too much to regard the process as one which would have appeared as simple enlargement, had the bones been soft as they are at the time of life when rickets occurs. The question of rickets was raised, at the discussion which took place on this case, at the Pathological Society, and the obvious analogy was pointed out; at the same time, there was a general agreement that it could not be a case of this disease. Looking, however, at the very general distribution of the disease; at the fact that the red medulla of the spongy bone, which formed great part of the outgrowths, is probably concerned with blood-formation, and certainly has intimate relations with the general nutrition of the body, it is impossible not to see that there was a general disease, or condition of the body, of which the local disease was the manifestation. We may also remember that the age of the patient was just that at which the ossification of the epiphyses of the long bones, and that of the head and tuberosity of the ribs, takes places. This is a perfect example of the constitutional character of certain tumours, and of the absolutely imperceptible transition from hypertrophy to new growth.

In Mr. Arnott's words, "the tumours appear to be only exaggeration of normal development, at a time when it is at its acme of activity, by which the bones, during a sudden increase of growth, sprout out into fantastic displays of such growth." I confess I should describe this case as hypertrophy rather than new growth, thinking that the definite and peculiar form of the enlargements was due to the unequal resistance of the parts.

Lest I should be thought to have trespassed unduly on the field of the surgeon, let me select a very similar instance from among the diseases which traditional usage has assigned to our care. Enlargement of the lymphatic glands is well known to be an extremely common affection of the body, more especially during the period of growth, and this enlargement is sometimes merely transitory, sometimes chronic. The structure of the glands, thus enlarged, is not generally different from that of the normal glands. In another class of cases we have enlarged glands, in outward appearance, the same as these, but nevertheless differing, both in their minute structure and in their history. Either the newly-formed gland-tissue, by which hypertrophy is effected, is found to have an inadequate vitality, so that it speedily decays and becomes necrotic, in which case we call the change scrofulous; or else the newly-formed gland-tissue becomes hard, loses some of its cellular elements, and shows increase of the fibrous element between the cells, till there results a change, recognisable by external characters, as induration; and, by its minute anatomy, as increase of the intercellular substance, or stroma. These two conditions—scrofulous change and induration—are the ultimate stages of chronic enlargement, or hypertrophy, from which, to them, there is a perfectly gradual transition, and at particular stages of the disease it would be impossible to say, with certainty, what name ought to be applied. Whether the ultimate difference depends upon difference in the original structure of the body, or upon nutrition, or upon external influences, we are rarely able to say.

In all these cases the form of the gland is not altered, and it would be only by a somewhat strained use of terms that we could describe the enlarged organs as tumours. Let us now go a step further, and consider those cases in which the glands are not only enlarged, but in which, by thickening or inflammation of their capsules, and the connective tissue around them (periadenitis), the group of glands becomes adherent together, and a lobular mass is formed, which not only possesses sufficient physical coherence to be regarded as a definite tumour, but also has evidently a certain physiological unity, being subject to the same laws of morbid growth. Is it possible to avoid calling this a tumour, or new growth? Certainly, in the present state of science, every one would call this a lymphoma, while we should call an enlarged gland simply a case of hypertrophy. Yet it is quite certain that our powers of observation, at least, do not permit us to draw any line between the two. Nor is there, as I believe, any anatomical difference. One supposed distinction is the presence, in some cases, of peculiar elements—myeloid, or giant-cells—but these elements are found in many, if not in most, simply hyperplastic conditions of lymphatic glands. (*Transactions of the Pathological Society*, vol. xix, p. 401, 1868.)

If we now go a step further, and examine another class of cases, we shall find that, in specimens not differing very greatly from those last mentioned, the enlarged glands are in a direct connection with masses of newly formed tissue around them, more distinct and prominent than the thickening of the capsule. These masses of newly formed tissue penetrate or infiltrate the neighbouring parts, and, so far as they reach, convert them into similar structure. This is, of course, not a case of adenitis, or periadenitis, but of an infective, or what is generally called malignant, tumour. Nevertheless, there are such cases, in which the structure of these adventitious masses differs little, if at all, from that of certain parts of healthy lymphatic glands (*Transactions of the Pathological Society*, vol. xxiii, p. 248, 1872): so that what is anatomically a kind of hypertrophy becomes, in its mode of extension, an actual new growth, and, in its effect on the body, malignant or infective. Lymphatic structure may, however, show another peculiar mode of occurrence which, nevertheless, we cannot but call hypertrophy. That is to say, the tissue, similar to that of lymphatic glands in other parts of the body, may also be increased. Take the case recorded by Dr. Moxon in the *Transactions of the Pathological Society* (vol. xx, p. 369, 1869), which is a type of numerous others, where growths of similar anatomical structure were found to occur simultaneously in the lymphatic glands, spleen, tonsils, and follicles at the base of the tongue. All these parts contain normally the same tissue, viz., that which is called cytogenous connective tissue, or adenoid tissue, and the occurrence of masses of the same kind in all may then be considered as a hypertrophy. In Dr. Moxon's words:—

"The disease of these organs is the same in all, consisting of a new formation, which resembles the lymphatic gland tissue, but that the elements were larger in size. The relation of the disease to the structure and function of the parts affected, plainly points it out as constitutional; by constitutional, I mean belonging to the parts in their relation to the other tissues; in other words, pertaining to their nature and use in the economy. So far, the case is parallel to the not uncommon occurrences of multiple melanoses of the skin, or multiple cancers of bone, either of which examples will give us instances of malignant disease attacking at many points the same system of tissues, and that under such circumstances that we cannot suppose the tumours to have spread from any one of the diseased spots to the rest by infection or transplantation."

I would only remark that, while agreeing with Dr. Moxon's interpretation of the simultaneous occurrence of the growths in similar, not identical organs, I wish also to lay stress on the fact of the growth being, in all cases, presumably a hypertrophy, and quite as justly comparable to the multiple exostoses just mentioned as to multiple cancers; though in this case there was also infection of the contiguous part of the lung, so that it was infective or infiltrating, as well as multiple or generalised.

These instances may suffice to show that hypertrophy may give rise to products which resemble the most pronounced form of new growth in their distinctness, or their generalisation, and even in their infectiveness.

I would further point out, that tumour-production is like hypertrophy in other respects, viz., that both processes occur with a certain frequency in particular organs, as well as in particular tissues. This is, however, true only of organs that are subject to certain kinds of hypertrophy. It is not functional hypertrophy, that is to say, such as hypertrophy of the heart and muscles. It might be enough to say that the striated muscular tissue is one not at all disposed to new growth; but then the question would arise, Why should it not be so? This may, I think, be answered in two ways, viz., either by the principle stated just now, that expenditure of force is antagonistic to excessive growth, or that highly specialised tissues have little germinative power; but it is enough to see that, when hypertrophy is produced by functional activity (whatever the mechanism may be), it will be proportional to functional activity, and there will be no surplus for abnormal growth. But there is another form of enlargement, which I should like to call nutritive hypertrophy, were it not that, if the word hypertrophy be taken in its original sense, the expression is tautology. What I mean is, overgrowth dependent on nutrition, not on function. Uncomplicated instances of this are very rare; but it is singular that the most extraordinary instance on record of hypertrophy of the heart is of this kind, viz., that in the museum of St. George's Hospital, which weighed over four pounds, and where no cause of obstruction was discernible; but it is more constantly the case in such hypertrophies, for instance, as that of the thyroid gland, a part which is frequently the seat of new growth, as distinguished from enlargement.

Also, it is most strikingly true, that those parts which are subject to occasional or periodical enlargement, or on which the overgrowth is consequent to change, perhaps functional, in some other organ. Take, for instance, the uterus and mammary gland in women.

Whatever the mechanism may be, there is no doubt some mechanism by which these parts are especially disposed to abnormally rapid nutrition and activity of growth under particular circumstances. This machinery will, we know, from time to time, act blindly. The uterus will enlarge around a tumour, or a mole, and finally contract upon it, as in parturition; and the mammæ will often enlarge sympathetically with various affections of the uterus, not necessarily with pregnancy. (*Lee's Lectures on Midwifery*, p. 169.) Can we doubt that some disordered action of this mechanism is an important factor in the production of tumours in these parts, and that the remarkable frequency of new growths in the mammæ and uterus is partly thus to be explained?

[*To be continued.*]

CLINICAL LECTURE

ON

DISEASES OF THE EAR IN RELATION TO PYÆMIA AND CEREBRAL ABSCESS.

Delivered at St. George's Hospital.

By W. B. DALBY, F.R.C.S., M.B.Cantab.,
Aural Surgeon to the Hospital.

GENTLEMEN,—On December 30th, I was requested by Dr. Wadham to see a boy, C. H., 10 years old, who was admitted under him into the King's Ward on the day before, and who, among other things, was suffering from a discharge from the left ear; and it is in consequence of the important part which the ear-affection played in causing the boy's death, that I have the privilege of delivering the clinical lecture to-day. The child had been sent into the hospital, supposed to be suffering from ague, and I obtained from his mother the following account of his illness. Three months ago, he was in good health, when, during an ordinary cold, he became deaf in the left ear. He continued pretty well, with the exception of the impaired hearing, until two weeks before his admission, and at that time he had an attack of pain in the left ear, which, lasting for between two and three days, was succeeded by a purulent discharge, and, with the appearance of the discharge, complete relief from the pain. Three days subsequently to this, he had a shivering fit, and this was repeated each day for a week. Shortly after the first shivering, the pain in the ear returned, and very soon involved the side of the head; and he suffered so much in this respect, that he was put to bed, and kept there until his removal to the hospital. When I saw him, there was a purulent discharge from the left ear; the tympanic membrane was ulcerated away; he was very deaf on that side; he was suffering from a good deal of pain in the head, especially in the neighbourhood of the ear; there was extreme tenderness, on deep pressure, over the mastoid process; some redness, but no swelling; no tenderness in the course of the carotid sheath. Pulse, 128; temperature, 99.8. He had a dry, brown tongue. The nurse said he had not slept. He lay moaning with his hand to his head, and had all the appearance of a patient suffering from blood-poisoning. He had an occasional dry cough, but no abnormal sounds in the chest had been detected, except that, at the apex of the right lung, the respiration was harsh and the voice sounds increased.

On January 1st, the pain on the left side of the head was so severe, and the tenderness over the mastoid process so much increased, that I believed it probable that the inflammation had spread from the tympanum to the mastoid cells, and that possibly the presence of pus in these cavities might be aggravating the symptoms. This, however, was uncertain, insomuch as there was no œdema, nor swelling of the integuments immediately over the bone. Notwithstanding these negative signs, I made an incision over the mastoid process, half an inch from where the ear joins the head. The periosteum and the bone beneath were healthy. I then made a small opening into the bone, the probe freely entering into the cells, in the direction of the tympanum, to the depth of an inch. No discharge of pus followed this, nor subsequently. Although, on the day afterwards, the pain in the head was somewhat better, his general condition remained unchanged. On the 7th, he had more shivering and an occasional cough. Not to dwell any longer in recounting this case, he now developed all the signs of fluid in the right pleura, and, at no time losing consciousness, he died on the 17th.

At the *post mortem* examination, the chief points which call for remark are, that the anterior two-thirds of the right pleura were filled with pus containing flakes of lymph; in the lower lobes of the right lung were several abscesses (none of them near the surface of the lung), with ragged walls filled with foul pus. The surface of the brain was somewhat congested, but otherwise it was healthy. There was no thrombus of the lateral sinus. Between the roof of the left tympanum and the dura mater was a small quantity of tough lymph. Here is the temporal bone. You will notice that the tympanic membrane is absent; the cavity of the tympanum is full of pus, the ossicles are necrosed and lie loose; the roof of the tympanum is carious on either surface, and the roughness on the cranial surface extends back to the sulcus for the lateral sinus.

This boy died from pyæmia, and the starting-point of the disease was a suppurating surface in the cavity of the tympanum. I will just ask you to notice how an apparently trifling disorder may terminate fatally. The order of events is somewhat in this fashion. The boy has an ordinary cold; the catarrhal condition of the nares is continued up the left Eustachian tube into the tympanum; the tube becomes obstructed, and the tympanum distended with mucus, so the conduction of sound is interfered with. In the usual course of events, if this were not treated, the mucus would become inspissated, leaving behind more or less deafness; instead of this, by and by, inflammatory action proceeds another step; the non-purulent catarrh becomes purulent; the tympanum becomes full of pus; this makes for itself a way of escape by ulceration through the tympanic membrane; there is a discharge from the ear; the cavity of the tympanum is a suppurating surface; this is followed by caries of the bone, purulent absorption, pyæmic deposit, and death. More usual than pyæmia, as an immediate cause of death in cases of disease of the tympanum terminating fatally, is cerebral abscess. Out of seventy-six cases of this latter affection recorded by Sir W. Gull and Dr. Sutton (in Reynolds's *System of Medicine*), twenty-eight, or a little more than one-third, arose from ear-disease The various appearances generally met with (and there are accounts of many in the *post mortem* books) are, pus between the cranial surface of the temporal bone and the dura mater, pus in the arachnoid cavity, abscess or abscesses in the cerebrum or cerebellum, and plugging of the lateral sinus (thrombosis). In these temporal bones from the museum, with most of them, the roof of the tympanum, you observe, is carious, as in the case before us. In one fatal case which I saw in the hospital in 1866, the disease had extended from the tympanum through the labyrinth and the internal auditory meatus. In other instances (and these are the most uncommon), the suppuration has been confined to the mastoid cells, the tympanic cavity remaining healthy, and the tympanic membrane entire. Where the seat of abscess is in the cerebellum, it is most usual to find the mastoid process diseased. And now, to go back again to the early history of these cases, and the way in which the ear-trouble may begin. Of all the causes which give rise to suppuration in the tympanum, scarlet fever and the other exanthemata are the most frequent; and next, perhaps, what is spoken of as idiopathic inflammation of this cavity, the meaning of this term (idiopathic), so far as I know, being, that it occurs without our knowing why or how. We meet with it as an affection characterised by severe pain in the ear, attended with more or less feverish symptoms, and succeeded by a rapid cessation of the pain and rupture of the tympanic membrane, as shown by its characteristic appearance, and a purulent discharge from the ear. Again, a non-purulent catarrh may, as in the case of this boy, merge into the purulent form. Lastly, and of this I have seen several cases, suppuration may be set up in the tympanum by an accidental rupture of the tympanic membrane. The first serious symptom with patients who die in the way we are considering is very generally a rigor; and this, when it often recurs, sometimes leads the friends of the patients to suspect that they are suffering from ague (as in the present case); but you will find that patients who are the subjects of cerebral abscess and meningitis, when once what we speak of as head-symptoms have set in, will exhibit a considerable variety of symptoms. Some are furiously delirious, others have convulsions, and others have epileptiform fits. I have seen all of these, but in most of the cases they have laid in a half stupid state for some days, evidently suffering from pain in the head, moaning sometimes, until they have become comatose and died. A few days generally suffice for the termination of these cases; but this varies very much, and one case has been recorded (in the article I have mentioned) in which the patient lingered for fifty-three days.

And now, gentlemen, there are some points in connection with this class of cases which are well worthy of your careful consideration. The first of these is to recognise the condition under which your patient is suffering, and, by taking note of the condition of the ear, to be able to trace the disease to its true source, and so you will then be enabled to estimate pretty accurately the gravity of the case and the probable (I was going to say inevitable) termination. Other questions are, Is there any precaution which should be taken in the instances of persons suffering from a discharge from the ear, with a perforate tympanic membrane? Is there any period of the affection at which surgical interference may rescue them from a position of great peril? I will first reply to the last question. During the past four years, I have had occasion to see two cases, both of which died from cerebral abscess, under very similar conditions as regards the ear. In the case of each, on examination of the ear, a polypus was found to be preventing the escape of pus from the tympanum. The tympanic membrane was (as it generally is) ulcerated away, and, upon removing the polypus, there escaped a quantity of fœtid pus, which had, by the presence of the growth, been kept pent up in the tympanum. One can hardly resist the conviction that, if the growth had been removed and eradicated before the occurrence of the head-symptoms, a fatal issue might have been averted. The conviction, too, is strengthened upon recalling to my mind many instances where constantly recurring pains in the head have disappeared after the removal of a polypus. Once more, let me call your attention to the layer of tough lymph overlying the cranial surface of the bone. It seems as if this product of inflammation had arrested the further advance of disease brainwards; indeed, that it is what I might speak of as preservative lymph. Again and again, we find persons with a perforation in the tympanic membrane suffering from pains in the head, which, after lasting for several days, pass off, leaving no evil consequences behind. May they not possibly have escaped further trouble by a provision similar to what we see here? Although, in the case of this boy, the bone was carious, it is by no means always so in fatal examples of brain-abscess. Again, it cannot be too much insisted upon that, whenever there is severe deep-seated pain in the mastoid process, with extreme tenderness on firm pressure, and swelling of the integument over the bone, an incision should be made down to the bone. If this be followed by an escape of pus, well and good; but, if the symptoms be urgent, an opening should be made into the mastoid cells. Although it was done with this boy, without any benefit (for there was no pus in the cells), a solitary case is of no use for guidance in all others. Redness, considerable swelling, and œdema will indicate plainly enough the presence of pus; but it is quite possible for there to be pus in the mastoid cells, setting up great irritation, and ominous head-symptoms, without such external signs. The mastoid cells have, you know, been perforated on several occasions, and, in some, with the happiest results. I was very much struck with a case in which I did this early in last year. The symptoms were very urgent, and, what is rare, the tympanic membrane was entire. The seat of inflammation was exclusively the mastoid cells; there was no perceptible swelling; but, on perforating the bone, a few drops of fœtid pus escaped, and the man had not a bad symptom afterwards.

In conclusion, I would propose for your consideration the question, whether, in all cases of a perforation of the tympanic membrane attended with a purulent discharge from the ear, common sense and surgical instinct do not alike suggest that the ear should be kept scrupulously free from secretion, and some cleansing astringent be applied to the suppurating surface; and, again, after all, may we not regard the fatal issue of such cases as often accidents of disease (so to speak), when we reflect how very large a number of people pass many years of their life with a purulent discharge from the ear and a perforation of the tympanic membrane, while, of the comparative few who die of pyæmia or cerebral abscess, it is only in the instances I have named that an extra exciting cause can be pointed to as leading immediately to such an issue?

ON HEAT, A POWER OF MOTION IN THE LIVING BODY IN HEALTH AND DISEASE.

By WILLIAM MARCET, M.D., F.R.S., Nice.

HEAT is a mode of motion and a power for change in the mineral kingdom; and the same remark must equally apply to the living animal body. We consider heat as the result of a vibration or motion of matter, which may be developed by friction, percussion, or compression; its most important seat of formation being the sun. When matter becomes heated, a portion of the heat thus taken up is tangible, either to our feelings or to the thermometer, and in a fit state for performing actual work, when it is known as *potential;* another portion of the heat, being employed in pushing asunder the atoms of matter, becomes absorbed, is not sensible to the thermometer, and remains in the latent or powerless condition until given out in the potential form. Water, for instance, whose capacity for heat is great, may feel cold to the touch, and yet have in store a considerable amount of heat fit for work under those conditions which promote the evolution of this heat in the tangible and active state.

Dr. Tyndall, whose highly instructive and interesting work on *Heat a Mode of Motion* has suggested to me the remarks embodied in the present communication, gives an excellent illustration of the passage of heat from the latent condition into the tangible or potential state. He takes a supersaturated solution of sulphate of soda, prepared by allowing to cool undisturbed a solution of this substance in hot water holding a greater quantity of the salt than the water could contain when cold, except if kept in a state of perfect repose; on dropping into the cold solution a crystal of sulphate of soda, crystallisation immediately sets in. Shortly afterwards, a thermo-electric pile, placed in communication with the fluid, will indicate heat by the deflecting action on the needle of a galvanometer. This heat is precisely the same in amount as that which the crystals had abstracted from the hot water in order to dissolve, and it is given out on the crystals forming afresh.

Now, all vegetables absorb heat during growth; this heat is derived from the sun, but, being used up in the work required for the nutrition of the plant, it remains latent or concealed within the substance of the tissues. When a log of wood is burnt in our fireplace, the amount of heat it yields is precisely the same as that which it had originally taken from the sun for the work necessary to its growth, so that the heat given out in an hour from a piece of burning wood may have taken years to accumulate within it.

Heat, consequently, is a power which becomes bottled up, if I may so express it, by the object on which this power has been exerted; it is equally present in our food, whose carbon and hydrogen yield it in a definite quantity when their attraction for oxygen comes into play. Heat thus liberated becomes potential, and must expend its energy in one way or another. It is to this phenomenon that the temperature of living animals is due; this heat exerts its power partly by effecting the various functional changes which are constantly in progress in the body, partly by ministering to muscular movement. Consequently, the various processes on which depend the maintenance of life are a source both of liberation and of consumption of heat; the liberation being due to oxidation, the consumption to the work the heat has to perform in the body—a phenomenon necessarily attended with cooling. In addition to this production of cold, temperature is abstracted by radiation from the body, which must keep drawing upon food for a continued supply of heat. It follows that food has two great objects to secure—that of yielding material to be transformed into tissues, and that of imparting heat, and consequently power, for the due performance of the functions of life.

There is, however, another source of animal heat, which must be more effectual than is usually considered to be the case, namely, the direct action of the sun. In tropical climates, this means undoubtedly acts an important part towards the performance of the animal functions; indeed, heat cannot be derived in sufficient amount from food where a pound or two of rice are sufficient to keep up life, as we find it the case with the natives in Bengal. Again, I need not allude to the frequent necessity of using artificial heat shortly after birth, when the body can hardly maintain its own temperature.

A certain class of invalids proceed every year, about the beginning of November, to the shores of the Mediterranean, and various stations in Egypt and Africa, there to enjoy a mild winter with a bright warm sun, and, not unfrequently, a succession of fine days lasting for two or three months, or even longer, with hardly any interruption. Here they can walk and drive out every day, even in the middle of winter, which is cheated out of its fogs and drizzling rain, its cold, cutting winds, and snowstorms. But, if a weakened state of health be benefited by such a change of climate, I may be allowed to doubt whether healthy and robust persons will be the better for wintering in the sunny south. It must be remembered that the succession of the seasons in the northern latitudes is in many respects an advantage in a sanitary point of view. In winter, the functions of the body undergo a kind of repose or rest; there is less heat and light, and consequently less activity, in the vital phenomena; this we are unconscious of, nevertheless there can be little doubt that it is so. The hibernation of certain animals is due to a torpid condition of all their functions; again, when the air is very cold, and the body exhausted by muscular exercise, or weakened from want of food, a feeling of drowsiness and numbness creeps on, clearly indicating a failure of vital power, which can only be restored by the external application of warmth and the administration of food. After the disappearance of snow and ice, when, in the early spring, nature appears to waken afresh and rejoice in the bright warm rays of the sun, human beings and animals are equally conscious of a renewal of life, energy, and strength. Those who winter in the south, in search of a temperature which the weakened functions of their body may require, must recollect that, let the station they select be ever so healthy, a warm climate has the tendency of lessening the power which the body possesses of generating heat; consequently, cold, even to a moderate extent, will be felt much more keenly by them than it would in a colder country. Few escape a chilly sensation on the coast of the Mediterranean, when, after being out in the sun at a temperature of 65 deg. Fahr. (blackened bulb-thermometer graduated on glass, and freely exposed to the sun, a thermometer in the sun against a shutter showing 93 deg. Fah.), a spot in the shade is reached at a temperature of 52 deg. Fah. (readings observed on January 30th, 1874, at noon). This feeling of cold is not so much the result of contrast, as is usually thought to be the case, as of the fact that the body is deprived, by the high temperature in the sun, of the power of producing the necessary amount of heat in the shade. It becomes accustomed to rely upon the sun for the temperature it requires for the performance of its functions, and, when no sun is to be had, a feeling of cold is at once experienced.

What are, therefore, the best means of preserving health in a warm winter climate? As so much heat is derived from the direct action of the sun in the day time, it will be important to restrict the heat-generating power of the body by taking but a moderate amount of food; moreover, as the sun's heat must be productive of motion in the body, commencing probably with an increased action of the heart and excited state of the circulation, it is advisable to avoid any additional stimulation, such as that which would result from alcoholic beverages, in any but very moderate quantities. Invalids wintering in the south of France should be careful not to sit down in the sun; however tempting this may be, it is much safer for them, I believe, to keep walking on slowly, watching the ripple on the blue water of the Mediterranean, or the foam as it blows about on a gentle breeze, or the waves as they curl over gracefully in regular succession breaking upon the beach. The main point is to give the heat absorbed a sufficient quantity of work to do in the body, so as to use it up, otherwise it is pretty certain to do mischief. Thence I should conclude that a moderate degree of muscular exercise, while out on a hot sunny day in a warm climate, is beneficial. It is true that muscular exercise, although it requires heat for its performance, also promotes the formation of heat by exciting the circulation and respiration, thereby causing the consumption of an increased quantity of oxygen; but muscular movement must, it appears to me, begin by making use of the heat obtained directly from the sun, which is within immediate reach, thus lessening the necessity for heat-production by the body.

A high temperature of the body in disease is probably owing to the united action of a number of different causes. In fevers, the total amount of urea excreted, and the quantity of carbonic acid expired, being greater than under normal conditions, it is usually thought that increased oxidation is the source of excessive heat. Now, under normal circumstances, the amount of food taken is considered as regulating the excretion of urea; and consequently, in health, a great excess of urea may be formed without any rise of temperature. This oxidation-process, consequent on the ingestion of food, must be a source of much heat in addition to that formed while fasting, and which is clearly taken up by some function also related to the ingestion of food, otherwise the body would necessarily become warmer. The function thus supplied with potential heat must be that of *nutrition*, which I consider as including all the phenomena connected with digestion and the formation of tissues. By taking food after fasting, or increasing the amount of food taken, an additional formation of heat is produced, together with increased nutrition; and the amount of heat generated must be exactly proportional to the degree of nutrition necessary for its consumption. In fevers, we have an excessive formation of urea, while very little food is taken, and where, consequently, the function of nutrition must be all but in total abeyance. The rise of the temperature is therefore owing, it appears to me, quite as much to the arrested function of nutrition, as to the increased production of urea, if not more so.

Taking the present view of high temperatures in fevers, we shall conclude that they are due to the disturbed balance between oxidation and nutrition, or between the formation and consumption of heat in the body; and the same remark will apply to increased temperature in phthisis and inflammatory diseases.

Wunderlich expresses a similar idea in his work on *Medical Thermometry* (translated by Dr. Bathurst Woodman). He states (p. 193): "A general elevation of temperature may also occur through an extensive overproduction of heat, resulting from chemical processes which are more or less unknown in the healthy body, by means of which so much heat may be generated that the channels of heat-abstraction are quite unable to compensate it; whilst in these also, through the extension of the disturbance, irregularities and anomalies may be developed. Very much, indeed, may be said for this; and something of this sort occurs in very many cases of fever."

Another circumstance in favour of the view which I am advocating is, that the excess over the normal degree of oxidation (supposing the heat resulting from this normal degree of oxidation to be absorbed or used up) is apparently insufficient to account for the excessive heat in fever. Wunderlich (p. 193) clearly expresses his opinion that such is the case, and that the weight actually lost by the body in fever does not correspond with the amount of destruction of the constituents of the body which might have been preconceived as resulting from the increased production of heat. Murchison, in his admirable treatise on the *Continued Fevers of Great Britain*, remarks (p. 15): "The preternatural heat of fever is the result of vital and chemical action exalted above the standard of health, assisted perhaps by a disturbance of the processes by which heat is carried away." He therefore suggests a possible cause of increased temperature which is usually little thought of, namely, the lessened consumption of heat in the body.

Indeed, the more I look into this subject, the more it is apparent to me that the diminished activity of the various functions in disease is intimately connected with increased temperature of the body.

This excess of animal heat in disease, which is commonly considered only as a symptom, is necessarily a serious cause of morbid action, as it must be employed in doing work. A portion, it is true, is lost by radiation, but the remainder is a source of motion; and, as most of the functions are in a state of abeyance, this agent exerts its power on the heart, and is a means of exciting perhaps abnormally those chemical changes which take place in the blood and tissues. It is therefore of much importance to effect, if possible, a reduction of the temperature in diseases attended with increased heat of the body; and, without entering at present into the merits of cooling baths, the rule for attaining this object must be to aim at increasing the various secretions, taking care lest they should be productive of too great a drain upon the system. Purgative medicines will be useful by causing heat to be absorbed towards the formation of the intestinal secretion; and I believe this is the explanation of the beneficial action of purgatives in many different affections and minor complaints. Again, Turkish baths and vapour baths, and the various means for promoting perspiration, will be advantageous, by causing an absorption of that amount of heat necessary to the increased exercise of this function. Any method calculated to bring on free perspiration without requiring the use of heat may be expected to prove one of the most efficient agents for lowering the temperature of the body in disease; and on that account I feel assured that no means of diaphoresis is so effectual as the application of the wet sheet. The well known fact that a return of perspiration frequently succeeds in reducing the temperature and lessening the action of the pulse in febrile affections is a strong argument in favour of the view I am advocating.

I might continue adding largely to the present remarks, but hope they will suffice to show the importance towards the maintenance of health of endeavouring to transform the sun's heat into motion in the body, and also to draw the attention to one of the causes of increased temperature in disease, together with the means of counteracting it by transforming the excess of heat, or at all events part of it, into physiological motion.

ON PYÆMIA.

By J. HUGHES BENNETT, M.D.,
Professor of Physiology and of Clinical Medicine in the University of Edinburgh.

I HAVE been greatly interested in the discussion which has taken place on pyæmia in the Clinical Society of London. Nothing could be more reasonable than the suggestion of Mr. Hulke, that there should be a clear understanding as to what the Society were talking about. "It appears to me", he is reported to have said, "that Dr. Bastian's remarks are most pertinent on the question of septicæmia, but I do not see their bearing on the subject of pyæmia". In truth, in this, as in many other discussions which take place in medical societies, accurate definitions and logical precision of language have been too frequently forgotten. A notable example was presented last year, in a discussion which took place in the Pathological Society of London, on the subject of tubercle. In no sense whatever could it be said to have advanced our knowledge, all the speakers apparently having puzzled themselves and bewildered one another, in a vain effort to explain German mysticisms, and apply new terms to very old and well known morbid conditions. The confusion which prevailed on the subject of pyæmia may, I think, be dissipated; and I propose, in this short communication, to make an effort to do so.

The term pyæmia was introduced by Piorry, and literally means pus in the blood, or purulent blood. He supposed that the formidable symptoms which constitute the dread of surgeons, namely, the rigor, typhoid fever, depression, and multiple abscesses, generally terminating in death, following operations or injuries, were owing to pus in the blood. However the pus was introduced, whether by absorption from wounds, or from phlebitis, or from an imaginary lesion he called hæmitis, or inflammation of the blood itself, the result was purulent blood, or pyæmia, and the cause of the fatal symptoms. But M. Piorry was no histologist. Had he examined the blood with a microscope, he would have found no pus-cells there; for, in fact, the blood of pyæmia contains no pus. Our present knowledge, therefore, demonstrates that the disease called by practical surgeons and obstetricians pyæmia is not necessarily caused by pus in the blood. This is further shown by the fact that if, as Mr. Hulke truly stated, we inject recent or so-called laudable pus into the blood of an animal, it produces no injurious effects. I have frequently performed this experiment (*Clinical Lectures*, 5th ed., p. 906), as have Sédillot and other pathologists. But, if putrid or ichorous pus be so injected, then we have the symptoms of so-called pyæmia; and the same result occurs if we inject putrid fluids, irrespective of purulent formations. It follows, therefore, that it is not pus, as pus, which produces the mischief, but any organic fluid in a state of putrefaction, that causes the blood-lesion, and, as a result, the group of symptoms now called those of pyæmia. That pus is easily decomposed has been long known; and to the absorption of that fluid, when putrid, the French surgeons Boyer and Bonnet, many years ago, attributed the noxious effects referred to as pyæmia. This condition was well named by Vogel ichorrhæmia, which is one of the varieties of septicæmia.

It appears to me, therefore, that Mr. Savory expressed the correct view on this subject, but did not appear to see that the term pyæmia ought to be abolished from medicine and surgery, and that the form of septicæmia to which he referred is correctly expressed by the term ichorrhæmia. In what the nature of septicæmia consists, is unknown. Why one variety should produce the phenomena of small-pox, another of measles, and a third of ichorrhæmia, we are ignorant. It is the same ultimate fact in pathology that exists in therapeutics, in reference to the proportion of different poisons or drugs. All we can do is to guard against the morbid influences, or modify them when present. It is in this point of view that the observations of Dr. Bastian are of direct practical importance. All trustworthy research indicates that the poisonous properties are not attached to imaginary germs constantly floating in the atmosphere, but rather to the ultimate molecules of organic matter, animal or vegetable, which belong to or enter the economy. I believe these not to be hypothetical, but visible molecules, detectable by good microscopes, and that, in the case of ichorrhæmia, the histological examination of the granulations of, and discharges from, suppurating surfaces will do much to indicate how and when they are to be removed or destroyed.

Although I have endeavoured to show that, in the morbid condition called pyæmia by practical surgeons, there is no purulent blood, and that the expression is wholly inapplicable, there can be no question there is a true pyæmia, or suppuration of the blood. This I described so long ago as 1845 (*Edinburgh Medical and Surgical Journal*, October 1845), in a case where I found, in a case of hypertrophied spleen and liver, that the blood was crowded with pus-cells. But, in that case, I took great pains to show that there was no inflammation anywhere in the economy—no suppurating sore, no phlebitis. Nevertheless, as I had no doubt that pus existed in the blood, I called the case one of suppuration of that fluid without inflammation. But the pathologists of that day could not comprehend the existence of suppuration without inflammation, and hence I subsequently called the morbid condition I discovered leucocythæmia, or white cell-blood, because that term "expresses the simple facts, or a pathological state, and involves no theory". By some, it was supposed that the colourless corpuscles of the blood were different from pus-cells, and that they rendered the blood white, producing the white blood of Hippocrates. This error still prevails among the German pathologists, who call this morbid condition leukhæmia. It is now, however, recognised that pus-cells, lymph-cells, young mucus and epithelial cells, and the colourless cells of the blood are identical, and hence Robin has applied to the whole group the name of leucocytes, or white cells. To have retained the term suppuration of the blood, or true pyæmia, in face of the constant employment of this last term by surgeons, to express a fatal poisoning of the blood, could only have led to confusion; although, as a matter of fact, leucocythæmia is the only purulent blood known in pathology, and the only suppuration of that fluid with which we are acquainted.

I propose, therefore, in order to avoid the confusion which now prevails from the incorrect employment of terms that can only mislead, to suggest the following definitions.

Septicæmia.—Poisoning of the blood from every source—a general term.

Ichorrhæmia.—Poisoning of the blood from ichorous matter or decomposed pus.

Leucocythæmia.—White cell-blood; excess of colourless cells in the blood.

Leukæmia.—White blood, from excess of fatty matter in the blood, so-called chylous or milky blood.

Pyæmia.—This term has no meaning, unless applied to ichorrhæmia or leucocythæmia. Its employment can only lead to confusion.

THREE CASES OF BLOOD-POISONING OCCURRING IN PRIVATE PRACTICE.

By G. H. EVANS, M.B., F.R.C.S.,
Acting-Surgeon to the Children's Hospital, Birmingham, etc.

THE following cases, three in number, I have ventured to place on record, as illustrating an outbreak of erysipelas, and two allied forms of blood-poisoning, which have lately come under my immediate notice, in a presumedly healthy house, situated in an undoubtedly healthy suburb of Birmingham. The cases are of some interest as bearing upon the several communications which have lately appeared in the medical periodicals, on the subject of erysipelas and its allied complaints, as occurring in hospital and private practice. I refer more especially to the address of Mr. Prescott Hewett to the Clinical Society; and to a clinical lecture by Mr. Jonathan Hutchinson, delivered at the London Hospital.

During the early part of the present winter, a gentleman, holding a leading position in this town, about 60 years of age, had determined to submit to an operation for the removal of a small tumour, situated under the right lower eyelid. The tumour had existed for some years without giving rise to any inconvenience; latterly, however, it had occasionally caused œdematous swelling of the neighbouring parts, and had also increased in size. Thus a suspicion of malignity was entertained, and its removal was recommended by Mr. Solomon and myself. The patient was stout, of loose fibre, otherwise apparently in good health, never having suffered from a serious illness in his life. He was somewhat of a lethargic temperament, rarely taking the exercise which his excellent appetite, and consequently large consumption of solid food, demanded; as regards the use of stimulants, he was very moderate. With a view to the operation, he had spent a month or six weeks at the Isle of Wight. The operation was performed by Mr. Solomon, with my assistance, the patient being under the influence of chloroform. The tumour, which was about the size of a small hazel-nut, proved to be more firmly adherent to the lower border of the orbit than was anticipated, and necessitated the removal of a small portion of bone. Microscopically, its structure was found to be principally of a fibrous nature, with many small nucleated spindle-shaped cells mixed indiscriminately with the fibres; hence falling under the category of the fibro-sarcomata of Billroth.

On the second day after the operation, a violent shivering fit and vomiting occurred, followed, on the morning of the third, by an erysipelatous blush, and polished appearance of the skin, in the neighbourhood of the wound, with, towards the evening of the same day, a temperature of 102.0 Fahr., a full bounding pulse of 124, and other symptoms of fever.

During the next fortnight, the patient passed through a somewhat severe attack of simple erysipelas of the face and head, accompanied with delirium. The eruption then gradually passed from the scalp on to the back of the neck and shoulders, assuming the character of erysipelas ambulans, involving in turn the whole of the back and loins, and finally, at the end of a month from its first appearance in the neighbourhood of the wound, fading away on the buttocks and the upper part of the thighs. During the whole of the course of the complaint, more especially in its earlier part, there were considerable dysphagia and dyspnœa. These symptoms were explained by the obvious œdema of the fauces and pharynx, and the presumed similar state of the larynx, no visual examination of the latter being possible.

After the eruption had left the head, the fever gradually abated, and, with some variations, continued until its disappearance, about the thirtieth day of the disease, leaving the patient, however, in a very exhausted and feeble state, the radial pulse being small and compressible, and the heart-sounds more than usually enfeebled. Some ten days afterwards, I paid my last professional visit, with a caution to the patient himself, and a still more distinct warning to his attendants and friends, not to permit any undue bodily exertion or mental excitement, fearing that, from the feeble state of his heart, serious syncope might occur. This warning, I afterwards heard, he neglected, in many ways exerting himself beyond what his then powers of endurance warranted.

On New Year's Eve, not having heard that he was materially worse, I called, and found him paler than on the occasion of my last visit, breathing rapidly and being occasionally troubled with a dry short cough, but still unwilling to acknowledge that he was suffering from more than a slight cold and fatigue. Next morning, I was hurriedly sent for at seven o'clock, with the message that he was taken very ill. On arriving at his house, I found that he was dead, having expired a few minutes after arising from his bed to mend his fire, with every symptom of syncope.

The subject of the second case was the wife of the above-mentioned gentleman, a lady 53 years of age, of florid complexion and full habit of body, who had for many years suffered from the effects of the so-called phosphatic diathesis in its worst form. In her youth, she had also suffered from frequent attacks of facial erysipelas. Two months before the history of the present case opens, she had a severe attack of congestion of the liver, with one or two slight paroxysms of apparent angina pectoris. From this she had quite recovered, and had returned from her month's sojurn in the Isle of Wight, greatly improved in health.

From the beginning of her husband's illness, and much against my wish, bearing in mind her previous history, she unsparingly devoted herself, both day and night, to his welfare. After five or six days and nights of the most unwearied attention to her husband, she began to complain of sore throat; her pulse and temperature rose, the former to 120, the latter to 103 Fahr., and other symptoms of fever declared themselves. In the course of a few hours, without any definite cause, such as a pin-prick or other injury, she experienced a throbbing pain in the right thumb, and it was soon evident that a whitlow was forming. The whitlow I hesitated to open for two days, knowing that it was impossible to prevent her from entering her husband's room as long as she was able to do so. At the end of that time, finding the pain unabated, and an erysipelatous blush and swelling appearing over the supratrochlear gland of the same arm, I incised the thumb freely, thus allowing the exit of a small quantity of matter. Beyond this, I leave out the enumeration of the other theraupetical procedures necessary in the further treatment of the case. From this time, however, the diffuse inflammation, which first occurred in the neighbourhood of the supratrochlear gland, gradually spread, until the whole of the upper arm, and, shortly before death, the shoulder, became involved in a most malignant form of cellulitis; free incisions into the now brawny substance of the limb gave exit to venous blood and watery serum only, the subcutaneous tissues and fasciæ having much the well-known appearance of sodden wash-leather. On the afternoon preceding her death, her temperature, which had during the morning registered 102.4 Fahr., fell to 99.5 Fahr., her other symptoms apparently being unaltered. This was the first intimation of immediately impending danger. The soreness of the throat had continued throughout her illness, during the last two days giving rise to most painful dysphagia. On examination, the soft palate and fauces exhibited extreme œdematous swelling, the mucous membrane being of a pale rose colour, but no trace of any membranous exudation on its free surface was perceptible. During the night of the last day of November she gradually sank, dying at half-past eight o'clock the next morning; the radial pulse being imperceptible for four or five hours previously to her death, and her consciousness remaining perfect until the last.

The third case in the same house, and which, from many of its symptoms, appeared not unlikely to have owed its origin to some blood-poison analogous in its nature to that of erysipelas, occurred in the person of a servant. For some weeks before her master's illness, the housemaid complained of general malaise and lassitude, slight occasional sore throat, rigors, and night perspirations, with some cough expectoration. When I first saw her, a few days after her master was taken ill, she was then confined to her bed. All the above symptoms had increased in severity; the throat was now exceedingly sore; there was much dysphagia, and occasionally dyspnœa, accompanied with free and constant expectoration of clear glairy mucus. Some redness, but no œdema, of the fauces was present. The pulmonary respiratory sounds were normal, and pain was experienced on pressure on either side of the larynx. In the course of a few days she was removed to her home in the lower part of the town, in consequence of the illness of her master and mistress. Here she became considerably worse; the difficulty of breathing increased, also the dysphagia; the expectoration of mucus was more copious; the temperature, which had been under 100 deg. Fahr., rose to 103.4 deg. Fahr. in the evening; the pulse was 120, soft and compressible. A prominent symptom during this period of her illness was a quiet form of watchful delirium, which continued day and night, both then and, to a less extent, for some time after, her removal to the General Hospital. There was also a copious diarrhœa, which lasted for two or three days; and at night the perspirations were very profuse. On one occasion, the dyspnœa was so excessive that I remained with her during the greater part of one night, prepared to perform tracheotomy. After remaining for three or four days at her own home, she was taken to the General Hospital, where she slowly continued to improve, being discharged from that institution but a fortnight ago. It was somewhat remarkable that the tongue was throughout her illness quite moist; neither was it ever furred beyond a very limited extent.

The case of the master of the house affords possibly the example of an attack of erysipelas, originating *de novo* after a comparatively slight wound involving osseous structure. At the same time, it is impossible, I think, to avoid connecting its outbreak, however indirectly, with the illness of the housemaid, which bore in many ways a resemblance to that of her master and mistress, more especially in the affection of the throat with dyspnœa and dysphagia, a conspicuous symptom in each. It may be, perhaps, well to add, that neither Mr. Solomon nor I had to our knowledge been brought into contact with an erysipelatous patient for some weeks before the operation took place. I may also mention that I am not prepared to say that the ventilation of the house was all that could be possibly desired.

A CONTRIBUTION TO THE STATISTICS OF AMPUTATIONS.

By HENRY LOWNDES, L.K.Q.C.P.,
Surgeon to the Liverpool Northern Hospital.

THE interesting and practical papers by Mr. Callender have attracted great attention to what seems the divergence between the mortality following the great amputations in the present day, and that displayed in the statistics that led to the outcry against hospitalism.

In the following series, I have given my experience during the last five years at the Liverpool Northern Hospital, a rather crowded institution, containing 140 beds, which are in great part devoted to surgical accidents. Its laws stipulate that it "shall be confined as much as possible to severe accidents and acute cases." It is situated close to the busiest docks and warehouses, and is also close to the stations of the Lancashire and Yorkshire Railway. I believe that, in the number and severity of the accidents brought to it, it has, when we consider its small size, no rival.

The following amputations were all under my own care, and were, with one exception, performed for the results of accidents. There were thirty-four cases in all, viz.:

Part.	Number.	Result.
Primary Amputations.		
Thigh	3	All died.
Leg	8	All recovered.
Both legs, in a boy aged 14	1	Recovered.
Arm	7	6 recovered; 1 died.*
Forearm	5	All recovered.
Arm and entire scapula	1	Died.
Secondary Amputations.		
Thigh	2	Both died.
Leg	5	4 recovered; 1 died.
Arm	1	Died.
Forearm (Disease of Wrist)	1	Recovered.

Among the secondary amputations of the leg in this list, one man is counted twice. He had had both legs lopped off in the backwoods of America, and had his two painful conical stumps amputated here, on separate occasions, below the knee.† The eight primary amputations of the leg were for crushes of the leg, either from railway accidents, or, as is very common here, from the wheels of the heavy lorries used here passing over the leg. With one exception, the operation was performed just below the knee, as a more useful limb is thus left for working men. Moreover, I prefer this operation, as not opening the cavity of the joint. The secondary amputations were either, as in two instances, cases in which the patient had refused to permit any operation until gangrene had occurred, or cases of severe compound fracture in which it had been hoped to save the limb, and where amputation had at last to be unwillingly performed, with pyæmia perhaps impending, if not already poisoning the system.

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* In this case, death was caused by hæmorrhage into the abdomen. This cavity was found full of blood, that had oozed from the vessels of the mesentery, which was found lacerated in three places.

† He is still in the hospital, but is recovering.

Of the mortality in the cases of primary amputation of the thigh, I need say little. Death, in each case, took place in three days at the farthest, and without any thorough rallying from the shock of the accident. The mode of amputation, or the treatment of the stump, can have little to do with the result.

The amputation of the arm and scapula was complicated with a laceration of the costal wall of the axilla, fracturing and exposing three of the ribs. The man died in twenty-four hours. The death in the arm amputation, as explained in the note, arose from causes unconnected with the operation. It is curious that, in this series, there are no shoulder-joint amputations. I published, in the *Liverpool Medical and Surgical Reports*, 1867, six cases which had occurred to me up to that time, and of which five recovered and one died.

When I was first appointed to the Hospital, twelve years ago, I found amputation below the knee a very serious operation. I became acquainted with hospital gangrene, sloughing of the flaps, and traumatic delirium. It is with great pleasure, then, that I look back on so many successful cases, in later years, of this operation, the mortality of which Mr. Erichsen, in his third edition, states as 40 per cent., from three years' statistics at the principal metropolitan and provincial hospitals.

I have been accustomed to follow the example of a very successful operator, Mr. Hussey of Oxford, in tying all large veins, as well as the arteries. In primary amputation, I have always seen more or less sharp febrile reaction, and I generally meet it with calomel and jalap, plenty of water and tea, and a diet restricted for two or three days to a little beef-tea and milk. As to the dressing of the stump, I usually touch its fresh surfaces with carbolic acid solution, bring them together as accurately as possible with silver sutures ; then apply a layer of dry or wet lint covered over with one of lint soaked in carbolised oil ; and then, as I was first taught to do by one of Mr. Callender's earlier papers, wrap the limb and stump in plenty of cotton-wool with a bandage loosely applied. I, of course, avoid all unnecessary disturbance of the stump. I do not avoid exposing it to the air during its dressing, and sponge it well with warm water. Sometimes it has not to be dressed from the first for many days. Arms and forearms often unite at once and require no dressing. Where matter forms in the cavity of the stump, and tension appears, I freely remove as many sutures as necessary, and break down all union between the flaps, if necessary, so as to ensure free and rapid exit to all discharges.

In conclusion, I may observe that I think the general results of amputations of late years have been much more favourable, and that the dangers of hospitalism have been much exaggerated. I cannot tell to what the improvement is to be attributed, unless to the superseding of ligatures by the use of catgut-threads cut short and of torsion, and to the greater use of antiseptics.

EPILEPTIFORM CONVULSIONS OF THE RIGHT SIDE, WITH APHASIA.

By J. LOCKHART CLARKE, M.D., F.R.S.,
Physician to the Hospital for Diseases of the Nervous System.

Mr. F., aged 74, a retired officer in the army, had jaundice two years ago, but was not confined to his house. During this period, he had an attack of epileptiform convulsions of the right side, followed by profound sleep for some hours. Six months later, he had a similar attack, the right side of the face being affected first by clonic spasm, and then drawn to the same side for several hours. After an interval of five months, he had another and similar attack ; and one more, only a month later. After the last, he was profoundly unconscious for some hours, the arm and leg of the right side being somewhat flexed and stiff. The next day, he could use his right arm and leg, but they were both very weak. He was quite conscious, but had considerable difficulty in expressing his meaning, from inability to recollect the words he wished to use. To whatever question I asked him, he repeatedly answered, "my right arm, my right arm, my right arm is unabled." The day after, he was somewhat improved, could walk, use his right arm, and say with difficulty nearly all that he wished, but he was quite unable to write even a short letter; for, whenever he attempted to do so, he substituted wrong words, or words that had no meaning, and, being sensible of his error, he at once gave up the attempt. During the next three days, there was a continuous jerking movement of the right arm, which was at length stopped by morphia.

Four months later, he had a very severe fit of convulsion of the right side. When I saw him, his head was twisted to the right, and both eyes deviated to that side. His lower jaw was in constant motion, and his right arm was incessantly jerking. After a few minutes, both arms and both legs became convulsed. On no other occasion had the left arm and leg participated in the convulsive movements. The patient was quite unconscious, his bronchial tubes were choked with mucus, and after a few hours he expired.

In the intervals between the paroxysms, the treatment consisted chiefly of bromide of potassium, combined sometimes with digitalis.

A *post mortem* examination was made twenty-one hours and a half after death. The body was extremely emaciated. On opening the head, nothing remarkable was observed in the dura mater. On removing this membrane, a layer of fluid was found beneath the arachnoid, over the convolutions of both hemispheres. The quantity of fluid which escaped on removing the brain amounted to between two and three ounces. Most of the arteries were more or less atheromatous, and the gray substance of the convolutions and of other parts was exceedingly pale. The entire brain was small, and the whole of the left hemisphere was decidedly smaller than the right. The posterior lobe did not reach so far back on the left side as on the right, and was less pointed. The posterior half of the third frontal convolution, and the lower parts of the transverse frontal and transverse parietal convolutions, were very much wasted and depressed, so that the processes which run from them to the insula, and which normally are almost covered by them, were entirely exposed when the tempero-sphenoidal lobe was drawn aside. The heart was of average size. Its muscular tissue was healthy, but the wall of the left ventricle was much thickened. The aortic and pulmonary valves were quite healthy, as were also the tricuspid and mitral, with the exception of being a little atheromatous. The liver was small and firm to the touch, with a tendency to cirrhosis. There was a broad antero-posterior groove on the convex surface of its right lobe. The gall-bladder contained four gall-stones of the size of large marbles. Both kidneys were contracted ; their cortical portions were diminished, and they were nodulated on the surface at different parts. On the surface of each, also, there was a cyst ; that on the left kidney was about the size of a large marble. The spleen was small ; its investing membrane had the appearance of having been inflamed, and its substance was softer than natural.

OVARIOTOMY SUCCESSFUL IN A GIRL EIGHT YEARS OLD.

By T. SPENCER WELLS, F.R.C.S.,
Surgeon to the Queen's Household and to the Samaritan Hospital.

Ovariotomy is now so generally and so often practised that a record of any single case is only interesting when there is something unusual in the history of the patient, or some peculiarity in the operation. The facts that an ovarian tumour of sufficient size to render surgical aid necessary has been observed in a girl only eight years old, and that ovariotomy has been successfully performed, appear to be of sufficient importance to call for the publication of a short account of the case.

On January 5th, 1874, a little girl, eight years of age, of German parentage, born in California, was brought to me from San Francisco, having been sent over by the advice of Dr. Levi C. Lane and Dr. Regensberger of that city. She was rather small for her age, and the central part of the abdomen was occupied by a tense movable cyst. I arranged a consultation for the 7th of January with Sir Wm. Jenner and Dr. Sutro ; and we all agreed that there was a cyst in the abdomen, and that I should tap it with a fine trocar and aspirator to ascertain if it were hydatid or ovarian.

On the 8th of January, Mr. Thornton administered a little chloroform, and, with the kind assistance of Dr. Sutro, I removed twenty-six ounces of opaque slightly viscid fluid, which I had no doubt was from an ovarian cyst. A hard substance like half an orange, either the contracted cyst or a hard portion of the ovarian tumour, was felt to the left side, after the fluid had all escaped.

The child did not suffer at all after the tapping, but the fluid soon began to distend the cyst again.

On the 23rd January, Sir William Jenner saw her again, and wrote : "There is nothing in the chest to contraindicate operation. The result of tapping is very interesting. I fancy now I can feel connection with pelvic contents on moving the mass, as if there were a long pedicle. I have advised very decidedly the operation of removal. Children bear operations well."

On January 27th, assisted by Dr. Tracy of Melbourne, and by Mr. Thornton, chloro-methyl having been administered by Dr. Day, I made an incision, nearly four inches long, through the abdominal wall in the median line below the umbilicus, and divided the peritoneum to the extent of three inches. A free cyst was tapped, emptied, and drawn out with a solid mass at the base. There was a long pedicle, and I was able to pass a silk ligature and tie the pedicle in two portions without including the Fallopian tube. I cut the ends of the silk close to the knots, leaving very little tissue beyond the ligatures on cutting away the tumour. The tied pedicle and the knots of the ligature were allowed to fall back into the pelvis. On examining the uterus and other ovary with one finger, I was doubtful which ovary I had removed, though I believed it was the left. The uterus did not feel as large as a walnut, and I could not feel an ovary, nor the ligature I had just applied. The wound was closed by silk sutures passed in the mode I usually practise in ovariotomy. During the passage of the sutures, there was more difficulty than usual in preventing escape of intestines and omentum, but there was no other peculiarity in the operation. A little ascitic fluid came away after the cyst.

The solid portion of the tumour weighed three ounces, and the cyst contained twenty ounces of fluid. In the solid portion, there was a mass of bone covered with true skin, from which grew a quantity of long light hair. The hair was rolled into balls and matted together by sebaceous matter. The skin covering the bone was perfect, and lay on a bed of adipose and areolar tissue. The bone was proved on section to be true bone, not a mere calcareous degeneration. A full description of this cyst was given by Mr. Thornton when it was shown at the Pathological Society; and the specimen will be preserved in the museum of the Royal College of Surgeons.

During the first and second days after operation, the little patient had some pain, and was rather feverish. After the third day, recovery was uninterrupted, and she sailed from Liverpool for New York on the 21st of February, twenty-five days after ovariotomy.

After the operation, I received a letter from San Francisco from Dr. Lane, in which he said—"In October, 1873, I was called in by Dr. Regensberger. There was a large abdominal tumour lying behind and beneath the umbilicus, and of such dimensions as to cause considerable anterior protrusion of the abdomen. Our diagnosis was an intra-abdominal tumour of the cysto-sarcomatous type, in which the cystic element greatly predominated. The solid portion, susceptible to palpation, lay to the left of the median line near the umbilicus. By relaxing the abdominal wall, the growth could be moved in all directions. One month later, I again saw the child, and was convinced that the tumour was rapidly enlarging, whereupon both Dr. Regensberger and I strongly advised the parents to consult you."

I was unable to ascertain with anything like accuracy when the tumour was first observed.

I shall be obliged to any member of the Association who can furnish me with references to other cases of ovariotomy in young children.

ICHTHYOSIS LINGUÆ FOLLOWED BY EPITHELIOMA LINGUÆ.

By HENRY MORRIS, M.A.Lond., F.R.C.S.,
Lecturer on Anatomy at and Senior Assistant Surgeon to the Middlesex Hospital.

SINCE the publication of my paper on this subject in the BRITISH MEDICAL JOURNAL of February 21st, 1874, I have had the good fortune to listen to Mr. Fairlie Clarke's communication to the Royal Medical and Chirurgical Society, of "Cases of (so-called) Ichthyosis Linguæ".

The briskness of the discussion which followed amongst the Fellows of the Society left no time for visitors to take part in it; Mr. Clarke and I differ, however, upon a few points, as to which I should have liked to say a few words.

He considers the essential nature of the disease to be a chronic inflammation *accompanied by an overgrowth of the papillæ*. But when the disease reaches the stage of epithelial cancer (which, sooner or later, he tells us it always does), the rete mucosum "increases enormously at the expense of the papillæ, reducing them in many places to mere threads, and dipping down between them in the form of large club-shaped processes." It would thus seem that, as the ichthyosis advances, the hypertrophied papillæ, which are its leading feature according to Mr. Clarke, must necessarily pass back to their normal size as they gradually dwindle down into a state of atrophy. The inference then is, that there is a stage in the progress of the disease when part of its essential nature—viz., an overgrowth of the papillæ—no longer exists; or, in other words, that as the disease is growing worse and worse, it gradually recovers.

The importance attached by Mr. Clarke to the hypertrophy of the papillæ, leads him to suggest the name "papilloma" as more appropriate than "ichthyosis"; and to regard this affection in its earlier stages as allied to warts, corns, and the "papillary tumour of the gums" described by Mr. Salter. He says, however, that it is distinguished from these affections in two ways; 1, so-called ichthyosis linguæ attacks only the tongue and the inside of the mouth, but no other mucous membrane; 2, it slowly spreads, but gives only slight inconvenience, and no pain. But neither of these are real distinctions between ichthyosis linguæ and the "papillary tumour of the gums", for surely this latter is a disease of the mucous membrane of the inside of the mouth, and no other mucous membrane is, I imagine, subject to it; while, as regards the second so-called distinction, Mr. Salter tells us that his case of "papillary tumour of the gum" was painless and continued to spread, and in Sir William Fergusson's case there is no mention of pain, and the growth increased and recurred frequently. In spite of some similarity in the microscopical characters of the growths in these two cases on the one hand, and of ichthyosis linguæ on the other, there is this great difference; the growths were actual tumours, with shaggy villous surfaces, and they occurred in a situation where, normally, there are numbers of papillæ: whereas ichthyosis of the tongue and oral mucous membrane has not the appearance of a tumour, but is a mere thickening of normal tissues, chiefly of the epithelium, *extending over a large superficial area*; and it may appear on a cicatricial surface where no papillæ exist, as, in Case 1, I reported. For these reasons, the term papilloma does not seem to me a suitable one. The papillæ, in many cases of ichthyosis linguæ, do certainly become hypertrophied, owing to the immense increase in their epithelial sheaths; and there is, too, sometimes a great hypertrophy of the subepithelial fibrous layer of the mucous membrane, as Dr. Goodhart's admirable drawing shows. In both these particulars, we have a resemblance to what is often found in ichthyosis of the skin.

I cannot agree with Mr. Clarke in regarding this change in the mucous membrane of the mouth as one due to chronic inflammation excited by irritation. For reasons I have elsewhere stated, the source of irritation ought to be very well defined before a change in the tongue is attributed to it. The irritation arising from inveterate smoking counts for little, when we find that ichthyosis linguæ occurs in those who have never been great smokers, and when we remember that hundreds of smokers of short pipes, and short cigars, too, take in "very hot smoke", but do not suffer from this disease. It unquestionably occurs in persons whose tongues have never been exposed to any excessive or unusual irritation, whether from smoking, tongue-scraping, glass-blowing, or otherwise; while the case quoted by Mr. Clarke, in which disease of the ear preceded ichthyosis linguæ, affords no more support to the theory of inflammation from irritation than it does to that of altered nutrition simply. I do not know if Mr. Clarke has been able to prove that persons with ichthyosis linguæ have a strong inborn tendency to the development of warty growths; nor do I see how treatment directed to the digestive organs can benefit (as it seems to do ichthyosis linguæ) a condition due solely to irritation in a person with or without such a tendency. It is admitted that ichthyosis linguæ never gets well under treatment; but, being of the character and kind it is, ought it not, if produced by irritation, to disappear soon after the removal of the irritation? Should we not expect the dogma of the schoolmen—"Sublatâ causâ, tollitur effectus"—often enough erroneous, to be, at least in this case, verified?

As regards operative treatment, the wisdom of excising the affected tissues depends upon the degree and extent to which they are involved. When the disease is localised, and of a severe form, excision seems advisable, whether the patient is seen in the early or middle stage. If it be widely diffused over the surface of the tongue or buccal mucous membrane, would it be well, at any stage, to attempt to cut away the whole? I think not. When epithelioma has supervened, the surgeon must be guided in his treatment of the twofold affection, as he is in the treatment of epithelioma alone.

My own cases support Mr. Clarke's conclusions; (1) That ichthyosis linguæ is more common in males, (2) is a disease of manhood, (3) is not necessarily or constantly connected with syphilis, (4) runs on in time to epithelioma.

Some of the cases mentioned by those who took part in the discussion prove an association in the same person, and also in persons of the same family, of ichthyosis linguæ and ichthyosis of the skin; so that, clinically as well as anatomically, the name given by Mr. Hulke ten years ago is shown to be well chosen. The objection that ichthyosis of the skin is a congenital malformation is not a strong one. Though often congenital, it often does not attain its greatest development till towards puberty, and it is stated on authority to appear occasionally late in life.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. GEORGE'S (HANOVER SQUARE) DISPENSARY.

EPILEPTIC MANIA IN A BOY FOUR YEARS OLD.

(Under the care of Dr. SUTHERLAND.)

ALFRED W., aged 4, a robust-looking boy, was brought to the Dispensary on February 23rd. The parents, brothers, and sisters of the patient were all perfectly sane and healthy; and there was no history of insanity, epilepsy, or phthisis, on either side of the family. At the birth of the child, the labour lasted about twelve hours; but no instruments were used, and the mother made a rapid recovery. Nothing unusual was noticed in the child till he was ten months old, when he began to suffer from slight but continuous attacks of convulsions, which were described as resembling fainting fits, and which were then attributed to the irritation caused by teething. All the teeth soon came properly through the gums; but the convulsions did not cease, and assumed a more severe type, being accompanied with violent struggling, screaming, and occasional vomiting.

On his admission, the patient had usually six or eight epileptic fits every day. His bodily health was fair, with the exception that the bowels were constantly relaxed, and that the urine was always loaded with phosphates. The child could repeat single words, but could not put two words together. He was in the habit of biting the table, eating cinders or his own fæces, or any dirt on which he could lay his hands. He behaved cruelly to his little sister, biting her, pinching her, and pulling her hair. He was always spitting; he passed his urine and stools at all times, in all places; and frequently masturbated. In the consulting-room at the Dispensary, he rushed about, screaming wildly if he were touched, seizing books and furniture, and biting and tearing any object he could reach. He appeared to have a powerful jaw, as he bit the handle of an umbrella and split it into several pieces. At times, he was said to be merry and cheerful; but he frequently screamed out and became maniacal without apparent cause. The parents were unable to influence him in any way, and he took no notice of either threats or kindness. He was rather knock-kneed. The fontanelles were normal; but there was a slight projecting ridge on the frontal bone, running from before backwards, about two inches and a half in length. The head measured nineteen inches and five-eighths in circumference; there was nothing unusual in the shape of it, beyond the ridge mentioned above. The case was treated unsuccessfully with bromide of potassium; but, as the child became worse, he was sent to an asylum.

The case suggests one or two questions of interest.

1. Was the case one of eclampsia occurring at dentition, or one of pure epilepsy? The distinctions between these two disorders, according to Trousseau, are as follows. In eclampsia, the attack is dependent on a pathological condition characterised by other symptoms; in epilepsy, it strikes an individual apparently in the midst of the most perfect health. In eclampsia, the seizures follow one another pretty rapidly; in epilepsy (setting aside the status), the convulsions occur at more or less distant intervals. And, as regards prognosis, in eclampsia, when once the cause is removed, the recurrence of the convulsions is in general no longer to be feared; while a first attack of epilepsy is always a reason for suspecting others.

In the case described above, it is evident that the child was first suffering from eclampsia due to teething, and subsequently from epilepsy; for Trousseau qualifies his distinction between the two forms, by remarking that it is especially in children that epilepsy may be dreaded for the future, when the attacks of eclampsia occur frequently and for the least cause.

2. Were the epileptic fits due to the prolonged compression of the child's head at birth, or were they consequent upon the attacks of eclampsia which occurred at teething? Both causes probably operated. All the brothers and sisters of the patient, whose births had been natural, had passed through the ordeal of teething without any bad symptoms being manifested. It must, therefore, be concluded that the compression of the head at birth, and consequent irritation of some important nerve-centre in the brain, probably predisposed the child to attacks of eclampsia at the period of dentition. These attacks of eclampsia passed by gradual steps into true epileptic fits, which, becoming more frequent and more severe, undermined the child's mental faculties, and resulted in that condition known as epileptic mania.

The mental condition of the patient may be briefly described as one of idiocy accompanied with epilepsy and maniacal excitement. The moral (or immoral) tendencies of the typical epileptic lunatic were also well marked, proving that the same disagreeable symptoms found in adults suffering from epileptic insanity are really part of the disease, and are not merely due to the imitation of the bad habits of other patients.

It need scarcely be observed, that treatment is of little avail, and that the prognosis must be most unfavourable in such cases.

WEST LONDON HOSPITAL.

CASE OF IMPASSABLE STRICTURE OF THE URETHRA SUCCESSFULLY TREATED BY LEECHING AND DILATATION COMBINED WITH REST.

(Under the care of Mr. TEEVAN.)

T. B., a stout, healthy looking painter, aged 30, was admitted into the hospital on November 19th, suffering from an impassable stricture in the subpubic region, five inches and a half from the meatus externus. The patient stated that he had an attack of gonorrhœa ten years ago, which was treated with medicines and injections. Since that period, he had twice suffered similarly. One year ago, he commenced to experience much pain when urinating; and, six months back, he noticed that the stream of urine had become very small. When admitted, he had no gleet, but was troubled with dribbling. As no instrument could be introduced, the patient was put to bed, and his perinæum freely leeched. On November 22nd, at 3 P.M., Mr. Teevan succeeded in introducing into the bladder one of the finest filiform bougies, which was tied in and came out at 6 A.M. the following morning. At 6 P.M. the same day, a No. 7 elastic conical catheter was passed and tied in, but the patient removed it at 11 P.M. the same evening, as it was beginning to cause him uneasiness. On November 28th, at 7.30 A.M., a No. 10 olivary catheter was introduced, and left in for one hour; and on December 3rd, Nos. 10 and 11 were passed successively, but not left in. On December 6th, Nos. 12 and 13 were introduced, and No. 16 was passed on December 10th. The patient left the hospital the next day quite well. On January 20th, No. 18 entered the bladder with ease, and the man had been taught to pass an elastic instrument for himself, which he did twice a week.

Mr. Teevan remarked that the rapid progress made in the case was due to a combination of various means, aided by the youth of the patient, and the fact that the stricture was not of long standing. No one had done more for the treatment of the impassable stricture than Dr. Phillips, who had himself practically demonstrated what might be done with the bougie when perseveringly handled. On one occasion he was sent for by M. Nélaton to take charge of a case in the hospital in which that great surgeon had failed to pass any instrument. The following extract exhibited an amount of patience rarely seen in this country. "Le surlendemain, *après une séance de trois heures*, la bougie entra dans la vessie." The patient afterwards left the hospital cured. The effects of the good example shown by M. Phillips were such that he was in his book enabled to state: "Les faits heureux que nous avons fait connaître ont eu pour résultat de diminuer le nombre des opérations hasardeuses généralement conseillées dans ces circonstances difficiles. Ils ont aussi donné aux chirurgiens une foi plus grande dans la puissance de la bougie maniée avec persistance, et surtout ils ont ébranlé leur confiance dans la prodigieuse et inutile quantité de dilatateurs, de porte-caustiques, de scarificateurs d'uréthrotomes, etc." (*Traité des Maladies des Voies Urinaires*, par le Docteur Ch. Phillips, p. 203 and p. vii.)

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

CASES OF NEURALGIA TREATED BY PHOSPHORUS.

(Under the care of Dr. BRADBURY.)

DR. BRADBURY has in the out-patient department been lately testing the value of phosphorus in neuralgia. On the whole, he has met with considerable success from its administration. The following are two cases in which the drug effected a cure when other remedies had failed.

CASE I.—E. P., aged 24, single, shopwoman, living in Cambridge, was first seen on October 29th, 1873. She had suffered from trigeminal neuralgia of the left side for three months. As the bowels were confined, and she was somewhat anæmic and the catamenia scanty, a draught containing one grain each of sulphate of iron and sulphate of quinine, five minims of dilute sulphuric acid, and half a drachm of sulphate of magnesia, in an ounce of peppermint-water, was ordered thrice daily. She persevered with this mixture till December 22nd, with only slight improvement. On this day the pain was very severe, and she was ordered a phosphorus capsule (= one-thirtieth of a grain of phosphorus), to be taken twice daily after food. After taking two capsules, the pain entirely ceased; and on January 12th, 1874, the patient was discharged quite well, having had no recurrence of the neuralgia.

CASE II.—E. H., aged 40, married, and living at Haslingfield, first came as out-patient on November 26th, 1873. For eight weeks she had had very severe trigeminal neuralgia, her features being expressive of great suffering. She was suckling her baby, although the child was fifteen months old. She was directed to wean the baby, and to take a mixture containing two grains of quinine and fifteen minims of tincture of sesquichloride of iron in an ounce of water twice daily. On December 6th, there was no improvement. As cases of ague had been admitted from this locality, Dr. Bradbury thought it possible the neuralgia might be of a malarious character, and ordered a mixture containing five minims of solution of arseniate of soda, one drachm of tincture of hop, and half an ounce of water, to be taken thrice daily, with the meals. A chloroform and belladonna liniment was also prescribed to be applied to the painful part. When next seen (December 20th), she was as bad as ever, so a phosphorus capsule was prescribed, to be taken thrice daily after food. The patient was also ordered to rub into the temple every night a little aconitine ointment. The relief from this treatment was most marked; and when the patient was last seen on January 31st, 1874, there had been no recurrence of the pain for more than a month.

LEEDS GENERAL INFIRMARY.

CASE OF SCLEROSIS OF THE OPTIC DISCS FOLLOWING SPINAL INJURY.

(Under the care of Mr. OGLESBY.)

JOHN MARSHALL, aged 35, iron stone miner, was admitted as an in-patient under Mr. Oglesby's care on January 3rd, 1874. He complained that twelve months previously he suffered from pain in the lumbar region, which varied in character, sometimes being dull, sometimes like cramp. This was followed by short sight. He affirmed that these symptoms had not been preceded by any serious disease. He was no drinker of alcohol, and his smoking was limited to two ounces of tobacco per week.

Shortly after noticing that he was short-sighted, he found that the sight of the right eye became so rapidly affected, that he could not decipher ordinary newspaper type; then followed dimness of vision of the left eye, which up to the time of admission had progressively become worse. The ophthalmoscope showed a peculiar smooth white appearance of each disc, the brilliancy in colour being most marked. There was absence of disc circulation, but slight dilatation of the retinal veins. The arteries appeared normal. The edges of the discs were, to some slight extent, irregular. The region surrounding the yellow spot in each eye showed a deposition of pigment, which was found to be progressive in character. The retinal veins of the left eye carried more blood than those of the right. The pupils, though small, acted sluggishly, and once or twice during his stay in hospital there was injection of the left conjunctival vessels. The heart was healthy, as also was the urine; but occasionally the pulse was irregular. The vision of each eye was limited to 18 Jäg. He was ordered hypodermic injections of one-sixtieth of a grain of strychnia twice a day, to be gradually increased to doses of one-twentieth of a grain.

On January 8th, as the man still complained of dragging pain of the legs and pain in the back, he was more minutely questioned as to any former illness or accident. He then confessed that one day when at work, about two years ago, a mass of stone fell, burying him beneath it, and that it rested, partly on the pelvis and partly on the spine, for a considerable time before he could be released. He then remembered that, two or three months subsequently to the accident, he had frequent attacks of cramp in the legs, which was usually preceded by dull aching pains round the loins.

On January 20th, he stated that vision was improving. On testing it, he could with patience make out 16 Jäger. The pigmentation round the yellow spot had progressed rapidly since admission.

On the 23rd, the dose of strychnia had been increased to one-twentieth of a grain administered twice daily. The appearance of the discs remained unaltered, but Mr. Oglesby thought he could discern the faintest possible trace of returning circulation, which afterwards proved correct.

Mr. Oglesby, in describing the case to those students who take more than usual interest in the ophthalmoscopic demonstrations, mentioned the fact that, had these progressive pigmentation-changes been situated in the retina, it would have modified materially the diagnosis, and the atrophy might have been regarded as the sequence of the structural changes found in the retina. There was not the slightest ground for belief that these changes had originated in the retina and spread to the choroid, or, having arisen in the choroid, had secondarily extended to the retina. It must be borne in mind that here the case was one of a limited central pigmentation, not a peripheral one. There certainly was diminution in the calibre of the arteries, but this symptom might arise in any form of white atrophy due to dissimilar causes. The pains in the back and the weakness of the legs still continued as prominent symptoms, but vision decidedly improved.

On February 7th, the retinal veins were observed to be carrying more blood than they had hitherto done, and the choroidal disease was advancing steadily. The discs were evidently less white, and appeared less flat than when first seen. In this condition he left the hospital, promising to return after the lapse of three months, the great distance at which he resided preventing him from coming more frequently.

REVIEWS AND NOTICES.

THE MEDICAL ADVISER IN LIFE-ASSURANCE. By EDWARD HENRY SIEVEKING, M.D., Physician to St. Mary's Hospital. London: 1873.

IN connection with the greatly extending business of life-assurance, the medical man assumes the very highest moral responsibilities. Here he appears professionally as a chief guardian of social morality and promoter of civilisation; and there are very few members of our profession who are not now more or less frequently brought into contact with insurance business. To each and all of us, therefore, this little book, of less than two hundred pages, cannot fail to be of great practical value. It contains just that kind of information which is special to the subject of life-insurance in its medico-legal aspects, brought together in a clear and concise form. It is a book that has been much wanted, and the profession is greatly indebted to the author for having dug out such practically useful material from the great variety of isolated papers or transactions of societies in which the information has hitherto been buried. In a very interesting introductory chapter, Dr. SIEVEKING shows how life-insurance stands prominently forward as peculiarly unselfish; and, as an enterprise, it is a characteristic feature of modern civilisation, which is rapidly extending—so much so, that English life-insurance business now involves pecuniary interests of nearly one hundred millions sterling, and second only in magnitude to the railway interests of the country.

The expectation of life of the individual embraces a consideration of a great variety of topics, which are very clearly explained in the work before us. When life-insurance business was first promoted, no definite principles existed to guide the practice until a firm basis was established by the preparation of reliable "mortality tables." The rates for insurance were at first extravagantly high; but, if the company be an honest company, and be judiciously managed, a high rate is a fault which leans to virtue's side, because it adds to the security of the policy-holders by increasing the assets of the company. The main object of all insurance tables is to demonstrate the average expectation of life at all ages, as deducible from the mortuary registers of the country for the entire population. Not only has this been now done for the community at large at all ages, but the duration of life in separate classes and trades has been worked out with a minuteness that leaves nothing to be desired; and here Dr. Sieveking gives us the tabular results showing the expectation of life, or the period an individual of a given age may be expected to live, according to observations made in England, on the Continent of Europe, and in the United States of America. But, while the average duration of human life, in a multitude of lives, fluctuates but little, individual human life is proverbially uncertain. Many contingencies require to be considered in determining the exact position which any individual occupies towards the general average. The bearing of accidents, of hereditary influences, of personal constitution, of trades and occupations, of acquired taints or of actual disease, require investigation, which can only be done efficiently by medical men when they have specially studied these subjects as influencing the individual expectation of life, and thereby acquiring data and experience in analysing the influences, separately or collectively, of these various elements. Thus the actuary and the physician must co-operate in the objects of life-insurance; and it is for the greater security of the companies that they should seek information from the best informed medical men as to the eligibility of individual lives. Thus the medical element constitutes an important item in the consideration of every proposal for life-insurance. The late Dr. Brinton, who paid much attention to this subject, gives a striking example of the consequences of ignoring the medical element in proposals for life-insurance. He personally examined into the results of a number of insurances that had been effected without medical examination; and, from a list extending over three or four pages of these cases, there were no fewer than forty instances of deaths from pulmonary diseases at periods which averaged eighteen weeks from the date of effecting the policy, but often did not exceed three, four, or five weeks. The average loss to the Society on these forty policies was exactly forty times the premium paid. The companies have now learned to appreciate the value of skilled medical advice, while the members of our profession have thus also acquired a direct pecuniary interest in promoting to their utmost the great social and economic principles which are the basis of sound insurance transactions.

The object of the work before us is to guide us to perform satisfactorily the responsible duties which pertain to the medical officer consulted by an insurance company, involving both the happiness and well-being of the applicant for insurance and the welfare of the company. With the power of one who thoroughly knows his subject, Dr. Sieveking points out those features in the constitution and sanitary condition, family predisposition, and mode of life of the applicant for insurance, to which medical men have to pay special attention. A chapter on "The Normal Man" abounds in very valuable data for observation. The lives taken by insurance companies must be selected lives, approaching as nearly as possible to a standard of perfect health; and hence, at the outset, Dr. Sieveking examines the conditions which constitute perfect health, and the means at our command for determining how far perfect health exists. A standard is thus obtained by which to estimate the comparative soundness of the individual; for the real difficulty of the medical referee is to estimate the departure from the conditions which constitute perfect health. He must begin by assuming that every candidate for insurance is more or less unsound until his physical health is conclusively established, or his departure from the standard of "The Normal Man" is definitely determined. Then follow chapters respectively on "The Duties of the Medical Officer," on "Hereditary Influences," on "The History of the Individual," on "The Insuree's Liability to Disease," and, lastly, on "The Medico-Legal Aspects of Life-Insurance." All these chapters abound in most valuable information, imparted with the skill and authority of an accomplished and experienced physician. The work is a valuable contribution to the subject of "Vital Statistics," and we hope to see a second edition very soon required.

A Practical Treatise on the Diseases of the Ear, including the Anatomy of the Organ. By D. B. St. John Roosa, M.D., Professor of the Eye and Ear in the University of the City of New York, etc. 1873.

As an historical account of the progress of otology, and the various methods of treatment that are pursued in America and Germany for diseases of the ear, this is, perhaps, the most complete work in English with which we are acquainted. The zealous manner in which American surgeons have of late years, in concert with each other at their Otological Congress, and in other ways, directed their attention to diseases of the ear, not only by investigations pursued in their own country, but also by diligent work at the cliniques of several of the principal aural surgeons in Germany, has contributed to give Dr. Roosa unusual advantages for writing a book upon aural surgery; and it is quite evident, in reading the treatise before us, that he has personally made himself acquainted with the practice of most of the leading men in this speciality. The first chapter is devoted to an outline of almost all that has been done for otology during the past twenty years, and reference is made to anatomical accounts as far back as the time of Hippocrates.

A very complete description of the anatomy of the external, middle, and internal ear is well given, and illustrated by some very good woodcuts. Like all surgeons who have done much and good work at diseases of the ear, Dr. Roosa has abandoned all other methods of examining the external auditory meatus and tympanic membrane in favour of diffused daylight (when it can be procured) reflected through a Gruber's speculum from a perforated concave hand mirror, and in all operative proceedings he uses a similar mirror fixed by a band round the head.

In acute purulent catarrh of the middle ear, where there is evidence of the presence of pus in the cavity of the tympanum, as shown by bulging of the tympanic membrane, an incision in the posterior part of this structure is recommended, so as to prevent the occurrence of a rupture by ulceration, and the disorganisation of the tympanum accompanying it.

Dr. Roosa's views of the pathology of non-purulent affections of the middle ear, to which we are accustomed to apply the term catarrh, are somewhat at variance with those generally advanced. He divides the disease into two distinct forms. For the one in which the mucous secretion in the Eustachian tubes and tympana is in excess, he retains the term in general use; but he distinguishes another form of disease in which the mucus is at no time (so he says) in excess, and in which throughout the affection the sounds heard upon inflation of the tympanum are of a dry character; this, according to the author, is a form of inflammation "that shows a higher formation than the catarrhal," and he classes certain pathological appearances that have been met with after death by Toynbee and others as evidence of this, which he terms "the proliferous form" of inflammation. Such changes are chiefly connective-tissue formations, hypertrophies of mucous membrane, ankylosis and hyperostoses, products of inflammation quite distinct, he points out, from collections of mucus in the cavity of the tympanum, which follow the catarrhal form. With regard to these views of the pathology, we feel constrained to say that, whether they be true or not, Dr. Roosa has, as yet, not adduced sufficient evidence in our judgment to make it quite clear that this is more than an arbitrary division. An account of all operative proceedings on the tympanic membrane as pursued by Gruber, Politzer, Schwartze, Voltolini, and Hinton is given, as well as Weber's operation of division of the tensor tympani. The author's experience in these respects is chiefly confined to incision of the tympanic membrane (Hinton's); and, from what he says, the reader is led to infer that he thinks generally well of the operation rather than that he has a very large experience in the matter.

The section devoted to diseases of the nervous apparatus is, perhaps, the least suggestive of any part of the book, and justice is barely done to the remarkable variety of ways in which the hearing suffers when the external and middle ear are both healthy. The same may be said with regard to the cases where there is a temporary suspension of hearing, without adequate cause being found for it in the conducting part of the ear. It is when discussing such points as these that so large a clinical experience as the author must possess, we should have thought might have done better service.

On the subject of syphilitic diseases of the ear, we must be at issue with Dr. Roosa. He lays very little stress on the affection of the nervous apparatus in the subjects of inherited syphilis, and seems to attribute their extreme and rapid loss of hearing to changes in the middle ear, instead of a nervous lesion, to which it has been abundantly shown that they are due; nor does he draw a clear line between the two modes in which a person suffering from constitutional syphilis may become deaf, viz., by a propagation of morbid action from the pharynx, and a nervous symmetrical deafness (unconnected with the middle ear) which is generally recovered from under constitutional treatment.

The main body of the book, however, is so excellent that we can strongly recommend all who are interested in aural surgery to read it, and they can hardly do so without gaining a great deal of information.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, February 24th, 1874.

C. J. B. Williams, M.D., F.R.S., President, in the Chair.

CASES OF (SO-CALLED) ICHTHYOSIS LINGUÆ.

BY W. FAIRLIE CLARKE, M.A., F.R.C.S.

The term "ichthyosis" was first applied to a morbid condition of the tongue by Mr. Hulke in 1864. In its earlier stages, the disease has something in common with warts and corns, and with "papillary tumours of the gum". But it is distinguished both pathologically and clinically from these affections in two ways. (1) It attacks only the tongue and the inside of the mouth; no other mucous membrane is subject to such an affection. (2) It slowly spreads, but gives only slight inconvenience, and no pain. In this state it may remain many years, but sooner or later it assumes the character of epithelial cancer.

Ichthyosis linguæ manifests itself in an overgrowth of the papillary and epithelial elements of the mucous membrane, and it is the dorsum of the tongue which is affected in the majority of instances. In some cases, the enlarged papillæ may be seen sprouting up in small groups, in others, the whole of the affected surface is smooth, hard, and almost cartilaginous. It presents either a silvery or a snow-white appearance, quite different from any fur which ordinarily covers the tongue. When the disease has once manifested itself, it is very persistent. Though it sometimes responds a little to treatment, and though it varies slightly, it never wholly leaves a spot which it has once attacked.

The essential nature of the disease appears to be that of a chronic inflammation, accompanied by an overgrowth of the papillæ, and a loss of power to throw off the effete epithelium. The irritation which gives rise to this inflammation sometimes acts on the periphery of the nerves, and sometimes it is situated between the periphery and the centre. It would appear that any persistent or oft-repeated irritation of the lingual branches of the fifth pair is capable of causing the disease in persons who have a strong inborn tendency to the development of warty growths under slight causes.

If a portion of the ichthyotic coating be examined under the microscope, some increase in the thickness of the epithelial layer is seen, some enlargement also of the papillæ, and a great development of the rete mucosum. Around the bases of the papillæ, and in the submucous and muscular tissues, there is a very abundant nuclear cell-growth. There is also a notable increase in the number and size of the blood-vessels in all parts. When the disease reaches the stage of epithelial cancer, the most striking feature is the development of the rete. It increases enormously at the expense of the papillæ, reducing them in many places to mere threads, and dipping down between them in the form of large club-shaped processes. Towards the termination of some of these processes, the cells may be seen to have assumed a circular arrangement, forming the laminated capsules, or nests of cells, that are so characteristic of epithelioma. These points were illustrated by microscopical sections and drawings.

Nine cases of ichthyosis linguæ were related at length, some of which were under the author's own care, while others had been communicated by friends, or gleaned from publications. In an appendix, eight more cases were briefly noticed. Several of the cases were illustrated by drawings.

The paper concluded with some general remarks upon the disease and its treatment. 1. It is much more common in men than in women. Out of sixteen cases (one being set aside for special reasons), only one was a female. 2. It never occurs before puberty. It is an affection of early manhood and of middle age. 3. Though a venereal ulceration may occasionally be its starting-point, there is no reason to think that it is always associated with syphilis. On the contrary, it is clearly distinguished from the manifestations of that disease. 4. With regard to treatment :—If the disease present itself in a very early stage, it should be promptly and thoroughly excised. On the other hand, when it has become epitheliomatous, no time should be lost in performing an operation. But during the whole middle period, the best thing that can be done for the patient is to study his general health. If any local measures be used, they should be of an unirritating kind. If any jagged teeth be present, they should be removed. At the same time, the patient should be advised to guard his tongue against all sources of irritation, and to pay particular attention to his digestion. Under this treatment, the ichthyotic coating often alters for the better, though it is never altogether removed.

Mr. ACTON had seen many affections of the tongue during the last thirty years, but had not been aware that there was such a disease as ichthyosis of the organ. He had examined the patient whom Mr. Clarke had brought to the meeting, and found that he had what he (Mr. Acton) had always regarded as psoriasis of the tongue, a very common result of syphilis. Syphilis, however, was not the only cause ; it might arise from the irritation of teeth, smoking clay pipes, etc. He believed that a somewhat similar affection of the tongue was met with in India. With regard to diagnosis, this was easy enough in some cases ; but sometimes there was a difficulty in diagnosing between ulcerating gummata and epithelioma. He did not find the treatment so difficult as had been described by the author ; perhaps this was because he saw the cases in an early stage. He found that the disease yielded to the application of acid nitrate of mercury, and alum ; and if there were gummata, iodide of potassium, in doses of fifteen or twenty grains, was useful. Attention to diet and general treatment was also necessary. The patients should abstain from the use of tobacco, and the tongue should be sheathed from the irritation of teeth.—Mr. HULKE had brought before the society, ten years ago, a case of ichthyosis of the tongue, which he believed to be the first reported. It had not been published in the Society's *Transactions* ; and he subsequently had an opportunity of bringing it in a more complete form before the Clinical Society. The patient was a strong healthy man, with no history of syphilis in himself or in his family ; and in several other cases, also, observed in the Middlesex Hosoital, there was no trace of syphilis. Mr. Clarke and Mr. Morris had published reports of cases in a later stage than that of Mr. Hulke, whose case was described fourteen years after the commencement of ichthyosis, and six years before the appearance of epithelioma. In Mr. Morris's case recently published (see BRITISH MEDICAL JOURNAL, February 21) there appeared to be much implication of the tissue beneath the epithelium. In his own patient, Mr. Hulke cut out the diseased patches ; he then did not see the patient till six years later, when epithelioma had set in—whether in the exact site of the ichthyosis, he could not say. He could not regard the disease as of an inflammatory nature. There was nothing on the parts under the mucous membrane indicating a subacute inflammatory process, such as might be seen, for instance, in chronic eczema. As far as his observation went, all treatment was useless. Epithelioma had supervened on ichthyosis in all the cases which he had seen.—Dr. FAYRER said that cases of the kind were very frequent in India. He had regarded this disease as psoriasis, but saw no objection to the use of the term ichthyosis. The cases were in general hopeless ; but when disease of the skin was present, and yielded to arsenic, the disease of the tongue was also relieved.—Dr. DRYSDALE asked whether Mr. Clarke would abolish the term psoriasis of the tongue and substitute ichthyosis. What was called syphilitic psoriasis was in many cases of syphilitic origin ; but it might also arise from smoking, irritation of teeth, etc. He asked whether iodide of potassium in doses of twenty grains three times a day, and the local application of acid nitrate of mercury or chromic acid would not be useful.—Dr. A. P. STEWART had been one of those who regretted that Mr. Hulke's case was not published in the *Transactions.* His attention had been directed to the subject by receiving an account of Dr. Neligan's case (referred to by Mr. Clarke) from the author, who had sent copies of his paper to the medical officers of insurance companies. A man had presented himself to Dr. Neligan for examination, with a suspicious-looking appearance of the tongue. Dr. Neligan advised the insurance society not to accept him ; but they did so, and, not long afterwards, epithelioma appeared, of which he died. A few weeks after receiving Dr. Neligan's paper, Dr. Stewart saw a gentleman who had the buccal membrane covered with a rough white coating, but the tongue was not much affected. He had had syphilis, and had been salivated, after which his mouth was never as it used to be. In 1857, and 1863, when Dr. Stewart saw him, he was never free from the coating of the buccal membrane. He was, Dr. Stewart had learned, now in perfect health ; but any irritant caused great discomfort. Dr. Stewart had also seen a case in a well-known naval officer, in which the tongue was enveloped above and below as in a bag of wash-leather. This condition had existed many years without giving much annoyance. The patient had not had syphilis. Being gouty, he took large quantities of lemons, believing that they would do good. The tongue became irritable, and glossitis set in, with great pain ; but there was no epithelioma. Dr. Stewart referred also to a case which had been operated on for epithelioma by Ricord, after having been declined by Nélaton ; in which death took place sometime afterwards from epithelioma.—Mr. SAVORY had two cases under observation. One was a man, aged 73, the dorsum of whose tongue, over the space corresponding to the compound papillæ, was covered with a substance like wash-leather. In the other patient, a man aged about 28 or 30, the tongue was not affected, but there was a fan-shaped pearly deposit on the interior of each cheek. These cases were purely different from psoriasis, which was less chronic and more amenable to treatment.—The PRESIDENT said that it was very desirable to define the character of the disease—whether it was a kind of ichthyosis or was from the beginning essentially epitheliomatous.—Mr. NAYLOR thought that ichthyosis was rather a malformation of the skin than an acquired disease.—Mr. H. ARNOTT thought psoriasis a better term than ichthyosis. Both psoriasis and ichthyosis were sometimes syphilitic, sometimes not ; and the most inveterate cases were the non-syphilitic. In ichthyosis of the tongue, there was great proliferation of the epithelium of the mucous membrane of the tongue and its papillæ, but this did not dip below. When the subjacent tissue becomes affected, then there was epithelioma. He had seen a case of ichthyosis of the tongue, developing into epithelioma, in a man whose brother had ordinary ichthyosis.—Mr. FAIRLIE CLARKE said that the terms ichthyosis and psoriasis were both liable to objection ; and he thought that the use of the term tylosis linguæ, used by a German author, would be justifiable. The words keratosis and papilloma had also been suggested ; but the introduction of fresh terms should not be done lightly. He had said that the disease appeared to belong to the class of chronic inflammation. Mr. Savory's case of symmetrical patches on the cheeks was remarkable ; he knew none like it.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, FEBRUARY 17TH, 1874.

CHARLES J. HARE, M.D., in the Chair.

Congenital Papillomatous Web uniting the Vocal Cords.—Dr. MORELL MACKENZIE exhibited a papillomatous web removed from the larynx of a young lady, who, till the age of 23 years, had never been able to produce a vocal sound. From the history of the case, it was clearly established that the growth was congenital. It passed between the vocal cords, and united them in the anterior half of the glottis ; it was removed *per vias naturales* with cutting forceps, and the voice was thoroughly restored after three weeks' treatment.—Dr. LEARED asked Dr. Mackenzie what he considered the essential difference between a whisper and a proper vocal sound.—Mr. HOLMES said that the case was a very remarkable one, but that he could not understand how a person could exist without any voice at all.—Dr. MACKENZIE said that he also considered the case a remarkable one. His patient was voiceless, not speechless; in other words, she could articulate, but could not produce a vocal sound. The essential difference between these two functions was often overlooked, and Dr. Mackenzie not unfrequently had cases of aphasia sent to him under the supposition that the vocal organ was affected. In reply to the President, Dr. Mackenzie said that the power of modulation of the voice was perfectly established.

Tuberculosis of the Choroid.—Dr. Coupland showed a specimen removed from a child aged 8, who was admitted in a semi-comatose condition, and who died three days afterwards from tubercular meningitis. The ophthalmoscopic examination, twelve hours before death, showed the optic disc to be fairly defined and normal, but scattered among the vessels were a number of yellow flakes, which appeared to have no relation with the choroidal and retinal vessels. At the *post mortem* examination, marked tubercular meningitis was found, and tubercle was abundant in nearly all the organs. The posterior two-thirds of the eyeballs were removed. The retina was intact, and a number of yellow spots were seen through it. On examining the choroid, yellow spots, semitransparent granulations, about twenty in each eye, well-defined, and raised above the surface, were found. They extended to the outer side of the optic eminence, some composed of round nucleated cells; the centre of the older nodules was breaking down; the tubercles were very vascular; the pigment-cells were less than normal; the blood-corpuscles were disintegrated, but this possibly was due to *post mortem* change. The tubercles were seen to be in the sheaths of the vessels, thus bearing out Cohnheim's views of the anatomy of tubercle. There were few cases of tubercle of the choroid published.

Aneurism of the Aorta opening into the Pulmonary Artery.—Dr. Frederick Tayler exhibited a specimen occurring in a soldier aged 39. He had lived in India; he never suffered from syphilis, gout, or rheumatism. He complained of shortness of breath on exertion; was sick the last few days preceding his death; had œdema of the legs and orthopnœa; the feet were cold and blue, and there was crepitation at the base of one lung. There was a cardiac thrill at the apex, and a loud systolic and diastolic murmur at the base. The pulse averaged 108; there was no marked throbbing of the carotids, but there was dilatation of the veins. The heart weighed twenty-eight ounces. The wall of the right ventricle was thickened. An aneurism of the commencing aorta, about one inch by an inch and a half in size, bulged into the pulmonary artery, perforating it by a small aperture. There was a patch of atheroma in the ascending aorta; the aortic valves were healthy; the mitral valve was also healthy; the posterior pulmonary valve was united to the walls of the aneurism. The point of interest was the relation of the pathological condition found after death to the symptoms during life. There was a double murmur at the base, and a diastolic murmur heard down the sternum, with a peculiar thrill. Aneurism with aortic regurgitation was diagnosed. The blood had passed from the aorta into the right ventricle, and not into the pulmonary astery.—In reply to the President, Dr. Tayler stated that there was no pulsation in the jugular veins, but they were distended.

Aneurism of the Aorta bursting into the Pericardium.—Mr. Myers exhibited the heart of a soldier who had marched on guard and died suddenly. There was no previous history of illness. The aorta was atheromatous. The case was interesting as being due to over-straining, tight clothing, etc. In almost all cases, there was a peculiar corrugation of the aorta due to distension of the coats of the vessel; in this case, the artery was smooth. The patient had had syphilis, but there was no evidence of constitutional disease. He had been in hospital ninety-four days for primary syphilis, and again for sixty three days.—Mr. Arnott inquired if there had been any indication of syphilis, such as sore-throat, etc. It might have been only a soft sore.—Dr. Pye-Smith remarked that the patient could not have been in hospital twice for primary syphilis.—Mr. Hulke inquired if there were any traces of iritis.—The President remarked upon the fact of the patient having been ninety-four days in hospital without any specific treatment being adopted. Had there been any rheumatism? Syphilis was a scapegoat when other causes were difficult to be found out.—Dr. Green asked how far syphilis was the cause of atheroma. Fibroid change in the external coat of the artery occurred from syphilis, but not atheroma. —Mr. Rogers remarked that no other disease except syphilis produced such a disintegration of tissues.—Mr. Myers stated that there had been no sore-throat. One of the admissions into hospital had been for inflammation of the eye, but there were no traces of iritis, and he had had no specific treatment. Dr. Aitken of Netley had recorded twenty-six cases of atheroma, seventeen of which had suffered from well-marked syphilis. Mr. Myers contended this was not the cause of atheroma.—Dr. Whipham stated that there was a specimen in St. George's Museum of perforation of the aorta of an infant which had suffered from hereditary syphilis. The aorta appeared to have all the characters of atheromatous change.—Mr. Holmes thought there must be some evidence of a previous cause. The man had not been treated for syphilis by mercury or iodide of potassium. The case was brought forward as a specimen of atheroma without previous constitutional syphilis. The chronic abuse of alcohol was a far more probable and general cause of atheroma and aneurism than syphilis. It was very difficult to discriminate between syphilis and alcohol, as regarded the one or other being the cause.—Dr. Leared remarked upon the fact of syphilis causing heart-disease, referring to a specimen he had exhibited where gummatous tumours were found at the aortic valve.—Dr. Burney Yeo thought that, if syphilis were the cause of atheroma, we should find other changes intimately associated with it.—Dr. Cayley referred to Dr. Leared's specimen that had been examined recently, of which it could not be decided whether it was syphilitic or not.—The Chairman remarked that no one had seen much of atheroma without seeing how much it depended on alcoholism. He had seen instances of syphilis and yet no atheroma, and again extensive atheroma and no syphilitic history. It was difficult to say whether atheroma did not arise from syphilis; but, if it did, the evidence went to show that the cause was not a very frequent one.

Ovarian Tumour affected by Secondary Cancer.—Mr. Thornton exhibited a specimen occurring in a widow aged 35, under the care of Mr. Spencer Wells. In June 1873, she presented symptoms of ovarian disease. Nineteen pints of fluid were removed by tapping, but no relief was afforded. The patient was emaciated, and had the aspect of suffering, the face being thin and pinched, and she had severe pain. Thirteen pints were drawn off by a second tapping. The emaciation became extreme; she had violent pain in the back; a hard nodule was detected on the right side. She was not operated on. After death, the right ovary was found to be a mass of cancer, packed down behind the uterus, which was free and movable, and there were nodules in the cellular tissue surrounding the rectum. There was also a carcinomatous tumour of the size of a nut on the fundus uteri, and the front of the cyst was adherent to the abdominal wall. The interest of the case was as regarded the question where the cancer commenced. Mr. Thornton thought it began in the nodules around the rectum, and secondarily affected the cyst. The cells there were full of fat and disintegrating.—Mr. Arnott suggested that the primary tumour was in the uterus, and referred to a case where he had observed this. Its commencement around the rectum was opposed to the recognised views on cancer. The fatty degeneration of the cells was not sufficient evidence.—Mr. Hulke inquired if the nodule in the uterus arose from the muscular tissue, or was so near the interior of the uterus as to have originated in the mucous tissue. The nodules around the rectum might have originated in the wall of the rectum, although the mucous membrane was intact.—Mr. Thornton thought the nodule arose from the outer, and not the inner or mucous surface of the uterus. The other nodules commenced in the areolar tissue around the rectum.

Dermoid Ovarian Cyst.—Mr. Thornton showed a specimen removed by Mr. Spencer Wells from a girl aged 8, sent from California. She was tapped on January 8th, and operated on on the 23rd for removal of the tumour. Lying behind the ovarian cyst, a dermoid cyst was found. The ovary was enlarged and spread out over the back of the cyst, the wall of which was fibrous and without epithelial lining; the outer wall of the dermoid cyst was fibrous; a piece of bone, with hair attached, was found covered by skin. It was a question whether the two cysts were an expansion of the fibrous stroma of the ovary. Several small cysts were found, evidently expanded Graafian vesicles.

Large Vesical Calculus.—Mr. Holmes showed a calculus weighing seven ounces and a half, which he failed to extract from a patient aged 40. There had been bladder-symptoms for nine years. On sounding the patient, a stone was detected in the urethra. The prostate appeared distended by a mass of stone. He divided the perinæum in the median line, but could not move the stone. The incision was enlarged, even cutting far into the rectum, but still the stone could not be moved. It was too large to crush with the lithotrite, even had one sufficiently strong been at hand. The patient died within forty-eight hours. The composition of the calculus was uric acid, oxalate of lime, with some phosphatic deposit on the surface. The ureters and the pelves of the kidneys were dilated. It was exceedingly rare to find a stone of such a size at the present day, patients not being allowed to go on so long unrelieved.—In reply to Mr. Thomas Smith, Mr. Holmes said nothing could be felt by palpation of the abdomen.

Large Cyst removed from the Axilla.—Mr. Gay showed a specimen from a man aged 30. It had been noticed for two years. It was situated high up in the axilla, and the man was obliged to keep his arm at right angles to his body owing to the size of the cyst. It was removed without difficulty, and the case did well. A cyst of such a size was rarely met with. He thought it was of inflammatory origin.

EPIDEMIOLOGICAL SOCIETY.

Wednesday, February 11th, 1874.

Inspector-General W. R. E. Smart, M.D., C.B., R.N., President, in the Chair.

Quarantine.—Dr. Gavin Milroy's propositions regarding quarantine, published at page 241 of the Journal for February 21st, were discussed. —Inspector-General Dr. Murray inquired if the question of quarantine did not include all hygienic measures relating to the prevention of the introduction of disease. Hygiene and quarantine combined had reduced the mortality from cholera in the jails of India by one-half.—Mr. J. N. Radcliffe explained that it was intended to confine the discussion to the legislative enactments for restrictive quarantine.—A communication was read from Mr. H. Leach, medical officer for the port of London. He said that it was most important that the practical bearings of quarantine, as far as they related to cholera and its importation by the shipping, should be fully discussed. As regarded the port of London, he did not think that the system, as carried out by the officers of customs, at all met the difficulties of the case, or afforded the requisite security against the importation of disease. Two glaring instances of false declarations made by masters of ships to the Customs' officers had been discovered during the past four months: one involving a case of erysipelas among a party of two hundred German emigrants, in which the reply of "all well on board" was returned; the other, the possession of certain effects of seamen who had died of cholera during the homeward passage, when the reply "no deaths during the voyage" was given. The sanitary state of a ship and her crew and passengers could only be properly ascertained by going on board, examining the official log book, and all the living freight. The log book gave the roll of the crew, and any deaths that might have occurred during the voyage. If a muster were called, and men were found wanting, any officer well acquainted with a ship's geography could find out the whereabouts of a sick man in less than five minutes; indeed, the entire business might be completed in a quarter of an hour. As the best substitute for quarantine, Mr. Leach made the following recommendations in his annual report to the Port Sanitary Committee. 1. To obtain, by assistance from the Government Departments and by all other means, a full and correct list of all ports infected with or suspected of cholera. 2. To issue an order that all vessels arriving from such ports should notify their arrival off the Nore. 3. That, with the assistance of the Customs, and in accordance with Article 7 of the "Order in Council," bearing date July 17th last, all such shall be examined in the manner roughly indicated above by the port sanitary authority. 4. That, in addition, all vessels arriving from such ports shall, while in the port of London, be visited daily by a sanitary inspector. 5. That all emigrant ships arriving from such ports shall be systematically and carefully inspected every twelve hours as long as the vessel remains in the Thames.—The President was of opinion that in insular positions quarantines of observation for ships from an infected port with a still unfixed duration for infected ships were necessary precautions. In studying the history of ships infected with cholera, he had not met with a single instance not coming from an infected port. As a contribution to the subject of the period of incubation and of duration of cholera in ships, he detailed the following instances occurring in 1850. In that summer, there was an epidemic of cholera in the Mediterranean Fleet. H.M.S. *Queen,* to which he belonged, lost fifty men in three distinct outbursts, each of which occurred in or on leaving Malta Harbour. On that occasion, Malta was infected badly from Tunis and Algeria. The fleet arrived in health from the Piræus in May, 1850. At the beginning of June, diarrhœa prevailed, increasing in force and frequency as the month advanced. The first case of cholera happened on June 19th, the next case on the 28th, then three on 29th, and one on 30th; two more cases occurred on July 1st, five on the 2nd, and three on the 3rd, the day of leaving the harbour. The collapsed cases of disease ceased on the 15th, being the tenth day from departure. On August 14th, the ship again entered the harbour and remained till the 16th; diarrhœa recommenced, and cases with fatal collapse occurred from the 19th to the 21st, occupying five days from departure. The *Queen* visited the port again from the 4th to the 8th of September, remaining only four days in harbour; and, while she was being towed out of it, a collapse case of cholera occurred, followed by a severe epidemic, lasting ten days, as in the first outbreak in July. This was not mere "recrudescence;" for, each time the ship visited the infected harbour, the collapse type of cholera was relighted, and the men employed in boats suffered in greater proportion than those whose duties kept them in the ship. The inferences from two of those instances were that four days were sufficient to develope the worst type of cholera, and that ten days sufficed for its cessation. H.M.S. *Bellerophon* afforded another instance. She entered Malta Harbour on September 9th, and sailed on the 12th, after three and a half days there. A severe outbreak of cholera occurred on board this ship before she left the harbour, which ceased on the eleventh day, that is, after she had been ten days at sea. Dr. Smart gave an instance of cholera being excluded from the island of Dominica by quarantine. Those of its being introduced by its non-observance are frequent, so that it must be regarded as a truly preventive measure; but, recognising the impracticability of exacting it under many circumstances, he would insist on the most strict isolation of all the first cases, or units of disease, whether introduced from without, or originating from a relation to introduced cases, or persons, or goods imported from infected countries.

SURGICAL SOCIETY OF IRELAND.

Friday, January 2nd, 1874.

John Denham, M.D., President, in the Chair.

The Nature of Erysipelas.—Dr. Mapother read a paper on this subject. On October 10th, 1872, he removed a scirrhous breast and two axillary glands from a woman, aged 56. She was seized afterwards with erysipelas of the arm, head, and face, but the wound progressed most favourably. The pre-eruptive fever had been most severe, and lasted eight days. Not the slightest evidence of contagion could be traced. The author argued that erysipelas was a simple inflammation of the capillary lymphatics, and neither a specific nor a contagious exanthem. The likeness between the affection and inflammation of the lymphatic trunks (angioleucitis), the previous tenderness of the neighbouring glands, the over-fibrinous state of the blood, and other circumstances, were adduced in support of the proposition. Several analogies were stated to exist between erysipelas and rheumatism, and the observations of German pathologists were quoted as to the functional relations of the lymphatics to the serous and synovial sacs, which are, as it were, spread out lymphatic glands. He attempted to explain the effusion of serum and fibrin in erysipelas, by supposing that embolism of the lymphatics quickly resulted from their inflammation. Dr. Mapother further asserted, that the evidence of contagiousness was very weak; that in outbreaks, the cases arose at once from hygienic faults, not from the introduction of a specific contagium; that the systemic symptoms were proportional to the local; that the pre-eruptive fever was inconstant in time and form; and that there was increased proneness to subsequent attacks. Quite the contrary was to be said of the true exanthems. As to curative measures, he quoted Paré, in favour of fresh air, and Aëtius, in favour of dry warmth locally, and alkaline salts internally, and explained the action of these remedies, discovered empirically by these old observers.—The President regarded erysipelas as undoubtedly infectious. Many years ago, a lady died from erysipelas of the head, after labour. A sister, who had slept in the same bed with her, was soon attacked by the disease, and also died. A third case followed in the house, with the sanitary state of which no fault could be found.—Dr. H. Kennedy regarded Dr. Mapother's case as one of pyæmic affection, rather than of idiopathic erysipelas. He alluded to the great success of the "iron" treatment of the disease, and mentioned the occasional occurrence of purulent deposits beneath the arachnoid membrane, in erysipelas of the brain.—Mr. P. C. Little detailed a striking example of the contagiousness of erysipelas.—Mr. Fleming alluded to Sir Thomas Watson's observations on idiopathic erysipelas of the head.—Mr. Stapleton believed that traumatic erysipelas was contagious, and strongly objected to the use of sponges in surgical wards.—Mr. Richardson could not endorse Dr. Kennedy's opinion as to the pyæmic nature of the disease in Dr. Mapother's patient, for erysipelas often occurred at a distance from the seat of injury.—Mr. E. Hamilton believed in the contagious nature of erysipelas, and in its being a blood-poison, or zymotic disease.

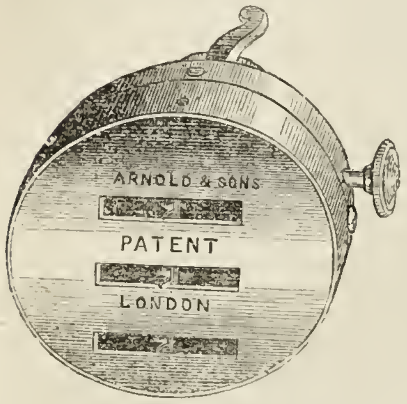
Burns.—Mr. P. C. Little detailed the particulars of several cases, illustrative of the after-effects and treatment of severe burns. A lady, aged 23, was extensively and seriously burned. Her left leg and arm had especially suffered. The case was complicated by enteritis. Mr. Little used calomel in the treatment of the case, with the intention of stimulating the absorbent properties of the lymphatic system. In a second patient, erysipelas of the left side of the head, face, and nostrils followed a burn of the left eyelid; and in a third, keratitis ensued after a burn of the left eyeball by a lucifer match. The author considered that nervous shock was the primary constitutional lesion after burns. —Dr. H. Kennedy had witnessed the degrees of nervous shock spoken of by Mr. Little. He alluded also to the sympathy between the skin and mucous membrane, exemplified in the occasional occurrence of duodenitis after severe burns.—Dr. Morgan had not followed the practice of giving mercury—a new remedy to him—in cases of burns.—Dr. Fleming mentioned two cases of duodenitis after burns; in one, death followed from perforative peritonitis.—Mr. Stapleton had never used mercury in the treatment of burns. Three prominent symptoms had not been noticed by the author, namely, a sensation of coldness, wish to pass urine frequently, and the "délire de douleur", as it had been called.—After some remarks from Dr. CORLEY, Mr. LITTLE replied, and the Society adjourned.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

MR. MALLAM'S INSTANTANEOUS VACCINATOR.



THIS elegant little instrument is to some extent an adaptation of the cupping scarificator for vaccination purposes. Instead, however, of being armed with lancets, like the scarificator, it has three steel teeth, gilded to prevent rusting, placed at equal distances from each other, and which, being set by the trigger, are released by pressure on a knob, producing three abrasions of the skin instantaneously. The lymph is then blooded from a little tube and rubbed over the abraded surfaces, and the operation is completed. The perforated surface of the little instrument is concave, so as to fit the arm of an infant. The celerity with which the operation can be performed will be a recommendation of this instrument. It is manufactured by Arnold and Sons, 35 and 36, West Smithfield.

MODIFICATION OF HOLT'S DILATOR FOR STRICTURED URETHRA.

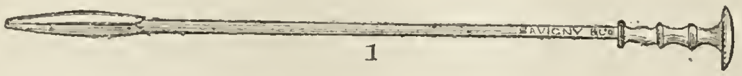
By RICHARD DAVY, F.R.C.S., Surgeon to the Westminster Hospital.

SURGEONS who are in the habit of practising immediate dilatation of a stricture at times have found it impossible to introduce Holt's dilator, although a soft stem could be passed through the stricture into the bladder. They have disapproved of dilating the meatus to the same calibre as the stricture, and have been inconvenienced by some minor mechanical details in the handle and bolt of Holt's dilator.

The following description and drawing apply to the modified instrument that I generally use in the wards of our hospital.

No. 1. The bolt set up.

No. 2. The bolt divided into three parts: viz., two sliding rods with bulbous-shaped ends; and the handle, which screws on to the end of one rod, and fixes both, as seen in No. 1.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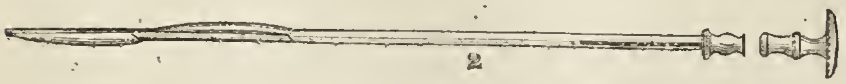
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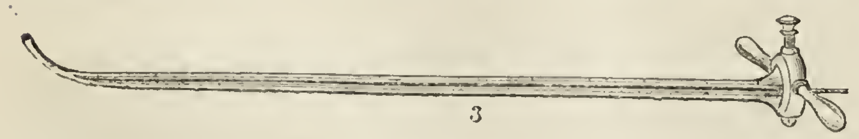
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No. 3. The dilator, with central tube from tip to handle, for transit of urine or catgut conductor.

These measurements are gauged by English scale:—Catgut *avant-courière*, No. ½—Tip of dilator, 1; maximum of dilator when bolt is not introduced, 5; stem of bolt, 7; bulbous end of bolt (set up), 12; bolt inserted between blades at meatus, 12; bolt inserted between blades at point of stricture, 18.

By means of this dilator, the strictured urethra receives four sizes more than the meatus, which amount of discrepancy may be maintained by subsequent usage of the same instrument. I am endeavouring to ascertain whether or not the inevitable subsequent contraction of the dilated stricture is postponed by the additional rupture.

The whole of the mechanical detail has been most carefully worked out for me by Savigny and Co., 67, St. James's Street, S.W.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 14TH, 1874.

THE TEACHING OF ANATOMY.

THERE is an old saying, to the effect that "it is never too late to mend", and this, like most proverbs, has its counterpart. "Well begun and continued, needs no mending;" or even "Well begun is half done," may be quoted on the other side. These sayings frequently express only half truths; and, while fully agreeing with them as far as they go, we think that the earlier one mends the better, and that the commencing and continuing well is no doubt an excellent precept; but its practical action must of course depend to a great extent on the view each individual may take as to the interpretation to be put on the word "well."

We have been taught that "all are born in sin;" and some have deduced from this text that which we believe its originators would repudiate, viz., that "everything in this world is wrong," and we are here to assist, each in his own sphere, to put it right. Be this as it may, at present we are only concerned to know that which will be readily agreed on all hands, that human beings are very fallible, and teachers of anatomy not less so than others. We wish it to be distinctly understood that we go the length of including ourselves in this category, and have neither the intention nor desire to throw over the major premiss and to establish ourselves as the exception which proves the rule. In fact, we are judging others, perhaps wrongly, from our own deficiencies in certain weighty matters; yet not entirely so, as a not inconsiderable experience in the teaching methods of others has led us to endeavour to avoid their errors of commission, and to supply those things which we deemed to be errors of omission.

Starting then, not from an assumption, but from the well-known fact that teachers of anatomy are prone to error, we propose to point out, first, the lines in which we consider the teaching deficient; secondly, some of the circumstances which have caused and help to maintain this condition of things; and thirdly, to indicate, to the best of our ability, the paths through following which matters may be considerably improved.

There can be little doubt, from our experience, that the chief defects are want of *system* and *method;* the lack of knowledge in anatomy in its largest sense, *i.e.*, of comparative anatomy; and the inability of teachers to keep themselves *au courant* with valuable work done on the continent through want of reading knowledge of the languages. To those who think that anatomy has long since said its last word—and such an opinion is held by those whose anatomical knowledge is superficial—we would advise the perusal of some of the many valuable monographs published in Germany during the last few years, which contain information on points even of the coarser anatomy unknown to readers of English works only. With regard to the want of system, we know that it is too often the case with the lecturer on anatomy to plunge at once into his subject, supremely oblivious of the important fact that most of his pupils require leading up to anatomical details. The first three or four lectures should be devoted to defining and explaining the scope, aim, and objects of anatomy, indicating the roads by which we have arrived at our present standpoint; pointing out the different branches of anatomy and their various application, showing, as far as possible, the methods by which subjects are prepared and preserved; and giving a sufficient historical sketch of the subject on which the students are about to enter. As the course proceeds, attention should be called to the differences and resemblances between man and the lower animals; and the minds of the learners should be specially impressed with the practical bearing of that which they are being taught.

In the department of practical anatomy, it is the demonstrator's duty to make men familiar with the surface-markings, to show them and to make them manipulate the various anatomical landmarks, and at the same time to tell them how injury or disease may alter them; to indicate the various cardiac auscultatory regions; to make them percuss, and to examine the rectum and vagina; to accustom them to the use of the catheter, speculum, etc., and many other things which will occur to the mind of the practical teacher.

Thus we cannot but think that both sides of anatomy will be attacked; the practical part, which of course is of the greatest importance to medical students, and the scientific, which should be of equal importance to them. By generalising, at certain appropriate stages of the course, and dwelling on the laws which govern the science of morphology—of which human anatomy is only a branch—or even by confining oneself to the more limited generalisations of the anatomy of mankind—which we have good reason to know is not often done—the most difficult and (miscalled) dry and uninteresting subject of the medical curriculum, will be made extremely interesting and instructive to the student mind; and the teacher will have the satisfaction of having the most intelligent of his pupils with him, and will feel that the words of Professor Humphry, at the last meeting of the British Medical Association, at any rate do not apply to him. These words were to the effect that anatomy, if properly taught, is not dry; but, if it be thought so, it is the fault of the teacher and not of the subject. How can a subject be in itself dry that deals with the grandest study of mankind? To point out the various stages of the evolution and development of the human species; to penetrate into the long hidden secrets of his minute structure; to trace the complicated arrangement of his nervous system, and, by studying the peculiarities of age, sex, and race, to arrive at great and startling yet true generalisations, is a duty with which one ought to be pleased and proud of being intrusted. If the anatomical lecturer would but take this view of his subject, and discriminate that anatomy, in its widest sense, includes not merely the coarser structure of man and animals, but embraces histology, even anthropology, he would be stimulated by the greatness of the task before him to redoubled exertions to learn and to teach, and his pupils would follow readily in the wake of his enthusiasm.

As regards the circumstances which have tended to induce this state of matters, no doubt much may be set down as due to the manner in which the present teachers have been taught. They have imbibed their method, with its deficiencies, from following in the steps of those from whom they learned; and very few are they who have had either the courage or originality to deviate from the time-honoured and beaten track. Blind and uninquiring submission to traditional usages, and the appeal to a precedent which was not even suitable in its day, are among other causes of the present state. Then, again, our bad system of a plurality of medical schools has tended to create and foster a class of men who are often much engaged in other professional work, and have little time to keep themselves abreast of the advancing state of the science or to undertake original research, and who are very mediocre anatomists, their knowledge often not embracing the whole of the contents of a good hand-book. If there were but two or three large schools in the metropolis, the fees would be ample to induce young men to devote their whole time to their subjects, and thus not only to become thoroughly well informed teachers, but also originators in their several branches. The students could be apportioned to the different hospitals for their clinical work, and this would stimulate the medical staff to perfect themselves in practical and clinical teaching.

Lastly, the examinations do not, in our opinion, tend to raise sufficiently the standard of the teaching of anatomy and the other branches of medical science. We think that for the higher examinations, such as the Fellowship of the College and the examinations of the Universities, candidates should be made to dissect—as was done formerly, also to prepare and explain before the examiner—the various tissues and organs, and not merely to say what they are when seen through the microscope. This is no test of real and practical knowledge; and we know of men who have presented themselves for, and passed, the examination for the Fellowship without having dissected or having even put up a microscopical preparation. That the examinations are not real tests may perhaps be attributed to the fact that the examiners are, in many cases, not the proper men for their posts. Men who examine in any subject should either be engaged in the teaching of it, or have so recently left it that its methods and facts are fresh in their memories. It is a mere truism to say that this is not generally the case, and it is well known to students, who have more fear than respect for the gentlemen who grind up their anatomy for the occasion.

In reply to these observations, it may be urged by some that it is the business of the schools to train practitioners, and not anatomists; others will perhaps think the students' time too short for any such comprehensive scheme. We have already insisted on the importance of thoroughly teaching the practical part of anatomy, and experience teaches us that the second objection is invalid. There is ample time, in a two years' course, to give a condensed, yet accurate and comprehensive, account of the science of anatomy, and thus excuse for the performance of the duties in a perfunctory manner is taken away. We candidly believe that, if the will be present, anatomy may be taught and learnt in an agreeable and satisfactory manner; and that, whether we consider it as an art to be applied to practice, or as a science of extreme interest and many collateral bearings, the time at the disposal of the teacher and the student is enough to procure for the latter a good grounding in both aspects of the science.

THE ADVANCE TO COOMASSIE.

The news from Ashantee warms every Englishman with a glow of admiration at the fine achievement and splendid conduct of our brave fellow-countrymen. On behalf of our profession, we welcome with pride and pleasure the warm and cordial acknowledgments which the despatches contain of the devotion and courageous humanity of the medical officers of the military and naval forces engaged. Seven times they are mentioned in the last despatches for distinguished services; and the conspicuous gallantry of Surgeon-Major Gore on a previous occasion, and of Dr. Fegan in the last engagement, in bringing in the wounded under fire, will no doubt receive due recognition. We give, in another column, a very interesting abstract, which has been prepared for us from the nominal list of casualties, reported officially in despatches, in the several actions during the advance to Coomassie, between January 29th and February 4th, 1874, inclusive.

A glance at the return serves to show the unusually small proportion of killed to wounded—viz., 8 deaths only out of 269 wounded. The small proportion of dangerous and very severe wounds to slight wounds is equally noticeable—viz., 12 of the former, and 9 of the latter, to 163 slight wounds. The figures are almost reversed as compared with those of the proportions of the different kinds of casualties in recent European conflicts. The fact is, of course, explained by the nature of the arms and ammunition used by the Ashantees: firstly, their indifferent firelocks; secondly, their use of slugs, projectiles quickly losing their velocity after discharge, easily stopped after penetration, and not capable of breaking the stronger bones of the body; and, thirdly, by the absence of artillery. But the small proportion of killed and dangerous wounds to the total number of casualties also points to another fact. There must have been an admirable disposition of the British troops engaged, and they must have been well kept in hand, especially in the two hotly contested fights at Amoaful and at the river Dah, or there would have been more deaths and dangerous injuries among them from accidental wounds caused by their own powerful Enfield rifles. In battles in the open field, there is always a certain number of casualties from men in front being hit by projectiles discharged from the rear or from flanking fire; but in bush-fighting, where the difficulties of ascertaining the relative positions, and of distinguishing between the fire of friends and foes are often immense, it might well be feared that such mishaps would be greatly more frequent. This danger must have been carefully guarded against in the actions on the advance to Coomassie. Thus, it is satisfactory to see that life has been carefully husbanded. Elaborate precautions were taken to guard against sickness, and these have been singularly successful. The General and officers have done their duty most gallantly; and, in pressing the enemy impetuously, have known how to spare their own men, as well as when to lead them on. We may claim for the medical department and for its chiefs and officers, both here and in the field, that, both in organising the sanitary details of the expedition and in the performance of their duties in the field, they have admirably succeeded in fulfilling a very onerous, important, and trying task, and have deserved well of the country.

METROPOLITAN HOSPITAL SUNDAY FUND.

The Council of the Hospital Sunday Fund met on March 10th to receive the Report of Canon Miller's Committee on the Dispensary question. Our readers are aware that considerable dissatisfaction was felt by the managers of the dispensaries at the manner in which the Fund was distributed last year. Such a large proportion was given to the hospitals, that the dispensaries came off but badly. The report of the Committee says that the dispensaries last year lost from £800 to £1,000, which they used previously to receive, and which was diverted to the Hospital Sunday Fund. Such being the case, it is no wonder that the friends of these useful institutions should have expressed a wish that some system of distribution should be adopted which would be less disadvantageous to them. And, indeed, the feeling ran so high that it threatened to make shipwreck of the Hospital Sunday movement altogether. Under these circumstances, Canon Miller's Committee was appointed, the matter was discussed, and the conclusion arrived at cannot fail to be satisfactory to the managers of dispensaries. There can be no doubt that these institutions have great social advantages. While the hospitals are necessary for accidents, urgent cases, and the severer forms of all maladies, there are many cases of slighter illness which can very well be treated at the patient's own home. There are many illnesses which are sufficient to keep the patients indoors, or, perhaps, in bed, for a few days, but from which he may reasonably expect to recover in a week or two. Why, in such a case, should a poor man or a poor woman be forced to seek admission into the hospital? Why should he be obliged to give up the care and supervision of his home? In such circumstances, many a man can superintend his work, if it be of a kind that can be carried on indoors; many a woman can look after her children, or provide for her husband's necessities. None of us in like circumstances would wish to be removed from our homes; and why should the poor be compelled to leave? Now, it is just here that the dispensary steps in, and provides the patient with medical attendance and medicine at his own house. In many instances, the boon to the poor must be incalculable, and we should be very sorry to see the dispensaries injured in the slightest degree by the action of the Hospital Sunday Fund. There is, we fear, little enough home feeling and domestic life among our poorer classes; and anything which gives facilities for the wife to nurse her husband, or the children to nurse their parents, during sickness, must be considered as an advantage to society, and must be better than transferring these obvious duties to others by means of a charitable institution.

The following is the conclusion arrived at by the Committee.

"That the dispensaries, as a class, ought not only to suffer no loss by the Hospital Sunday Fund, but also to partake proportionately in the increased collections for relief of the sick in the metropolitan district. That the expense of maintaining the resident medical officer of the dispensary and the cost of drugs ought to be regarded as a part of the necessary management, like that of the hospital administration, and, therefore, classed with charitable expenditure. That the fact of the very extensive administration of medical relief, coupled with the smallness of the cost, ought to be regarded as a recommendation in behalf of the dispensaries upon the Hospital Sunday Fund. That any additional resources accruing from the distribution of the Hospital Sunday Fund to dispensaries will enable them in most cases to improve their administration of relief, and to confer greater benefits on their patients. That it does not appear on what principle the ratio of the grants awarded to dispensaries and hospitals respectively should be different, and that the subcommittee is, therefore, of opinion that the ratio ought to be the same, and that the distinctive features of dispensaries already specified ought to be regarded. That among the circumstances which, in the opinion of this Committee, ought to influence the Distribution Committee in their awards to particular dispensaries are:—The amount of work done in relation to expenditure; the proportion of home visits; the need of the dispensary."

In deference to these opinions, the Council decided unanimously to place dispensaries on exactly the same footing as hospitals. Whether dispensaries shall continue to be purely charitable, or shall be made in part at least self supporting, is another and a totally different question. We have never hesitated to express our opinion in favour of the provident principle. Long before it was so prominently brought before the notice of the public as it now is, it was consistently advocated by this Journal. We are pleased, therefore, to see that the Committee are of opinion "that it is right for those who have the management of dispensaries to keep in view the provident principle, and, as far as possible, to act upon it."

THE SIAMESE TWINS.

We publish in another column an interesting account of the *post mortem* appearances found in the case of the Siamese Twins, extracted from the *Philadelphia Medical Times*.

It will be remembered that, on their visit to this country in 1869, they were seen, among others, by the late Sir James Y. Simpson, who delivered a lecture to the midwifery students at Edinburgh, which we published in the Journal of February 13th, 1869.

Alluding to the general law in relation to double monsters, that the heart, liver, etc., are inverted in position, or on the reverse side, in one of the two individuals forming united twins, he remarked that "this does not seem to hold good in relation to either Chang or Eng. The livers in both, if we may judge from percussion, are situated normally on the right side of the abdomen, and their hearts on the left side of the thorax."

In reference to operation with the view of separating them, Professor Simpson thought it was certainly possible, and would be attended probably with little or indeed no difficulty; but it would be so perilous in its character that the twins could not, in his opinion, be justified in submitting to it, nor any surgeon justified in performing it.

Mr. Bolton, in his interesting account of the Siamese twins, published in the *Philosophical Transactions* for 1830, states that, "when the brothers were young, the band was much larger in proportion to the size of their bodies than it is now", a fact which the result of the *post mortem* examination will serve to explain.

The Duchess of Edinburgh has graciously consented to become a patroness of the annual ball in aid of the funds of University College Hospital, to be held at Willis's Rooms on Thursday, May 7th.

Mr. Charles A. Rayne, M.B., B.S.Lond., has been elected House-Physician to the Radcliffe Infirmary, Oxford. This office is newly created.

Professor Hyrtl, the well-known teacher of anatomy in the University of Vienna, will deliver his last lecture on Monday next, March 16th, and will then finally retire from the chair which he has worthily occupied for thirty years. The cause of his retirement is said to be failure of vision. The students of the University are, *more suo*, preparing a demonstration in his honour.

THE *London Gazette* last week formally announced the elevation to a baronetcy of George Burrows, of Cavendish Square, in the county of Middlesex, and of Springfield, in the Isle of Wight, M.D., President of the Royal College of Physicians of London, and one of Her Majesty's Physicians in Ordinary.

THE ROYAL MEDICAL BENEVOLENT COLLEGE.

WE are informed that His Royal Highness the Prince of Wales has consented to take the chair at the Biennial Festival of the Royal Medical Benevolent College, Epsom, at Willis's Rooms, on April 22nd. This gracious favour to the great medical charity will, we hope, prove highly beneficial to its interests.

THE LOCAL GOVERNMENT BOARD.

DR. GWYNNE HARRIES, the medical inspector under the Local Government Board—who died from fever contracted when on duty, and to whose widow a pension has been given at the instance of Mr. Gladstone—has been succeeded by Dr. F. J. Mouat, a graduate of Edinburgh University, and an inspector of hospitals in the Bengal Presidency.

THE "VICTOR EMMANUEL" HOSPITAL SHIP.

WE hear justly a good deal of the admirable services of the *Victor Emmanuel* hospital ship, and its excellent fittings. We have heard, however, on good authority, a story of the treatment of the medical officers of that ship, which will, we think, be hardly credited by those who do not know the crooked ways of public departments. The medical officers serving on board volunteered, believing (on the strength of a letter from the Director-General) that they would receive the usual double pay for service on the West Coast. When, however, they applied for pay, they were informed that, as they were afloat, they were not considered as serving on the Coast at all, and were therefore not entitled to double pay. Further than that, they were not even taken on the strength of the expedition, and consequently the Control Department could issue them no pay at all, even at English rates; so that those officers have gone out to an unhealthy climate and arduous duties, and not only get no extra pay, but are losing all their ordinary home allowances, and cannot even get their ordinary pay for current expenses, with the additional mortification that they are not even considered on the establishment of the expedition. Unfortunately, the insurance offices do not think service in the surf of the West Coast the same as home service, and charge accordingly. Is it a wonder that the service is unpopular? Or will it be astonishing, should there be no volunteers forthcoming when next we have a war?

THE SHERRY OF COMMERCE.

THE number of *Food, Water, and Air*, for the current month, contains an elaborate investigation, made by Dr. Hassall, into the quality of the sherry of commerce. That commercial sherry is always fortified by the addition of a large quantity of spirit, was quite well known, and is again affirmed by Dr. Hassall. That the ash of sherry consists, to a great extent, of sulphates and not tartrates, was also known, and is again put forward by Dr. Hassall, who, however, fixes the highest limit as 51.6 grains of sulphate of potash per bottle, whereas Dr. Thudichum had found, in some cases, as much as 169.2 grains per bottle. On a former occasion, it was pointed out in this JOURNAL that sherry is by no means peculiar in containing sulphates instead of tartrates, and that Rhine wine does the same; and we are of opinion that undue importance has been attached to the circumstance of the sherry-ash being sulphates. We do not agree with Dr. Hassall in his condemnation of the fortification of sherry. No doubt unfortified sherry, like unfortified Rhine wine, might be imported to this country in sound condition; but what we require of sherry is, that it may be kept in a decanter and drunk in small quantities—by the glass-full—at intervals. No unfortified wines will bear such usage; neither claret, nor Rhine wine, nor natural sherry, could be kept in a decanter for a week without becoming very nasty. If we are to have unfortified sherry, we must drink it as we drink light wines; and if custom should alter so as to admit that, then we shall have large quantities of natural sherry imported, but not till then. This will, however, be practically a much more costly wine, since a bottle opened is a bottle spoiled; and a tumbler will supersede the economical "glass of sherry", to which, spite of chemists and critics, the British public adheres.

HOSPITAL SATURDAY FOR LONDON.

THE promoters of the Hospital Saturday movement are holding weekly meetings at St. John's Hospital, Leicester Square, for the purpose of organising "a simultaneous collection on Saturday, October 17, next, in all the workshops, warehouses, and factories of London, in aid of a fund which is to be divided upon a just and equitable principle among the various London hospitals and dispensaries". There can be no doubt that this effort springs from a laudable desire on the part of the working classes to contribute something towards the medical relief which they use so freely; they probably feel that their position is such that they ought not to be contented to receive entirely gratuitous assistance. But it is a pity that they have not accepted the invitations given them by the Mansion House Committee, and acted in concert with the promoters of the Hospital Sunday Fund. The opinion was strongly expressed at the Council meeting on Tuesday last, that it was undesirable that there should be two funds and two distributions for the same object, and in this opinion we entirely concur.

CLINICAL INSTRUCTION.

IT will be seen from the subjoined communications, that the teachers of the Manchester School concur in the objections expressed by the authorities of the Birmingham and Liverpool Schools to the clauses in the conjoint scheme of education relating to clinical instruction.

"Royal Infirmary, Manchester, March 10th, 1874.

"SIR,—I am requested to forward you the following copy of a resolution passed at a meeting of the Medical Committee of this Infirmary on the 5th instant, a copy of which has been sent to the Royal College of Physicians and Royal College of Surgeons, London.

"I am, Sir, yours obediently,
"GEORGE REED, M.D., Resident Medical Officer.
The Editor, BRITISH MEDICAL JOURNAL."

"March 5th, 1874.

"The Medical Committee of the Manchester Royal Infirmary beg to call the attention of the Committee of Reference for an Examining Board in England to Note M, Sec. 2, Clause 23, in their Report, which, if adopted, will interfere very seriously with the necessary control in the scheme for practical tuition suggested by the College of Surgeons, and recently instituted in the medical and surgical departments of this hospital. The Committee are also of opinion that the regulations referring to the admission of graduates of the Universities to the final examination, should include evidence that the applicants have been engaged in the study of practical medicine and surgery.

"(Signed) M. A. EASON WILKINSON, M.D., Chairman."

PRIVATE PROVIDENT DISPENSARIES.

A LETTER which we published last week illustrated the truth of the axiom that all good things are liable to abuse, and pointed out a mode of action which would be very apt to bring provident dispensaries into disrepute. The practice of medical men opening provident dispensaries on their own account is one to which, when properly carried out, we can see no objection. We have heard of it in several places, and it seems to be a very legitimate development of the provident principle. It is a method of carrying on the humblest class of paying practice which is advantageous alike to the medical practitioner and to his patient. It secures the former from bad debts, and it enables the latter to obtain advice on easy terms. It would be to the interest of all parties, and to the credit of our profession, if those who now announce "advice gratis," etc., were instead to open a provident list, and to attend their poorer patients on something like the same terms and under the same restrictions as the fully recognised provident dispensaries. We are glad to know that this is done already by some practitioners; and, indeed, if the provident principle is to be spread widely, it must in some places be carried out by such private enterprise. The practice, however, needs to be jealously guarded. Those adopting it must be careful not to carry it on, as in the example alluded to last week, by unqualified assistants; they must not word any announcement so as to mislead the public by inducing them to suppose that they are the appointed officers of a society, when in truth they are acting solely on their own account; and they must not adopt any means of advertising which are at variance with the ordinary rules of professional etiquette. We allude to these dangers, because they have been specially brought to our notice, and because we think that a word of advice on the subject may be useful at the present time, when many medical men are contemplating the adoption of the provident system in one form or another.

IMPORTANCE OF VENTILATION.

PROFESSOR RUTHERFORD, King's College, writes to us: "I observe, from your impression of to-day, that Dr. Mac Cormac of Belfast has given as wide publicity as possible to what he evidently regards as a remarkable exhibition of ignorance on my part. He quotes from an account of one of my Royal Institution lectures, given in the *Illustrated London News*, that 'an open window can seldom be endured in the night in this country.' It will, I trust, afford Dr. Mac Cormac much relief when I tell him that this statement was not made by me. In speaking of the ventilation of bed-rooms, I said that, although an open window is an excellent means of ventilation, *there are many persons who cannot bear an open window in their bed-rooms during the winter in this country* (or words to that effect); but an aperture in the top or bottom of the door can always be tolerated. I endeavoured to show that there should always be at least such an aperture of sufficient size, together with an open chimney. It is gratifying to learn that Dr. Mac Cormac and all his family can enjoy the practice of sleeping in rooms 'betwixt the door and window *widely open*, the draught *rushing backwards and forwards* as it lists, with the temperature not much above freezing-point.' This statement may be regarded as sufficient proof of the robust constitution possessed by Dr. Mac Cormac and the members of his family; but, notwithstanding Dr. Mac Cormac's excellent health, I would rather not recommend the practice to any one, and least of all should I dream of recommending such a procedure to those who have weak throats and chests. I doubt if sleeping with open windows 'would cause an approximate, if not entire, cessation of the ravages of consumptive tubercular disease,' as Dr. Mac Cormac so confidently maintains."

COMMODORE COMMERELL.

IN congratulating the commodore on his recovery, the *Australian Argus* claims for the medical officers the meed of praise due to them for having, under Providence, rescued their patient from the very jaws of death, and observes: "On Dr. Thomas Colan, the chief surgeon of the *Rattlesnake*, devolved all the responsibility of the case from its commencement, a responsibility Dr. Colan did not hesitate to incur. He fearlessly undertook the risk of taking the commodore from Cape Coast Castle to the Cape of Good Hope. Through the long and anxious voyage his attendance upon his patient had to be unremitting. After landing at Simon's Bay, and again some weeks of anxiety and care, Dr. Colan had the satisfaction of seeing his treatment crowned with success. Dr. Murray of Simon's Town, and Staff-Surgeon Breen, the principal medical officer of the naval hospital at Simon's Town, ably assisted Dr. Colan with their advice after the arrival of the *Rattlesnake* at the Cape." The *Argus* doubts not that Dr. Colan's medical chief and the Board of Admiralty will confer upon him some substantial mark of their favour in recognition of his services.

THE QUEEN'S HOSPITAL, BIRMINGHAM.

THE thirty-third annual report of the Committee of Management of the Queen's Hospital, to be presented to the annual meeting of Governors on the 19th instant, has been issued. It gives a brief narrative of the proceedings of the committee during the past year, and refers especially to the advantages derived from the alterations and enlargement of the hospital. Appended is the following supplementary report.

"The Chairman of the Medical Board, acting under the instructions of his colleagues, begs to add the following observations to the above report. The completion of the structural improvements of the hospital, in connection with the extension movement, appears to the medical officers to offer a fitting opportunity to make mention of the eminent services of their colleague Mr. Gamgee in instituting and promoting that movement. Nothing of equal importance has occurred since the first establishment of the institution—nothing of equal value as regards either its salubrity or its convenience. The zeal, the self-sacrifice, the eloquence, the administrative skill brought by their colleague to this great work were such as to deserve the warmest thanks of all interested in the success of the charity, and especially of those engaged in its medical and surgical labours. The medical officers wish also to place on record their full appreciation of the remarkable services of the same gentleman in setting on foot and bringing to a successful termination the first Hospital Saturday collection in this town. Much is hoped in the future from the benevolent co-operation of the working men of Birmingham in the support of its public charities, and in connection with this assistance the name of Mr. Gamgee must ever be held in honour.—THOMAS P. HESLOP, M.D., F.R.C.P., Chairman of the Medical Board."

THE WINTER ABROAD.

A NEAPOLITAN correspondent of the *Times* writes: A few words on climates will not be unacceptable to that large class of invalids who always seek to escape from the rigour of a northern winter. In Southern Italy, as you have been informed more than once, the season has been exceptional; but so it has been even further south, and it is only fair to this neighbourhood, and especially to one or two warm retreats on the Bay, to give you some gleanings which I have gathered from various quarters. Of Palermo, I have already spoken; the cold has on some days been severe, and English travellers arriving from Catania, one of the mildest spots in Sicily, report that snow fell during their visit. A letter now before me, dated Cairo, from some friends who wintered last year in Capri, and who have found that by going further they have fared worse, says:—

"Our winter in Cairo has so far (February 20th) proved a disappointment. Some persons who have been here several years say they never remember such a winter. There have been about twelve days in two months on which there has been rain, and of this number two or three days have been very wet. The thermometer before sunrise has stood at 37, 36, 35, and even at 33 deg., Fahrenheit of course. We have had a great deal of kaarnisin or sirocco, a very cold wind here in winter. It blew, I think, for twelve days in succession. There was a kind of hurricane more than once, and the sky was obliterated by the clouds of dust and light sand which were whirled along by the wind. Even when there is no gale, there is a great deal of wind in Cairo, and the drifts of dust are sometimes most distressing. A poor French General suffering from chest or throat disease was so disgusted, that he took himself off to Madeira after giving this place a trial. Only one of the bedrooms (in the hotel) has a fireplace, and, so far as I know, only one of the sitting-rooms has this luxury. The cold has been acutely felt, and —— says she has not suffered so much since we were at Meran, eighteen months ago, as she has done here. I tried to warm the bedroom with lamps, as she felt the cold was retarding her recovery. Bad as the weather has been, there is no doubt that the winter of Cairo has even this year been drier and milder and brighter than our English winter; yet I should hesitate to send patients, were I a medical man, to this city of dust and wind and comfortless hotel existence."

It is to be presumed that this winter has been exceptional in Cairo, but so has it been on the entire coast of the Mediterranean, and invalids have not been worse off on the Bay of Naples than they would have been in Palermo, Catania, or Cairo; perhaps, indeed, they have been better off, as they have had less dust and more comforts.

PROFESSOR SHARPEY.

WE feel very great pleasure in joining in the congratulations addressed to Professor Sharpey on the recognition of his great public services by a Government pension of £150 a year. This graceful act of the retiring Government is, we believe, due to the representations of Earl Granville. Professor Sharpey has in his life illustrated the highest personal qualities of the philosopher. He had the opportunity of accepting more than once much more highly lucrative posts than any that he has held, by quitting his own for another University; but he felt, rightly, that his place was here, and that here he could be most useful. Professor

Sharpey has beén and is at once the Mentor and Nestor of physiological science in this metropolis; and his great personal influence, the weight of his character, and the uprightness of his judgment, have done much to advance the highest interests of physiological and biological research in this country. We trust that he may long enjoy his well earned laurels.

MEDICAL SOCIETY OF LONDON.

THIS Society held its hundred and first anniversary meeting at St. James's Hall on Monday, March 9th; Dr. Habershon, President, in the chair. The following is the list of officers and Council appointed for the ensuing year. *President:* Victor de Méric, F.R.C.S. *Vice-Presidents:* A. E. Sansom, M.D.; F. J. Gant, F.R.C.S.; W. H. Broadbent, M.D., F.R.C.P.; H. Royes Bell, F.R.C.S. *Treasurer:* John Gay, F.R.C.S. *Librarian:* J. C. Thorowgood, M.D. *Secretaries in Ordinary:* F. W. Braine, F.R.C.S.; C. T. Williams, M.A., M.D. *Secretary for Foreign Correspondence:* W. Cholmeley, M.D. *Orator:* F. E. Anstie, M.D., F.R.C.P. *Council:* J. Brunton, M.A., M.D.; T. Bryant, F.R.C.S.; A. Carpenter, M.D.; R. B. Carter, F.R.C.S.; A. Cooper, F.R.C.S.; R. A. Farquharson, M.D.; C. Godson, M.D.; S. O. Habershon, M.D.; J. Hainworth, F.R.C.S.; T. H. Hill, M.R.C.S.; C. Holman, M.D.; J. H. Jackson, M.D.; F. Mason, F.R.C.S.; R. P. Middlemist, M.R.C.S.; J. H. Paul, M.D.; R. D. Powell, M.D.; L. Sedgwick, M.D.; E. S. Thompson, M.D.; E. S. Willett, M.D.; A. Wiltshire, M.D. The Fothergillian Gold Medal was awarded to Dr. John Kent Spender of Bath, for his essay on Therapeutic Means for the Relief of Pain; and the silver medal for services rendered to the Society to Dr. Wiltshire. The dinner was well attended. Among the guests were Sir George Burrows, Mr. Curling, etc.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

A MEETING of the profession in Bristol was held on Tuesday, Feb. 24th, Crosby Leonard, Esq., in the Chair, when a new Society was constituted, and forty-five members enrolled. The Society was named "The Bristol Medico-Chirurgical Society." Laws were proposed and accepted provisionally. The meetings are to be held monthly (except in July and August). The following officers were appointed for the ensuing year, viz.—*President:* F. Brittan, M.D.—*Vice-President:* R. W. Coe, F.R.C.S.—*Secretary:* R. S. Smith, M.D.—*Committee:* S. Martyn, M.D.; J. Beddoe, M.D., F.R.S.; W. H. Spencer, M.D.; N. C. Dobson, F.R.C.S.; L. M. Griffiths, M.R.C.S.; E. A. Gloag, M.R.C.S. At the next meeting, on March 27th, Dr. Brittan will deliver an inaugural address. The annual subscription is 10s. 6d.; there will be "no tea and coffee, nor feeding." The Bristol Museum and Library Committee have placed their lecture room at the disposal of the new Society for its meetings. We believe that most, if not all, of the members are also members of the Bristol Branch of the Association; and, under these circumstances, there will, we apprehend, be presently no difficulty in constituting this a working section of the Bath and Bristol Branch, like the Clinical and Pathological Section of the Birmingham and Midland Counties Branch.

CONVICTION OF A QUACK FOR MANSLAUGHTER.

IN the JOURNAL of January 17th, we called attention to the case of a young man aged 22, who died under suspicious circumstances, after taking five pills, which he obtained from one "Professor" Morris in order to cure a "cold and cough". At the inquest, a verdict of manslaughter was returned; and the case came on for trial last week at the Hertford Assizes, before Mr. Justice Lush. Mr. Richard Shillitoe, who made the *post mortem* examination, gave evidence that he found no appearances in the body of the deceased to account for death, beyond those that might be produced by an irritant poison. Dr. George Harley, of London, stated that he found a considerable quantity of arsenic in the stomach and intestines, and also in the substance of the spleen, showing that the poison had circulated through the man's blood before his death. He further showed that arsenic was contained in the pills which remained in the box found in the pocket of the deceased, and sworn to as having been obtained from the quack. He also showed metallic arsenic and sublimated crystalline arsenious acid, obtained from the man's viscera and from the pills; and a drawing of the intestinal canal of a terrier, showing the effects produced by the administration of six grains of arsenic in doses of a quarter of a grain daily. The appearances were the same as those presented in the intestinal canal of the deceased. His lordship, in summing up, said that there was no dispute as to the law in such a case. If a medical man of the highest class were, through a pure mistake, to substitute one sort of medicine for another, that would not make him criminally responsible. But, on the other hand, if a person totally ignorant of the science of medicine took upon himself to administer a violent and dangerous drug to one labouring under disease, and death resulted, then that person was guilty of manslaughter. No person was justified in using such a deadly poison as arsenic in compounding pills, until he had ascertained with the utmost exactness what was the proper proportion to be used. The jury found the prisoner guilty, but recommended him strongly to mercy, on the ground that he administered the arsenic without knowing it to be so poisonous. On the following day, the judge, in consequence of this recommendation, passed on him the light sentence of imprisonment for three months without hard labour.

HARVEIAN SOCIETY OF LONDON.

As we stated in our last impression, the proposition to expel Mr. Lobb in consequence of his advertisements, was not carried by the requisite majority—viz., three-fourths of the members voting. We are informed that the President and several other members have since resigned, but have been requested by the Council to suspend their resignations until the results of a special meeting of the Society, which is to be held on Thursday next, are known. This extraordinary meeting, at which it is hoped all members will try to attend, has been summoned, in order that the present position of the Society may be considered.

DEATH OF PROFESSOR CRUVEILHIER.

OUR Paris correspondent writes: One of the connecting links between the members of the profession of the present and past century has just passed away, in the eighty-ninth year of his age. Dr. Cruveilhier was one of the most distinguished physicians of Paris, and was besides one of the oldest. He was a pupil of the celebrated Dupuytren, and took his degree in 1815. He was the author of several works, but that on Anatomy is the most familiarly known, it having been, and still is, the text-book of the Faculty, as it has been in a great measure revised and modernised by his son, who has adopted surgery as his specialty, and is a subprofessor at the Faculty of Medicine of Paris. The deceased was a most charitable man; and his death will be deeply felt by the poor of his parish, whom he relieved with money and gratuitous consultation.

DEATH IN CLERKENWELL.

AT an inquest in Clerkenwell, the foreman of the jury addressed Dr. Lankester on the absence of a public mortuary in the parish. As an instance of its necessity, he mentioned a case in which a *post mortem* examination had had to be made in a room occupied by six people. Dr. Lankester replied that no one could appreciate more highly than he did the value of such establishments. He had recommended them to be built in every parish in his district. It is stated that a mortuary which formerly existed in this parish, the property of the Marquis of Northampton, who draws a large rental revenue from the parish, has been pulled down. We earnestly trust that the appeal which is to be made to this proprietor for assistance to restore it will be successful. Unquestionably, in such a parish as Clerkenwell, the responsibilities of property must be held in view not less than its privileges.

WHOLESALE POISONING BY ARSENIC.

ALMOST incredible carelessness upon the part of a shepherd, named Thomas Coombes, at Thursley, West Surrey, has resulted in the death of himself, his wife, a son, and two daughters. At the time of the inquest on Tuesday last, three other members of the family were also in a hopeless condition. The man brought from the farm on which he was engaged a bucket containing about two and a half gallons, which had for a long time previously held a composition for dressing sheep. Having washed out the bucket, he used it as a receptacle for containing the water drawn from a well for the use of the family. Dr. Stevenson, analyst for the county of Surrey, has examined the bucket, and found it to be impregnated with arsenic to such a degree as to make it dangerous for use as a receptacle for water. Would it not be as well if the boxes, or paper in which the "composition" is sold, had a caution printed on the outside, warning people not to place the contents in any vessel which may at any time be used to contain water for drinking purposes; or, better still, in no wooden receptacle?

SCOTLAND.

THE ABERDEEN AND DUNDEE INFIRMARIES.

THE financial accounts of the Aberdeen Infirmary, submitted at the meeting of the managers this week, showed that there had been a falling off in income of £1,088:13:5, and an increased expenditure of £652:17:8 in 1873, compared with the previous year, and that the year's deficit amounted to £1,074:10:4. The managers of the Dundee Infirmary also met, and the cheering reports of the success met with in their endeavours to extricate that institution from a still more embarrassed position may, the *Scotsman* suggests, perhaps serve as a hint and an encouragement to the Aberdeen Board. The institution of the "Hospital Sunday" in Dundee has brought in £500 more than the churches used to give, and upwards of £1,700 has been received by voluntary subscription, reducing the infirmary debt to £1,000.

SCANDALOUS TREATMENT OF SMALL-POX PATIENTS.

THE Stranraer correspondent of the *Scotsman* gives the following particulars regarding the treatment of small-pox cases. "A tramp named Murphy, on Monday, the 9th instant, with the external symptoms of small-pox already apparent on him, left Newton-Stewart and went to Wigtown; thence he came round by Whithorn and Portwilliam to Glenluce. By that time he was nearly 'off his legs', but the parochial authorities in the last-named place would not let him stay on any account. They tried to get him forward by rail to Stranraer or Newton-Stewart, and the superintendent of the Portpatrick line, Mr. Grafton, at once put a stop to such a proceeding. The patient was then driven to the road, and tramped to Stranraer, where he found shelter in a chimney-sweep's house, the family there having just been suffering from small-pox. About the same time, a female vagrant came along the coast from Ayrshire, carrying an infant with the pox developed upon it. They were lodged in the old castle, the keeper's family having recently had the disease. The infant died there, and the mother, it is to be presumed, will continue her journey with the seeds of the disease 'lingering in her clothes'. A Glenluce correspondent, referring to the first case, says:—'Our quiet little village was thrown into a state of alarm on Friday morning by the intelligence that a vagrant, afflicted with small-pox, had been harboured over Thursday night in one of our lodging-houses. It seems that he had been sent in a conveyance, by the Mochrum sanitary inspector, from Portwilliam to the upper end of Glenluce village. He was dropped out on the road at midnight, and found his way into the lodging-house sometime thereafter. Next day he proceeded to Stranraer, where, it is believed, he resides.'"

PROFESSOR HUXLEY AT ABERDEEN.

OUR Aberdeen correspondent writes:—To those who really understand the position and requirements of the School of Medicine in the University of Aberdeen, the visit of Professor Huxley, and the results likely to accrue therefrom, have proved a bitter disappointment. It was to have been expected that our Medical Rector, the undoubted possessor of a master mind, would have taken a master's grasp of the situation, and suggested a suitable remedy for the state of affairs which is awakening in the northern University so much and so powerful internal fermentation. The English and other members of our Association are perhaps unaware of the true position of the Aberdeen Medical School, and a word or two of enlightenment may not be amiss. By the Universities Act, such hard and fast lines have been laid down, that no change in that which was deemed suitable for 1858 can be effected without such an amount of time and formality as amount to a practically insuperable barrier. The curriculum, the examinations, the subjects of study, and the machinery of tuition, are fixed for ever, and not even a shade of power is possessed by the University to accommodate itself to the rapidly changing times. The burden is greater than can be borne, and no gleam of hope of its removal can be distinguished. Groans and protests are uttered on every side; and struggles, hopeless struggles, against such an injustice, are not wanting; but their effect is *nil*. And now the hope of a helping hand from the powerful denunciation of the illustrious Lord Rector has proved but a broken reed. Instead of assisting to sweep away the fetters which have tied up the hands of the University from itself effecting the needful reforms, and protesting against the legislation which cramps every freedom of action, he has contented himself by pointing to one or two of the least important sores which the bonds have produced, and suggesting their cure or amelioration. What is required is not the mere removal of botany and zoology from their present position in the medical curriculum, not the adoption of practical methods of teaching, not the limitation of subjects of examination, and not the multiplication of laboratories and demonstrators; these things may be good in themselves, but they are far from being all. What is required is, that our University should obtain the right of not only now, but at all times, effecting its own needful internal reforms and changes, of accommodating itself to the changing requirements of medical education, and of doing this without the need for overcoming the serried lines of obstacles which meantime hedge it round, and which no human patience or perseverance can overcome. Anything short of this is no solution of the question of university reform in the Aberdeen Medical School, and would be, at the best, a temporary slackening of the bonds, which a slight growth would render as irksome as ever, and which ought in justice to be totally removed. It is a subject of deep regret that Professor Huxley has not dealt a single blow at the prime cause of the discontent which exists, and has lost a golden opportunity. Were the hands of the University untied, it would soon effect the changes which he has advocated, and a great deal more which he has overlooked.

IRELAND.

AT a meeting of the guardians of Galway Union held lately, the salaries of the medical officers, Drs. Grealy and Clayton, were increased from £100 to £120 *per annum* respectively.

SMALL-POX IN LURGAN.

SMALL-POX, we regret to state, has not yet left Ireland. Last week, three cases of this disease were admitted into the hospital connected with the Lurgan Workhouse; and since then, two additional cases have taken place; one being a child aged four, the second a woman, forty-four years old. It is also stated that a schoolmaster has recently died from the same affection. All the cases that have occurred are of a most malignant type, and so far it has been found impossible to trace the outbreak to any particular source.

LADY NURSES.

NURSING by ladies in hospitals has generally turned out very successful; and has been found of advantage to both patients and to the medical officers of those institutions; but, at a late meeting of the guardians of the Mallow Union Infirmary, it was resolved, by a majority of seventeen to fifteen, not to admit lady nurses into that hospital.

REPORT
ON
THE NURSING ARRANGEMENTS OF THE LONDON HOSPITALS.

BY OUR SPECIAL COMMISSIONER.

II.

We gave last week a short account of the more important changes which have been made, during the last twenty years or so, in the nursing arrangements of the principal London hospitals. Opinions may differ as to whether some of these changes are really improvements; for example, the employment of scrubbers and ward-maids to assist the nurses is objected to by many, as tending to create amongst the latter a spirit of fine-ladyism. The presence of sickness, say they, of itself throws a heavy strain on the energies of ordinary households, and to train nurses who require a servant to wait upon them is to confer a very doubtful blessing on society. But, as Dr. Steele remarks: "This so-called menial work is not nearly so irksome, nor so laborious, nor is it half so offensive, as many of the important duties connected with the exclusive art of nursing; such duties as the cleansing of foul wounds, attention to the requirements of paralytics, the removal of the egesta, and the laying out of the dead, are all necessarily disagreeable, and, to most minds, offensive; and there are few women who would not occasionally prefer the subordinate work to these more exalted duties of the nurse." The idea of an experienced nurse is, then, not so much that the washing of dishes and the scrubbing of rooms is unpleasant or degrading, as that it is better for her to devote her energies to those duties which no one else can perform so well, rather than waste them in work which can be equally well done by anybody. And if it be true that this idea is sometimes pushed to an extreme, the fault must not be laid altogether on hospital managers. These, and other changes, have not been introduced out of a pure spirit of philanthropy, simply with the view of relieving the nurses; they were, to a great extent, forced upon the governing bodies. It was found that, owing to the spread of education and the constant discoveries of fresh openings for female labour, there was a growing scarcity of suitable applicants for training, and it was absolutely necessary to offer more favourable terms, or to be content with candidates from a lower social grade. On the whole, however, we think it will be allowed that the general effect of the changes has been good, and that both patients and nurses have benefited by them.

There has certainly been a great improvement in the general standard of education among nurses, though perhaps not greater than among other classes of similar social position; still, this is a matter of importance. We learn from Mr. Fowke's Report that, in 1867, at the Birmingham General Hospital, out of twenty nurses, seven, including three head-nurses, could not read or write; and, at all events, a few years earlier, the state of things at most of the London hospitals was not very different: it is only wonderful that serious mistakes were not of more frequent occurrence. No hospital will now receive a woman as nurse unless she can read and write fairly.

But it is in the upper grades of the nursing system that the improvement in this respect is most marked. At the majority of the London hospitals, the sisters are either of gentle birth, or at least superior in education to the majority of those whom they command; whilst the substitution of a *lady* superintendent for the old matron is almost universal. It is evident, therefore, that the advantage of having well-educated women to superintend the nurses is generally admitted; and the only questions are, as to the extent to which this should be carried, and as to the possibility of surmounting certain difficulties and drawbacks which attend any great advance in this direction. The advantages have been so often dwelt upon, that we need only mention the chief. Both nurses and patients more readily obey a lady sister; her presence checks all rough play and coarse joking, and secures general propriety of behaviour; she generally possesses more tact in management, and consideration for the feelings of others—qualities which are often deficient in the ill-educated; and, lastly, since a lady is not likely to hold such a post unless she have a real love for the work, she is more likely to perform it zealously than a nurse who might only be actuated by merely mercenary motives. We are far from asserting that old nurses do not preserve order and propriety in their wards, but only that, as a rule, a lady can maintain discipline more easily and with less show of power.

There are three principal objections which have been raised to the employment of ladies as head-nurses—viz., (1) that the supply is insufficient; (2) that they are not properly amenable to discipline; and (3) that the system is extravagant.

1. The first objection is really more serious than it may appear at first sight. That the number of unemployed, or badly employed, ladies in this country is very large is true, and it is also true that the position of a sister at most hospitals may be favourably compared with that of many a governess or so-called "companion". Moreover, there is no dearth of applicants; there is a deeply rooted idea in the female mind, fostered by poets and other unpractical people, that all women are born nurses; and a lady who has once nursed a mother or husband is apt to consider herself equal to any emergency. A short stay in a hospital generally undeceives her; she soon comes to understand the difference between attending on a loved relative or grateful friend, and looking after a succession of vulgar and often thankless patients. Many ladies are too sensitive to bear the sights and scenes which are constant features of hospital life; others are over-excited by the work, or otherwise fail in health; some have not sufficient administrative ability, for the duties of a sister are both numerous and responsible; and many who succeed admirably when roused by the excitement of war, fall off entirely under the more monotonous *régime* of a civil hospital. Notwithstanding, then, the apparent abundance of the raw material, the number of ladies who can be trained into efficient head-nurses is practically somewhat limited. And, as a rule, the system of having lady-sisters should be adopted absolutely or not at all. In hospitals where some sisters are ladies and some are not, the latter must occupy an inferior position; their authority suffers, there is consequent jealousy, and the staff is split up into cliques.

2. The second objection is also true to a certain extent: ladies, previously accustomed only to command others, are undoubtedly liable to resent the necessarily strict discipline of a hospital; and this is especially the case with those who are in other respects the most valuable—viz., those who have adopted the profession really from choice and not from necessity. This tendency can only be obviated either by the presence at the head of the establishment of a lady possessing unusual tact, judgment, and general power of management, or by the development among the sisters of a strong *esprit de corps*. To this last factor is chiefly due the success of the nursing associations founded on a religious, or semi-religious, basis; and we may as well take this opportunity of speaking of these a little more at length.

At most of the London hospitals the nursing is in charge of a lady-superintendent or matron, who is under the immediate supervision of, and is responsible to, the Board of Governors or Committee of Management. The lady-superintendent engages the sisters and nurses, subject to the approval of the Board, by whom also they are paid and are liable to dismissal. But in a few instances the hospital authorities have contracted, as it were, with a separate establishment to provide the whole of the nursing staff for a certain sum. The nurses in this case are not under the immediate control of the Board, but are engaged and paid by the nursing establishment, which again holds itself responsible to the Board for the efficient performance of the duties they have undertaken. The lady-superintendent is thus directly responsible only to the authorities of the nursing institution, and only secondarily to those of the hospital in which she may be placed. The Hospital Committee have no power either directly to approve of or to censure any of the nursing staff, and are even supposed to communicate with the sister in charge only through her immediate superiors. The most notable examples of this sort of arrangement are King's College Hospital and University College Hospital: the first has been nursed since 1856 by the sisters and nurses of St. John's House, and the latter since 1858 by those of All Saints' Home. Speaking of this system, Dr. Steele remarks, in the paper before referred to (*Guy's Hospital Reports*, 1871), "There must necessarily be a duality of government, with all its inconveniences, in administering the internal affairs of a charity, when the larger number of those employed are not officially responsible to the governing body, but are ruled and controlled by a superior agency outside. It appears impossible but that misunderstanding should arise from time to time with reference to many questions of domestic economy, involving considerable expenditure of money, which under a single system of administration would be at once decided in a way more in keeping with the limited resources of a voluntary charity than irresponsible agents are likely to follow". The arrangement does seem a complicated one, and recent events would seem to prove that the opinion which Dr. Steele expressed regarding it three years ago was a true one.

Practically, however, these inconveniences are not so seriously felt. King's College Hospital has been nursed on this system for eighteen years, and Charing Cross Hospital for eight years, both by the St. John's sisterhood. University College Hospital has been nursed by the All Saints' sisters for sixteen years, under an agreement identical in all essential points with that of King's College; yet we are informed on good authority that, during the whole of that time, the subject of the nursing has never yet been brought formally under the notice of the hospital committee; questions of discipline have, in rare instances, arisen, and inefficient nurses and sisters have occasionally required removal; but these matters have invariably been promptly settled by the sister in charge on the informal representations of the resident medical officer, or of members of the honorary staff. We consider King's College Hospital unfortunate in not possessing a paid medical superintendent; such an officer is a most useful mediator between the medical and nursing staff and the lay authorities. A secretary, however zealous he may be, cannot possibly estimate fairly the relative importance of medical questions, and often acts inconsistently in consequence; moreover, his constant tendency is to consider unduly the immediate cost of any proposed change, rather than increased efficiency or even ultimate economy; but this by the way. At Charing Cross Hospital, also, the above arrangement has worked very satisfactorily during the shorter time it has been in force there, and the authorities are perfectly satisfied with the result.

Evidently, therefore, "the duality of government" is by no means such a prominent feature in practice as it seems on paper. The sister in charge is empowered by the authorities of her Society to act according to her own discretion in all ordinary matters, and they are only consulted occasionally on affairs of importance; the sister is therefore quite competent to attend to any representations from the hospital authorities which do not involve a change of principle or of system. On the other hand, although at many hospitals all new sisters and nurses come before the Board to have their contracts ratified, yet, except on very strong provocation, no Board deals with their nursing staff except through the lady-superintendent or matron, or at her request. Direct interference would effectually destroy that lady's authority; she would at once understand it as an expression of want of confidence, and would probably tender her resignation.

The advantages of this contract system are—first, that the hospital governors delegate a very difficult and responsible portion of their duties to agents who, from their special experience, may be supposed to be better qualified to perform it; secondly, since these societies have generally a reserve of members whose characters and capabilities are known, from which to select their working staff, the general standard of efficiency is likely to be higher than when recruits are obtained, by chance means, as required from time to time; and, lastly, the good discipline and strong *esprit de corps* which is usually a marked feature of these associations, ensures harmonious working, at all events, amongst their own members. It is true that harmonious working with the other officers of the hospital depends much upon the disposition of the sister in charge, and that she can only be changed with the consent of her immediate superiors; but we can scarcely imagine that these latter would refuse such an application from the hospital committee if they thought it was made *bonâ fide*, and not intended merely as a preliminary to further proceedings of an unfriendly nature.

There is, however, one objection to this system which, in some instances at least, seems to have had some foundation in fact. These nursing associations devote their attention to the supply of nurses for private cases, as well as to the maintenance of their hospital staff, and indeed use the hospital as a training-ground, drafting off nurses as they become efficient, and supplying their places with fresh probationers. Within certain limits, this cannot be objected to; the majority of nurses will not stop longer than they can help at hospital work, and if they are not put to private nursing by the sisters, they will take to it on their own account. The danger is that, for the sake of profit, nurses may be drafted off too rapidly, and that an undue proportion of young nurses and learners may be left to carry on the service of the hospital. We think also that, as a rule, the staff of nurses kept for private cases should be kept distinct from that of the hospital. We believe that at some institutions it is the rule for a nurse, on her return from a private case, to go back to her duties in the wards; in a short time she is sent off to another case, to return again in the same way. We believe that this unsettles the nurse; that she does not take the same pride in her ward or the same interest in her patients. That it is the sister who is actually responsible for the state of the ward may be true, but it is also a fact that good nursing depends so much upon small things, that a nurse may strictly fulfil the letter of her duty and yet be decidedly wanting; she must know something of the characters as well as the complaints of her patients, and a nurse who does not feel certain, from day to day, that she may not be sent off to a strange place on short notice, is very apt to neglect this unwritten but important part of her duty.

We have now stated the principal arguments for and against the plan of employing ladies in the nursing of hospitals, so far as its effect on the discipline of those institutions is concerned. We have still to consider the charge of extravagance, which has been frequently brought against them; and as this is rather a long question, we will reserve it for another occasion.

THE STATUS OF DISEASE IN IRELAND.

We have not had time or space to refer before to the important document issued by the Irish Census Commissioners upon this subject. The report is the first volume of the second part of the Irish Census for 1871, and refers to the absolute number of sick and infirm on the night the census was taken. They are classed under the various heads—deaf and dumb, blind, lunatic and idiot, lame or decrepit, sick in hospital, and sick at their own homes. Besides these, we have other important records purely within the term status of disease, but nevertheless interesting to the medical profession; namely, the inmates of workhouses, prisons, reformatory schools, and charitable institutions.

Deaf and Dumb. Of true deaf-mutes, or those both deaf and dumb, being born deaf, there were 3,297, or 713 less than in 1861. In considering the question of those afflicted, we must not forget that the population of Ireland has decreased at the rate of 6.83 per cent. during the ten years from 1861 to 1871. Those returned as deaf and dumb from disease or accidentally acquired mutism number 776 persons, or 178 more than those returned in 1861. There were 291 mutes paralytic or idiotic; of these, 206 were congenital, and 85 acquired cases. The total number of deaf and dumb has decreased from 4,747 in 1851, and 4,930 in 1861, to 4,467 in 1871. There is a real decrease in the proportion of mutes to the population between 1861 and 1871: in 1851 the ratio was 1 in 1,380; in 1861, 1 in 1,176; in 1871, 1 in 1,222. The proportion is greatest in the west and south-west, and least in the east and north-east of Ireland. The occupations of the deaf and dumb are interesting: thus, the number unoccupied in 1861 was 2,376; whereas it is now but 1,344. No fewer than 500 attend school, against 234 in 1851. Under the head of ministering to health, we find two returned; one a medical student, the other a man-tender. There were six instances of twins, in each of which both children were deaf and dumb. In 359 there were two mutes in each family: 109 of these were both boys; in 78 both girls; and in 172 a boy and girl. In 191 instances there were three mutes in each family; in 53 instances, 4; in 21 females, 5; in 5 families, 6; in two cases, 7.

With regard to consanguinity of marriage as a cause of mutism, the tables before us tend to confirm the opinion that such marriages are a promoting cause. As to hereditary causes, we find that 211 cases were transmitted through the father, and 182 through the mother, out of 393 cases of apparent hereditary transmission; the transmission seems generally to be indirect. We may here remark that, in many inquiries as to hereditary transmission of disease and consanguinity of marriage as a cause of disease, the fact that one condition involves the other is very generally lost sight of, although such is not altogether the case in the present instance. The ratio of male mutes to female mutes in Ireland is 100 to 81.63. Of the causes of mutism in the acquired class of 861, small-pox caused 15; measles, 39; scarlatina, 126; fever, 81; paralysis, 74; fright, 72; "suddenly struck," 2, but one is ascribed to superstitious causes; 50 to falls; 24 to sleeping in open air; and 53 to cold and exposure. There are only five institutions for the education of the deaf and dumb; these are capable of containing 686 inmates.

The Blind. The proportion of blind in Ireland is on the decrease: thus, in 1851, it was 1 in 864; in 1861, 1 in 843; in 1871, 1 in 852; the total number of blind being 6,347 against 6,879 in 1861. The apparent increase between 1851 and 1861 was owing to emigration; the blind did not emigrate in proportion to the seeing portion of the community. Thus emigration naturally disturbs this, as it does nearly all questions of vital statistics in Ireland. The proportion of blind is greatest in Munster, and least in Ulster; being 1 in 858 in the former, and 1 in 1,136 in the latter. In Connaught, it is 1 in 1,054; in Leinster, 1 in 858. The variation in the ratio of male and female blind in the different provinces is remarkable, being 100 to 100.9 in Leinster; 100 to 139.11 in Munster; 100 to 93.75 in Ulster; and 100 to 90.5 in Connaught; for the whole of Ireland, 100 to 110.03. The proportion of blind in Galway town is greater than in any other town or county mentioned in the tables, being 1 in 338; next in Kilkenny city, where it is 1 in 385. The lowest is in the town of Belfast, and the next lowest is the county of Dublin, where the proportions are 1 in 1,381 and 1 in 1,336 respectively. The different proportions of the blind to the population in each province may be accounted for also by the emigration; where there has been the greatest emigration, there will be found the greatest proportion of blind, and there also the greatest proportion of blind females to blind males. The occupations of the blind seem to be those usually followed by blind persons—such as knitters, 382; spinners, 62; weavers, 59; milliners, 47. The proportion of females to males in this class is 100 to 25.5. Of persons ministering to "tidying furniture or machinery," there were 523; no fewer than 125 were basket-makers against but 48 in 1851, showing the value of the education of the blind in useful employments. There are only nine institutions and asylums for the blind in Ireland: of these, there are five in Dublin; one each in Belfast, Armagh, Cork, and Limerick. There is not a single institution for the blind in the whole province of Connaught. The total accommodation amounts to 823 against 440 in 1861, showing a satisfactory increase. There were 890 blind inmates of workhouses on the night of the census. Small-pox caused blindness in 526 cases: of these, 276 were under five years of age; 101 between five and ten; or 377 under ten years of age. The greater portion of this blindness may be ascribed to want of vaccination. Ophthalmia blinded 1,642 persons; in 1861, 1,962. The absolute number suffering from ophthalmia on the night of the census was, in 1871, 603; in 1861, 1,307; and in 1851, 3,883 persons, showing a sensible decrease in this formidable malady.

Lunatics and Idiots. At first sight, the increase of lunatics and idiots in Ireland seems alarming, the proportion being, in 1851, one in 657 of the population; in 1861, one in 411; and in 1871, one in 328; showing that the proportion of this class to the population has apparently doubled during the last twenty years. The Commissioners however, attribute this apparent increase to a more correct enumeration, consequent on the increase of asylum accommodation, the number in asylums having increased from 3,234 in 1851 to 4,613 in 1861, and in 1871 to 7,141, or about one half of the total number, which amounted, in 1871, to 16,505. The proportion of the same mentally affected is about equal, 100 males to 97.8 females. The greatest proportion of lunatics to the population is to be found in Kilkenny city. The details as to occupations and causes of insanity seem of rather an unsatisfactory character: thus twelve servant-girls went mad from love or jealousy. The cases said to be hereditary amounted to 727. The amount of accommodation for the insane has increased from 3,853 in 1851, to 5,549 in 1861, to 8,870 in 1871, or accommodation for more than one-half of the insane in Ireland on the night of the census. The absolute number in asylums at the time of the census was 7,551; besides these, there were 2,955 insane persons in the workhouses. An important improvement in the management of dangerous and criminal lunatics is shown by the fact that in 1861 there were 299 insane persons in prison, whereas in 1871 there were but 9 so confined on the census night.

Sick in Workhouses. There were, at the census, 49,001 inmates of workhouses, or 1 in 110 of the population. Of these, 16,203, or 1 in 3, were sick paupers. A great deal of valuable information as to the status of pauperism in Ireland is contained in this report.

The Sick in Public and Military Hospitals. The total number of institutions for the temporary reception of the sick amounted to 103: of these, 33 are county infirmaries, 21 general hospitals, 35 fever, 8 lying-in, 3 ophthalmic, 3 lock; total accommodation, 6,543; total number under treatment, 2,798; number admitted during ten years, 434,390. The small proportion of inmates to accommodation seems remarkable. A considerable amount of interesting information relative to the status of crime is added to this volume; we do not know why, as it does not appear in the title which is "the status of disease," unless crime can be considered as a form or forms of disease. Why cannot the Irish Registration Office issue its returns with explanatory titles? A short time since we wished to know something of emigration, and we found it, after much searching, under the head of "Agricultural Statistics"; it is also partially included under the head "Births, Marriages, and Deaths." Without in the least wishing to detract from the eminent position which Sir William Wilde holds as a medical statistician, we should like to know why the Medical Superintendent of the General Registry Office of Ireland was quite ignored in the issuing of the last Census Commission. Surely, Dr. Burke's knowledge and experience must have added much to the accuracy and importance of reports on the status of disease in Ireland. The presence of similar officers in England and Scotland is considered necessary for a complete Census Commission. It was all very well to employ Sir W. Wilde when no Medical Superintendent existed at the Registration Office; but why should Dr. Burke not have some of the honour and profit, as he probably has had much of the work, for which Messrs. Donnelly, Abraham, and Sir W. Wilde are to have the credit? The specialism of the medical commission is well exemplified by the large space and great care allotted to the status of ophthalmic and aural affections.

THE SIAMESE TWINS.

A SPECIAL meeting of the College of Physicians of Philadelphia was held on Wednesday evening, February 18th, for the purpose of hearing the report of the Commission on the Siamese Twins—Dr. W. S. W. RUSCHENBERGER, United States Navy, in the chair. The following is taken from the *Philadelphia Medical Times* of February 20th.

The bodies of the Siamese Twins being upon the table, the meeting proceeded to hear the report of Drs. Pancoast and Allen. On behalf of the Commission, Dr. Pancoast stated that, the dissection not having been entirely completed, the report would be a verbal one, to be followed, at some later date, by a memoir upon the subject. It had been agreed that he should consider chiefly the surgical aspect of the matter in hand, while to his colleague had been assigned the demonstration of the anatomical peculiarities.

Dr. WILLIAM H. PANCOAST addressed the College as follows.

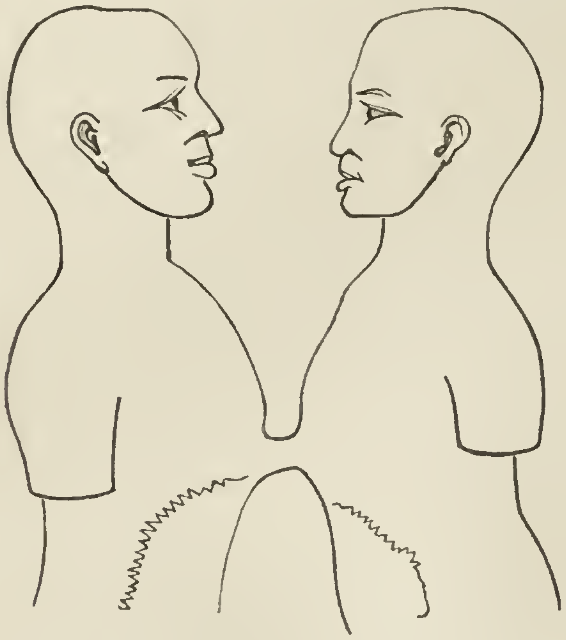
Mr. Chairman and Fellows of the College,—Having been requested, as a member of the Commission, to open the discussion this evening, I will say briefly, in reference to this monster of a symmetrical duplex development, joined, as many of the Fellows now know, at the ensiform appendix, and also here at the omphalos or navel, that at the investigation which we made, on the first occasion, at Mount Airy, I made the opening incision of the body on the line for the ligation of the primitive iliac, on the right side; Dr. Allen made the incision on the left. The object was to reach the great vessels—the aorta and two primitive iliacs—and to force the injecting material, which we use for embalming (chloride of zinc), up the aorta, and down the iliacs, until it ran from the incisions made in the fingers and toes. It flowed freely through the blood-vessels of Eng, owing to the ossified condition of his arteries; the injection in Chang was, however, not so successful, owing to decomposition in the tissues and blood-vessels. It was necessary to repeat the injecting process several times in order to preserve the body. The arteries of Chang were found to be very much decomposed—quite rotten, in fact.

In Dunglison's *Medical Dictionary*, we find the scientific name given for the Siamese Twins, in the classification of teratology, to be Xiphopages; and by referring to the admirable article on "Diploteratology," of Dr. G. J. Fisher (published in the *Transactions of the Medical Society of the State of New York* for the year 1866), it will be found that the twins belong to the class of Anacatadidyma. In his classification of double monsters he makes three orders. Order first: Teratacatadidyma; derived from τέρας, τέρατος, a "monster," κάτω, "down," and δίδυμος, "a twin." Definition: Duplicity, with more or less separation, of the cerebro-spinal axis, from above downward. Order second: Terata-anadidyma; derived from ἄνω, "up," or "above," and δίδυμος, "a twin." Definition: Duplicity, with more or less separation, of the cerebro-spinal axis, from below upward, or from the caudal-towards the cephalic extremity of the neural axis. Order third: Terata-anacatadidyma; derived from ἄνω, "above," κάτω, "down," and δίδυμος, "a twin." Definition: Duplicity, with more or less separation, of both the cephalic and the caudal extremity of the cerebro-spinal axis, existing contemporaneously. In this order, the monster now before us might be called an Omphelopagus Xiphodidymus.

Thus we have the scientific nomenclature of this monster. Of course, the consideration of greatest interest to the profession, and one of the reasons why the Commission made exertions to obtain this *post mortem* examination, was that the American profession might not be charged with having neglected an effort to obtain an autopsy, which would solve the mystery of their union. The feature of greatest interest is connected with this band, about four inches long, and eight inches in circumference. In addition to this, there are other points of importance in teratology, in regard to the fulfilment of the law of homologous union, in relation to the juncture of the recti muscles, and the fasciæ of the obliquus and transversalis at their point of meeting in the centre of the band. In regard to the position of the hearts, we think their apices present towards each other; but we have not yet opened the thorax. The livers we have found to approximate to each other, and to push through the respective peritoneal openings into the band. We extended our incisions to the margin of the band in front. By placing my hand in the peritoneal cavity of Eng, and my colleague placing his hand in the peritoneal cavity of Chang, we pushed before us processes of peritoneum, which ran on to the median line of the band; and we could feel our fingers in the lower portion of the band, behind the median line, with a distinct layer of peritoneum between them, demonstrating at once the prolongation of the peritoneum into the band, and the complete separation of one peritoneal cavity from the other at this median line. Above that we felt some traces of vascular connection, apparently running from one liver to the other; but this we will examine into when we have a better opportunity of carefully dissecting and examining what vascular structures may exist. We also noticed that in turning off the flaps, consisting of the anterior walls of the abdomen, the hypogastric arteries, as illustrated by the diagram on the black board, ran upward in each body into the band. We lost them in this way, as we think, towards the common umbilicus in the anterior inferior surface of the middle of the band.

It is probable that the two hypogastric arteries on each side passed through this umbilicus. Whether or not there were two umbilical veins, we have not yet been able to decide, nor to answer the question whether the umbilical cord was double or single, and composed of the four hypogastric arteries and two umbilical veins, or whether the placenta was single, double, or twin.

We also recognised that the ensiform appendix, as shown in the diagram of each side, was prolonged and united in the middle line. On our later examination, we find that there is complete continuity of structure of cartilages, but no true joint at the middle line, although it is possible there be some small synovial sacs further up. The motion is mainly due, as I here demonstrate to you, by moving these bodies one upon the other, to the elasticity of the connected ensiform appendices and intervening fibro-cartilages.



Diagrams from a cast showing the position of the ligament and of the primary anterior incisions. During life, the twins never assumed the face-to-face position in which they are here represented, and which is, without doubt, that of their fœtal life.

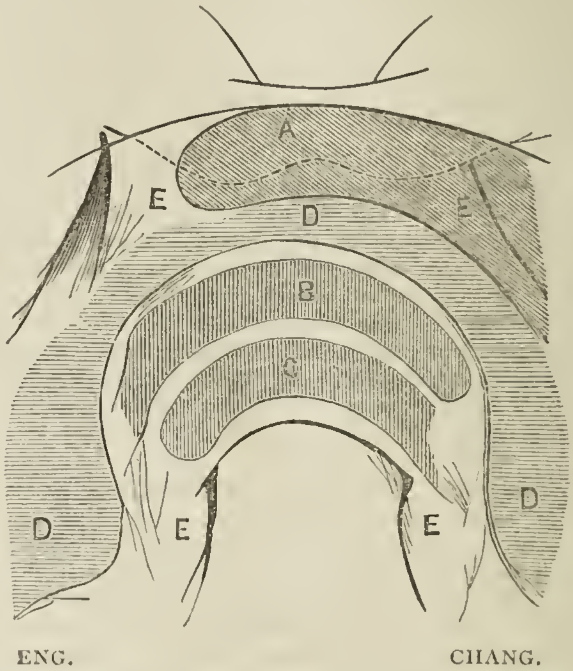
In regard to the vascular connection of the band, we have not yet been able to make so thorough and careful an examination as we wished; but still, in throwing coloured plaster into the portal circulation of Chang, it has been found to flow through the vessels of the upper part of the band into the portal vessels of Eng. So that the surgical anatomy of the band consists in the skin and fascia which cover it, the two peritoneal pouches which meet in the middle, the large peritoneal pouch, the vascular connection, to whatever extent that may exist, between the two portal circulations, and the remains of the hypogastric arteries in the lower portion of the band. Thus the main difficulty in any operation for section of the band would seem to be in regard to the peritoneal processes and the portal circulation. The anastomosis which may exist between the internal mammary arteries and the intercostals in the integument in the upper portion of the band, of course would present no difficulty.

I will not venture upon any further remarks as to the surgery of the case, while there are so many distinguished gentlemen present more competent than myself to give an opinion. At the same time, operations on the peritoneum may not be considered so hazardous in this day, when ovariotomy, gastronomy, and even Cæsarean section are so often performed. The peritoneal pouches themselves would not present so great a difficulty as might be anticipated, under pressure and acupuncture, by which the sensitiveness of the structure might be so altered as to permit section. I was informed, at Mount Airy, that in Paris a surgeon had made the experiment of applying pressure upon the band, and it was reported that the twins had fainted in consequence. I could not ascertain, however, whether this was from fright, design, or actual pain.

As Dr. Hollingsworth is present, it may be proper for me to mention a fact, which that gentleman can corroborate, that Eng was the stronger physically, and Chang was the stronger mentally. The same difference was observable in their characters. Chang was more irritable than Eng, especially since an attack of paralysis with which he had been afflicted—this being in the side next to Eng. The latter had not only to bear with the irritability of his associate, but also to support one-half his weight. Among other peculiarities, Chang would sometimes break useful articles, or throw them in the fire.

In conclusion, let me say that, when I turned up the skin and superficial fascia of the **H** incision, on the posterior part of the band, I was struck with the development and the strength of the abdominal aponeuroses. The fibres arched, interlaced, and developed into a strong fibrous band about a quarter of an inch wide, running around the median line, although there was no actual joint in the cartilage.

Professor HARRISON ALLEN said: Perhaps it would be best to point to that simple diagram upon the black board, before considering the subject more fully in detail. As Dr. Pancoast has said, there is an union of the twins at the two ensiform cartilages, which are very firmly joined in the centre, Eng's process being the more robust of the two. There is a point of conjunction between the two processes which is not quite in the median line of the band. In the centre of the band is seen an elliptical space, which suggests the presence of a synovial cavity, with fibro-cartilage. It is probable that the ensiform junction is of the character of a synchondrosis, with a median bursa-like sac. Neither ensiform cartilage is ossified.



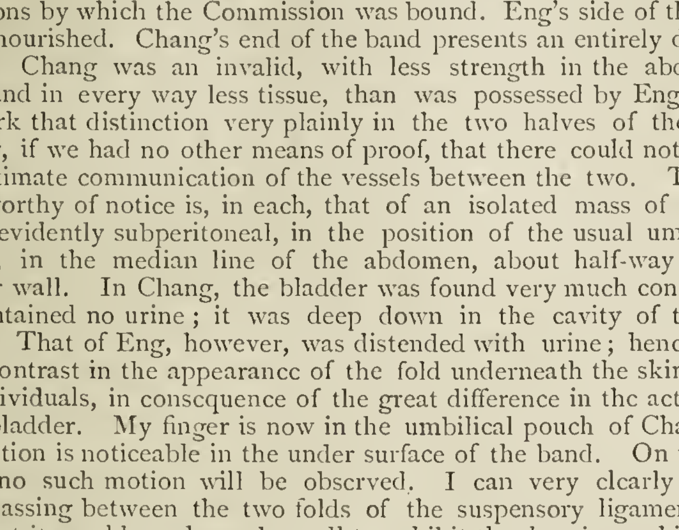
Diagrammatic representation of the Band.—A. Upper or Hepatic Pouch of Chang. E, E (dotted line). Union of the Ensiform Cartilages. D. Connecting Liver Band, or the "tract of portal continuity". B. The Peritoneal Pouch of Eng. C. The Lower Peritoneal Pouch of Chang. E, E. Lower Border of the Band.

Below this point, in the diagram, you see a number of differently lined tracks. The lower one (C), immediately above the umbilicus, is only separated from the skin by a very delicate layer of tissue (so that, with the finger introduced into the pouch and moved, there is a decided indication of motion in the skin), on the under surface (E E) of the band.

This pouch passes across the band from the abdomen of Chang, and is lost in the duplicature of the suspensory ligament of the liver of Eng. The finger, passed upward to the band from the abdomen of Eng, crosses the band above the pouch just mentioned, and is lost between the layers of the suspensory ligament of the liver of Chang. When the significance of the round ligament at the free border of the suspensory ligament is remembered, the relations of these pouches directly suggest that they have had essential bearings to the umbilical vein of the funis, and might be provisionally termed the umbilical pouches.

Above Eng's pouch (B), and between it and the under surface of the ensiform conjunction, is a second pouch (A), prolonged from Chang's abdomen, which fairly reaches the peritoneal cavity of Eng, but is not continuous with it. Extending up into this pouch, from Chang's abdomen, is a process, which suggested to the Commission the possibility of the passage of hepatic vessels. This view was rendered more probable from the fact, that a similar process passed up into the band from the liver of Eng. Accordingly, the plaster injection, coloured by ultramarine, was thrown into a tributary of the portal vein of Chang, when it was observed that a fluid passed freely into the liver of Eng, as well as into some of the mesenteric veins proper. It is my own hypothesis, that this bond of union (D) was the true hepatic tract; but in its present state, in the absence of evidence of any parenchymatous admixture about the vessels thus crossing the band, we prefer to denominate the transit as the tract of portal continuity.

In the fœtal condition, it is very likely that this large space (A), the upper pouch, now continuous with the abdomen of Chang only, was entirely occupied by true liver-tissue, which, as maturity was attained, became smaller, and left an empty space. Hence I propose to call this upper pouch the hepatic pouch. The contraction chanced to be greater on Chang's side, in harmony, it may be, with other evidences of a weaker and less developed type, which is apparent in many of the tissues of Chang. As Dr. Pancoast has already informed you, the incisions in the abdomen were made in rather an exceptional manner, so as to avoid the median line, since it was supposed, from the peculiar position of the umbilicus, that the remains of the hypogastric arteries would be found extending from the fundus of the bladder, upward and onward along the entire length of the anterior wall of the abdomen. Besides, this incision would enable us, by continuing from below upward, to fairly open the abdomen and examine the cord, without violating the conditions by which the Commission was bound. Eng's side of the band is well nourished. Chang's end of the band presents an entirely different aspect. Chang was an invalid, with less strength in the abdominal walls, and in every way less tissue, than was possessed by Eng. You can mark that distinction very plainly in the two halves of the band, proving, if we had no other means of proof, that there could not be any very intimate communication of the vessels between the two. The first point worthy of notice is, in each, that of an isolated mass of adipose tissue, evidently subperitoneal, in the position of the usual umbilicus, namely, in the median line of the abdomen, about half-way up the anterior wall. In Chang, the bladder was found very much contracted, and contained no urine; it was deep down in the cavity of the true pelvis. That of Eng, however, was distended with urine; hence there was a contrast in the appearance of the fold underneath the skin in the two individuals, in consequence of the great difference in the actual size of the bladder. My finger is now in the umbilical pouch of Chang (C). The motion is noticeable in the under surface of the band. On the side of Eng no such motion will be observed. I can very clearly see my finger passing between the two folds of the suspensory ligament. At this point it would, perhaps, be well to exhibit the drawings which have been made of the views which we have been able to obtain from this very limited incision. On looking up towards the band with the greatest possible stretch of tissue, we see the arrangement of the remains of the hypogastric arteries converging towards the bond of union. In this lower diagram, we show you the livers, joined by what is supposed to be the tract of portal continuity. You will observe that the limits are somewhat symmetrical. Here is the liver of Chang, with a fore-shortened right lobe—



Diagrammatic representation of the Livers, portraying the relations of the Vessels, etc. The arrows show the direction in which the injection passed from Chang to Eng.

When the finger is passed from Chang into Eng, it is received between the folds of the suspensory ligament of Eng. In Eng the parts are essentially the same, although you see more evidence of adipose tissue. Here is a little ligament aiding in the support of the liver, to whose convexity it is attached; it is not seen in Chang at all. You might term it an accessory suspensory ligament. When the finger is introduced there, it is observed to terminate blindly, showing, we think, that this is no more than adventitious pouch, due to the presence of that suspensory ligament.

We find some vessels of the portal system, even as far down as the mesentery, well filled with the blue colouring matter. We, of course, desired, as far as possible, to examine all the tissues here by these incisions; hence it was that, when the bodies were in this position, the skin was taken off from the wall in order to get a view of the linea alba.

[The bodies were here inspected by the audience, and afterwards turned so as to expose the posterior part of the band. Further remarks apply to this posterior aspect.]

Dr. PANCOAST: While the bodies are being turned, I will take the opportunity of replying to one or two questions which have been asked me. First, in regard to the common sensibility of these individuals. According to the statements we received at Mount Airy, there was a line of common sensibility corresponding to the median line of the band. Dr. Hollingsworth says that if a pin was stuck into the band at the median line, both of the twins would feel it distinctly; but that, even at a slight distance to either side, the point of the pin produced an effect only on the twin of that side. Another question has been asked me as to whether either of them was ever put separately under the influence of an anæsthetic. I answer it by saying that, so far as we know, it never was attempted; but that when, upon the final occasion, Chang was anæsthetised by death, Eng was, for a time, unaffected. The story, as told at Mount Airy, was that Eng waked up and asked his son, "How is your uncle Chang?" The boy said, "Uncle Chang is cold. Uncle Chang is dead." Then great excitement took place. Eng commenced crying out immediately, saying to his wife, whom they called in, "My last hour is come," and finally sank away. He was in perfect health when they went to bed. They had been sitting up in a large double chair made for their accommodation. Eng was smoking his pipe until he became sleepy, and finally said to Chang, "We must retire." Chang said that he could not lie down comfortably. I understand that when they went from Chang's house to Eng's house, where they died, it was against the direction of Dr. Hollingsworth; but, with their usual stubbornness, they persisted in riding the distance in an open buggy. After Chang had refused to lie down, they walked about the house for some time, and even went out to the porch and washed their hands and drank some water. It was about one o'clock when they went to bed. Then Chang died, some time between that and morning, his death not producing any immediate impression on Eng. It was only when the latter woke up and inquired about the condition of his brother, that he was at all affected. As to the question, "What caused Eng's death?" I am not able to tell. The *post mortem* examination which has been made does not show the condition of his lungs. Probably the valves of his heart were disorganised, and probably also the shock upon that weakened organ caused death.

Dr. ALLEN: In my opinion, Chang died of a cerebral clot. From inquiry at his home, I was led to believe that the lung symptoms were not due to pneumonia; indeed, were not severe enough to have been so caused. The suddenness of the death, the general atheroma of the arteries, and the fact that there had been previously an attack of cerebral paralysis, all indicated that the death was of cerebral origin. Eng probably died of fright, as the distended bladder seemed to point to a profound emotional disturbance of the nervous system, the mind remaining clear until stupor came on—a stupor which was probably syncopal. You will observe the great contrast between the anterior appearance of the band and its posterior aspect. When we suspended them face to face, we conceived we had them in the proper position for study. On the posterior side there was a fold underneath the skin extending from the ensiform cartilage of Chang, passing over, crossing the median line, and inserted into the ensiform cartilage of Eng. It was one of the objects of the examination to determine what was the nature of this fold. I judge it to be the linea alba; but I leave the Fellows to decide that for themselves. I will also add that, because we had not the privilege of cutting the anterior portion of the band, we were obliged to cut down from the point of which I have spoken to get to the structure, and demonstrate these *culs-de-sac* from behind. Here (referring to the casts) from this point the incision is horizontal about midway, and jointed laterally by two oblique lines which were directed one upwards and the other downwards and outwards, making a modified letter H incision. Thus we got all the space we needed. When I raise the skin, we see the umbilicus of the superficial fascia; and on lifting the other flap we get a better general demonstration.

And now we come upon the point of interest, namely, the position of the band and its true nature. We have a diagram here. You notice, on Chang's side, that there is an arrangement of interlacing aponeurotic fibres, and these fibres, starting in Chang, pass across the median line and are inserted into the ensiform cartilage of Eng.

Turning the lower flap downward, the upper flap upward, and the two lateral tongues outward, the superficial fascia is exposed. This is abundantly supplied with adipose tissue on each side, but is free from fat where it covered the band. Both the lower flap and the fascia are lost in the scar marking the position of the umbilicus. The same dissection exhibits the position of the lower pouch of Chang. Turning down the external oblique, the two recti, and the internal oblique muscles, the transversalis was exposed, the latter forming a very well-defined layer in Eng, with an interval between the ensiform cartilage and the inferior margin of the thorax. These were much less marked in Chang.

Turning forward this layer of fibres in Eng from without inward, the diaphragm is brought into view. Muscular fibres are conspicuous in this position. The peritoneum on each side is now fairly exposed. Incisions may now be made with a view of demonstrating the pouches of the band. The upper pouch of Chang is freely opened on its posterior aspect, and the vessels in the tract of portal continuity are seen to be well distended with the injecting fluid. A small artery is seen crossing beneath this tract of veins, and is probably a branch of the hepatic; but, whatever may be its origin, it evidently could have little effect in influencing the nutrition of parts beyond the band, and is probably retained within the band itself. The lower pouch of Chang reveals nothing which was not demonstrable from in front, and the same may be said of the single pouch of Eng; thus confirming our opinions of the construction of the band before the pouches had been opened from behind.

Dr. Abraham Jacobi of New York, being called upon, said: If I were to answer the question as to how this monstrosity originated, especially whether they became connected after having been separate organisms, I should say that that idea has been given up by those whose opinions are entitled to weight. It appears to me that, at that period, such a thing might be possible; but, of course, the union would be superficial, not involving the deep organs. We know that the first epidermis is formed about the end of the fifth week of embryonic life, and that, after a time, it is thrown off. The epidermis is thrown off a number of times, until about the fourth month of utero-gestation. Now, it is suggested that, at those times when the epidermis is thrown off, the connection takes place between the two individuals just as the connection takes place between the prepuce and glans, which we often find adherent in the fœtus and in a number of new-born children. There are evidences that such connections have taken place before the final epidermis is formed, and about the time one of the earlier coverings is being thrown off, at a period when the internal organs are already formed. There are few double monstrosities so well developed as this one. I think the records of about four hundred monsters have now been collected, but very few are of such a complete nature as this. Every one has heard of the Hungarian Twins, who lived to the age of twenty-one years, in the last century. Another pair of female twins, that travelled in Germany about two years ago, were described at the time in the *Berliner Wochenschrift*. They were of a similar nature. There are two cases on record in which a division has been successfully attempted, but in those cases the connections were not so well developed as in the Siamese Twins. The connection was in the same neighbourhood, but was only superficial—of skin and subcutaneous tissue. One of these cases is recorded by Dr. Braun (*Virchow's Archiv*). Fortunately, or unfortunately, I do not know which, they were his own children. They were of the female sex. He separated them immediately after birth. One lived three and a half days, and, when the case was described in 1866, the other was five years old. In that instance, the connection—three and a half inches long—extended from the ensiform process to the umbilicus. The other case is described as early as 1689, by the old German author Kernoch.

As far as the origin of twin monsters is concerned, I believe that the general opinion is now, that one Graafian vesicle may have two ova, or one ovum have two nuclei; and these finally may, like the two vitelli of an egg, be closed together, surrounded by the same material, forming a single complete ovum; and thus it may be that the two are included in the same ovum. I think that this will explain also why the sex is always the same—why they are always both male or both female. They are male in 20 or 25 per cent. of the cases.

Official Report of the Visit of the Scientific Commission to Mount Airy.—The *Philadelphia Medical Times* gives a report of the visit of the commission to Mount Airy. After an account of the preliminary proceedings which led to the visit, the report states that the commission, consisting of Dr. Pancoast and Dr. Harrison Allen, with Dr. Andrews, arrived at Mount Airy on the evening of Saturday, January 31st, and proceeded to the residence of Eng the following morning, in company with a photographer and Dr. William Hollingsworth, the family physician in the absence of Dr. Joseph Hollingsworth. The widows of the Twins received the commission hospitably, and a conference was at once entered into. It was then agreed that, under consideration of embalming the bodies of the twins, permission would be granted to exhume and examine the structures distinguishing them, provided that no incisions should be made which would impair the external surface of the band. Subsequently, it was agreed that limited incisions would be allowed on the posterior surface of the band. An agreement in writing was then drawn up, expressing the above restrictions, but extending authority to the commission to remove the bodies to Philadelphia, provided that they be kept there in a fire-proof building, and held subject to the commands of the families when informed of the completion of the embalming process.

The bodies were buried in the cellar of Eng's house, in a shallow grave, which had been covered with a tumulus of powdered charcoal. This being removed, revealed several planks covering an outer wooden box, which, in turn, enclosed a tin encasement to the coffin. After unsoldering the tin box, the coffin was carried to the second floor of the house, to a large chamber. The lid was unscrewed, and the object of the search of the commission was exposed to view.

The bodies were found in the coffin in a good state of preservation. There was a slight cadaveric odour about Chang, with marked passive congestion of the back of the arms and neck on both sides, and in a less degree of the posterior aspect of the forearms, buttocks, thighs, and legs; there was none on the feet, where, however, there was marked fulness of the superficial veins; this was better marked on the left side. There was a greenish discoloration on the anterior abdominal wall. The lips were moist and discoloured; the peculiar reddish congestion was sparsely distributed over the malar prominence and beneath the ear. The thoracic discoloration was much deeper on the side next to Eng. The left nipple was visible in front well toward the middle line, the right one just showing. The fingers of the right hand—the paralysed side—were forcibly flexed, although *rigor mortis* was absent. In Eng, there was passive congestion of the back, most marked on the buttocks and infraspinous spaces; none on the front of the body; slight greenish discoloration of the anterior abdominal wall. In both subjects, the hair of the head was grey. On the pubes of each subject, the hair of the left side was grey, that of the right side was black.

The process of embalming was now begun. Incisions were made to the outer side of the median line of the abdomen in each individual, extending from the inferior margin of the thorax to a point midway between the symphysis pubis and the anterior superior spinous process of the ilium. The aorta was reached after the usual method, but was found to be atheromatous, compelling the selection of the left primitive iliac for the insertion of the pipe. A solution of chloride of zinc was then injected.

After the embalming had been completed, the incision was continued upward and inward towards the band. Examination of the band through this incision convinced the Commission of the complex nature of the band, and suggested the suspension of a complete study of the parts until removal of the bodies to Philadelphia. The incisions were sewn up, the clothing readjusted, and the bodies placed in the coffin and conveyed to Mount Airy. Here the tin box, which was used for the temporary burial, was again brought into use, and the lid carefully resoldered. Without delay, the Commission started on its return, expressing the bodies at Salem. The Commission arrived in Philadelphia on February 5th, having been absent one week.

Upon the arrival of the bodies at the College of Physicians, they were placed in the care of the Committee upon the Mutter Museum and of the Hall Committee, and were closely locked and guarded until a special meeting of the College was called, on Monday evening, February 8th, when, after considerable discussion, it was agreed that the College should accept the action of its Fellows, and pay the expenses of the trip. Further, a vote of thanks was given to the gentlemen who went to North Carolina, and to Dr. Hollingsworth; and the Mutter Committee was authorised to appropriate three hundred and fifty dollars for the preparation of casts and photographs, which should remain the property of the Museum. Finally, the College appointed the Mutter Museum Committee and the original Commission (Drs. Pancoast and Allen) as a joint Committee for carrying out the examination of the Siamese Twins; it being understood that a report and a demonstration of the specimens were to be made to a subsequent meeting of the College; also that the dissections and the report were to be the work of the original Commission.

On Tuesday, February 10th, they were exposed for study. They were at that time found in a satisfactory condition, except the right lower extremity of Chang, which required immediate care to prevent further destructive changes from taking place.

Statement of Eng's Widow made to the Commission at Mount Airy.—The paralytic stroke from which Chang had suffered occurred about three years ago, when he was at sea, seven days out from Liverpool. He had been intemperate for some time previously, and had been drinking hard on board the vessel, being frequently intoxicated. He had never had *mania-a-potu*. Even when he was drunk, Eng was not affected. Two of his children had died; one from phthisis, the other apparently from apoplexy. Eng had lost five children; one each from phthisis, diphtheria, and dysentery; one from the effects of a burn, and one still-born. Chang died on Saturday, January 17th. He had had a cough since the preceding Monday night. It was dry, with scanty, frothy sputum and no pain. Left lung probably involved; slight dulness on corresponding side. On Thursday, January 15th, his skin was acting freely, and for that reason Dr. Hollingsworth ordered him not to venture out; but, in spite of that prohibition, he went as usual to Eng's. At the time of his arrival, he had little cough and no expectoration, but loud bronchial rales were plainly heard by those around him. When Eng saw his wife, after learning that Chang was dead, he said, "I am dying", but did not speak of his brother's death. He soon afterwards expressed a desire to defecate, and this continued for half an hour. He rubbed his upper extremities, raised them restlessly, and complained of a choking sensation. The only notice he took of Chang was to move him nearer. His last words were "May the Lord have mercy on my soul"!

THE WEBB FUND.

THE following contributions have been received by Mr. Augustus Churchill, the Treasurer, to the 11th instant.

	£	s.	d.
Dr. Richardson	5	5	0
Dr. Chadwick	1	1	0
Mr. R. Ratcliff	5	0	0
Mr. Sergeant Robinson.	3	3	0
Miss Maria Coulson ...	2	0	0
Mr. Carl Feish............	2	2	0
Mr. C. W. White	5	5	0
Baroness Meyer de Rothschild	5	0	0
Mr. Edward Curd	5	5	0
Mr. R. F. Curd	5	5	0
A Friend	10	10	0
Ditto	1	1	0
Dr. Pett	2	2	0
Dr. Smith..................	1	1	0
Dr. Moorhead	1	1	0
Dr. Lush	0	10	6
Dr. Griffin	0	10	6
Dr. Tizard	0	10	6
Dr. Rhodes	0	10	6
A Friend of Dr. Druitt.	5	0	0
Five Ladies at Weymouth	5	0	6
A Friend at Norwich ...	1	0	0

	£	s.	d.
Mrs. Low	2	2	0
The Misses Low	1	1	0
Mr. Edward Lund	2	2	0
The Misses Rateliff......	20	0	0
Mr. R. S. Tomlinson ...	5	0	0
Mrs. T. Robinson	5	0	0
Miss Cooper...............	3	0	0
Mrs. Robinson............	3	0	0
Miss Goodger	2	0	0
Dr. Peyton Blakiston ...	20	0	0
A Friend	3	3	0
In Memoriam	5	5	0
Mr. A. P. Price	2	2	0
W. W. V.	20	0	0
Mr. H. Doulton	10	0	0
Tredegar Iron Company	10	0	0
	181	18	6
Amount previously acknowledged	1296	15	6
Total............	1478	14	0

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH.

AN ordinary meeting of this Branch will be held at the rooms of the Medical Society of London, on Wednesday, March 25th, at 8 P.M., when Dr. Anstic will read a paper on "The Prognosis and Treatment of Chorea".

A. P. STEWART, M.D.,
ALEXANDER HENRY, M.D., } *Hon. Secs.*

London, March 12th, 1874.

WEST SOMERSET BRANCH.

THE spring meeting of this Branch will be held at the Royal Clarence Hotel, Bridgwater, on Thursday, April 2nd, at 5.15 P.M. The following question has been settled by the Council as the one on which each member should be asked to express his opinion at the said meeting:—"What is your opinion as to the relative value of chloral hydrate and opium in allaying pain and inducing sleep?"

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, March 2nd, 1874.

EAST SUSSEX AND WEST KENT DISTRICTS OF SOUTH EASTERN BRANCH.

A CONJOINT meeting of the above districts will be held at the Infirmary, Tunbridge Wells, on Wednesday, March 18th, at 3 P.M.; Dr. WARDELL in the Chair, who will read a short paper on the "Progress of Medicine".

Dr. Wardell invites members and their friends to lunch at 1.30 P.M., at his residence, Calverley Park.

Dinner will be provided at 5.0 P.M., at Terry's Restaurant, opposite the South Eastern Railway Station. Charge, 6s., exclusive of wine.

Members and visitors intending to lunch or dine are requested kindly to inform either of the Secretaries *two days* previously to the meeting.

Notice has been received of the following communications.

1. T. F. Sanger, Esq.: Remarks on the Treatment of Neuroses by Phosphorus; and on the Operation of Dry Tapping.
2. F. Manser, Esq.: Case of Delirium Tremens treated by Large Doses of Tincture of Digitalis.
3. G. F. Hodgson, Esq.: Cases illustrative of the Value of the so-called Artificial Tympanum.
4. M. A. Adams, Esq.: On Gastric Ophthalmia.

THOMAS TROLLOPE, M.D., St. Leonard's-on-Sea } *Hon. District*
F. J. BROWN, M.D., Rochester } *Secretaries.*

LANCASHIRE AND CHESHIRE BRANCH.

A SPECIAL general meeting of the above Branch will be held in the Medical Institution, Liverpool, on Wednesday, March 25th, at 4 P.M., to consider the Report of the Subcommittee of the Parliamentary Bills Committee on the Instruction and Registration of Midwives.

Dinner at the Alexandra Hotel, Dale Street, at 6 P.M. Tickets 7s. 6d. each, exclusive of wine.

Gentlemen intending to dine are requested to notify to the Honorary Secretary as early as possible; in any case, not later than Monday, the 23rd instant. A. B. STEELE, *Honorary Secretary.*

Liverpool, February 28th, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETINGS.

THE fourth general meeting of the session, 1873-74, was held at the Midland Institute, Birmingham, on January 8th. Present: FURNEAUX JORDAN, Esq., in the chair, and thirty members.

New Members.—Dr. Pope, Queen's College, and Mr. Lloyd, Cheswardine, were elected members of the Branch.

Communications.—1. Mr. LAWSON TAIT showed Mr. Richardson's Scissors, and Specimens of Coiled Wire Drainage Tube.

2. Mr. HAMMOND read notes on two cases—Inversion of Uterus, and Eclampsia.

3. Dr. MALINS read a paper on Bipolar Version.

The fifth general meeting was held on February 12th. Present: FURNEAUX JORDAN, Esq., in the chair, and fifty-two members and visitors.

Communications.—1. Mr. BARTLEET showed a new Stand Aspirator and Mr. Spencer Wells's Forceps.

2. Mr. WEST presented a specimen of Nævoid Tumour, six inches in length, three in breadth, and one in thickness, removed by him that morning from a child, eight months old. This large erectile growth, which was on the right side of the chest, reached from the mamma round to the scapula, and the deeper portion of it intended below that bone. Mr. West had removed the greater portion by the *écraseur*, having first elevated the tumour from the subjacent parts by means of five acupressure needles. No hæmorrhage accompanied or followed this part of the operation, but considerable bleeding took place when the deep part of the tumour was being removed, partly by enucleation and partly by the scalpel, from the front of the scapula. Mr. West brought the case forward as showing that the *écraseur*, although most useful for the removal of nævoid tumours having a narrow base without loss of blood, was not suitable for those cases in which the growth sprang from a broad base.

3. Mr. B. JOLLY showed several Internal Sequestra removed from the

Tibia for Necrosis after Esmarch's plan for the prevention of hæmorrhage. There was scarcely a drop of blood lost during the entire operation, and the view of the healthy from the diseased structures was as unimpeded as it ever is upon the *post mortem* table.

The West Haddon Case.—Dr. FOSTER proposed, and it was carried: "That this meeting expresses its deep sympathy with Mr. A. G. Waters, a member of this Branch, on account of the unfortunate position in which he has recently been placed, and of the loss he has sustained by the death of his wife."

Dr. FOSTER also proposed, and it was carried: "That the best thanks of this meeting be given to the Editor of the BRITISH MEDICAL JOURNAL, for his able and outspoken criticism of the evidence on the West Haddon case."

Mr. LAWSON TAIT read a paper on the Medical Education of Women.

NORTH WALES BRANCH: INTERMEDIATE MEETING.

THE intermediate general meeting of this Branch was held on Tuesday, February 24th, at 11.30 A.M., at the Cambrian Hotel, Pensarn, Abergele; R. DAVIES, Esq., Llanfairtalhairn, President. There were also nine other members present. Several letters were received from members regretting their inability to attend, owing to professional engagements.

The Portrait Presentation of T. T. Griffith, Esq.—Mr. KENT JONES, Honorary Secretary, read a letter which he had received from Mrs. Griffith, of Wrexham, expressing her grateful thanks to the subscribers of the portrait of her husband, which was presented to her, for their kindness and liberality towards herself. The portrait, she added, would always remain a memento of that kindness, and would be cherished and valued.

New Members.—Richard Glyn Griffith, Esq., of Bangor, and Robert Davies, Esq., of Abergele, were unanimously elected members of the British Medical Association and of the Branch.

Papers and Cases.—The following were read.

1. Case of Fracture of the Skull, with the Bones exhibited. By LL. LODGE, Esq., St. Asaph. This was an interesting case, and elicited discussion. During life, the most prominent symptoms were those of acute peritonitis. The man survived forty-five hours after the blow on the top of the head. *Post mortem* examination discovered no lesions whatever in the abdominal viscera, nor in those of the thorax. The inner plate of the skull corresponding to the small external wound of the scalp was fractured.

2. Case of Ovarian Tumour, complicated with Disease of the Liver. By R. DAVIES, Esq., Llanfairtalhairn.

3. Cases of Severe Injuries to the Head, accompanied with Fracture. By R. HUGHES, M.D., Conway.

4. Cases of Cholera in the West Indies. By Dr. DAVIS HUGHES, Menai Bridge.

Dinner.—All who were present, with Walter Wynne, Esq., of Abergele, and A. F. Watts, Esq., of Pensarn, dined together and spent a most agreeable day.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETING.

THE fifty-first meeting was held at the Ship Hotel, Faversham, on Thursday, March 5th, 1874; EDWARD GARRAWAY, Esq., the President of the Branch, in the Chair.

After having partaken of lunch, kindly provided by the President at his residence, twelve members attended the meeting.

Papers.—1. Mr. GARRAWAY read a paper on Bits of Placenta left behind, in which he propounded the question as to whether it was ever justifiable, wilfully and deliberately, to leave behind fragments of placenta, or whether it would be correct to use any amount of violence, even to tearing the uterine parietes, rather than risk the consequences of leaving such fragments behind. In a practice of twenty-five years, he had had about six such cases. In those occurring in the earlier months of gestation, he related two cases where, to all appearances, the placenta never came away, unless as mere *débris* in the ordinary discharges. —Mr. REED mentioned the opinion held by some, that retained portions of placenta sometimes developed themselves into hydatids and other forms of uterine moles.

2. Mr. BOWES read a case of Stone in the Bladder, with enlarged Prostate, in a clergyman, aged 80. No examination was allowed till retention of urine necessitated the use of the catheter, when a stone was detected. All operative interference was forbidden; and, at his death, thirty-one uric acid calculi, weighing 223 grains, were found in the bladder. The points of interest were the slight constitutional disturbance produced by their presence, and the few symptoms which had happened in their passage from the kidney, a rigor being the only one. Opium was found to be the most useful palliative. It was considered that the largest stone had only been in the bladder six months.

3. Mr. THURSTON narrated a case of Puerperal Septicæmia which threatened a fatal issue, but eventually recovered. The favourable termination, he considered, was to a great extent due to the internal injection of a lotion of carbolic acid.

4. Mr. FRANCIS read a short paper containing the Results of his Midwifery Practice during Thirty-six Years. The number of labours personally attended amounted to 3630; the maternal mortality was six; two of the deaths were from phthisis, three from placenta prævia, and one from exhaustion following arm-presentation. He had had three cases of puerperal convulsions, three cases of forceps, one of spontaneous evolution, one of double monstrosity (being an exaggerated case of Siamese twins), one case of inversion of uterus, no rupture of perinæum, and no single case of *post partum* hæmorrhage. He thought highly of the use of ergot, but never bandaged. Mr. Francis considered that his great success and low mortality were to a great extent due to the healthy class of individuals amongst whom his practice was situated. The members present could not but congratulate the author upon his success as a midwifery practitioner, and especially on his perfect freedom from that bugbear of midwifery, *post partum* hæmorrhage.

Dinner.—The members afterwards dined together.

The next meeting will take place at Canterbury, on May 28th.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

A MEETING of this section was held on Tuesday, February 10th; Mr. LAWSON TAIT, in the absence of the President, in the Chair.

Histology of Some Points in Skin-Diseases.—Mr. G. H. EVANS, after describing the normal structure of the skin, illustrated by specimens shown, described certain pathological states, especially those involving the epithelial elements. The eruptions of sudamina and miliaria, often seen during the course of acute febrile attacks, had their origin in the occlusion of sweat-ducts at the external apertures, from the accumulation of epithelia whilst the perspiratory function was in abeyance; hence, on its re-establishment, the transpired sweat separated the horny from the mucous layer, giving rise to the characteristic vesicular eruption. In the dysidrosis first described by Dr. Tilbury Fox, the sweat-ducts were found closed in their continuity, not at the external apertures only, and thus the glands themselves became dilated. In its clinical course, it somewhat resembled pemphigus, principally occurring on the hands and feet, except that the fluid contained in the vesicles was always clear in the former and milky or purulent in the latter. The varieties of acne, molluscum, and wen were then noticed as illustrating the principal pathological conditions to which the sebaceous follicles were subject. In pityriasis was well exemplified the action of various irritants—mechanical, as in pityriasis versicolor, or inflammatory, as in pityriasis rubra, which led to a hyperplasia of the superficial epithelial elements. Finally in ichthyosis, of which a very fine specimen was exhibited, was found an example of a hypertrophy of the cell-elements in the various layers of the epidermis, with a similar affection of the papillæ of the corium, the latter, however, being present only in the more severe forms of the disease.

Starch, and its Merits as a Food-Substance.—Mr. WALTER G. LATTEY of Rugby read a communication on this subject, giving the natural history of starch, and also his views as to the destructive effect upon infants fed on a diet composed of this substance exclusively.

Adulteration of Tea.—Dr. ALFRED HILL, Borough Analyst, at a late meeting, gave an interesting account of the present state of the subject of adulteration of tea. Dr. Hill pointed out the various structural characters and peculiarities of the leaf of genuine tea, especially as to margination and venation, and showed, under the microscope, the character of the ferruginous particles, silicious matters, and other substances with which tea is adulterated. He also submitted to the members various samples of ash and residues obtained by him in the process of analysis. A sample of "lie" tea was also shown, and its various ingredients described, and also the various colouring matters used as facings by the Chinese in the "manufacture" of different varieties of tea.

Mr. LAWSON TAIT showed sections of Dermoid Cyst, injected, and of Corpus Luteum.

CORRESPONDENCE.

INSTRUCTION OF MIDWIVES.

SIR,—Although I cannot regard the letter of the President of the Obstetrical Society in any respect a reply to the arguments I have advanced on this question, I beg permission to correct the error into which Dr. Tilt has fallen in supposing that I have "been misinformed respecting the work of the Society".

That "every labourer's wife should be attended by a fully educated medical practitioner", is declared to be Utopian. Why so? Because neither Dr. Tilt nor those who think with him on this question have ever made the slightest effort to attain this object. Our paternal and economical Government not only provides, but insists under penalty, that no labourer's child shall be vaccinated except by "a fully educated medical practitioner". The safety of his wife in childbirth they leave to Providence. Why so? Because the minimum fee for public vaccination is 1s. 6d.; that for public midwifery is 10s. 6d. *Verbum sap.*

I am, etc., A. B. STEELE.

Liverpool, February 28th, 1874.

MR. MORGAN'S INOCULATIONS.

SIR,—Mr. Henry Lee is reported in your JOURNAL to have said, in his remarks on Mr. Morgan's paper, read before the Medical Society on February 9th, that Mr. Morgan "had now shown, experimentally, that the secretions from a syphilitic person, whether accompanied by an open wound, or not, would communicate constitutional syphilis". Surely Mr. Lee was misunderstood, for Mr. Morgan stated he practised *auto*-inoculation, and never inoculated a healthy person. Hence he cannot have proved that constitutional syphilis is communicable by his experiments, for that disease cannot be inoculated in a person already suffering from it. As the report now runs, Mr. Lee's remark is absurd. Long before Mr. Morgan began his experiments, it had been proved that certain morbid secretions of syphilitic persons contain the virus in a contagious form; but Mr. Lee, or any other observer, would do good service by stating what secretions have, in his experience, propagated syphilis. By careful records of facts of this kind, we shall in time know exactly which secretions are contagious, and therefore dangerous, and which innocuous; some clearly are one, some probably the other. So far as Mr. Morgan's experiments go, they show that fluids taken from the vagina of women infected with syphilis will, in certain cases, cause irritable sores when inserted into the skin. This, I apprehend, is no great novelty, and is a long way from proving the local contagious sore to be connected with constitutional syphilis.

I am, etc., B. HILL.

THE PROPOSED ADMISSION OF WOMEN TO THE OBSTETRICAL SOCIETY.

SIR,—I should be glad to be allowed to make a few remarks with regard to the recent discussion at the Obstetrical Society.

One of the speakers is reported to have said that my name was "smuggled" on to the *Medical Register*. It is difficult to know what meaning was attached to the word; and it is obvious, from the report of other speeches, that it would be unreasonable to expect any great etymological nicety from gentlemen who agree that the word "candidate" cannot be applied to a woman. But, to ordinary people, "smuggling" implies dishonesty, or at least as much dishonesty as is involved in creeping or stealing in, slily or insidiously. It would, I submit, be incorrect to describe the method I pursued in getting upon the Register in these terms. Every step that I took in completing the required curriculum was taken with the knowledge and sanction of the Court of Examiners of the Apothecaries' Hall. I still possess a copy of my letter, asking their permission to take certain courses of lectures privately from recognised teachers in the regular medical schools, and their answer granting me the permission I wanted. With these documents in my hand, I think it is unfair to speak of smuggling.

Dr. Routh is reported to have said that he was sure, from his experience, that women would not consult women when they could consult men. It is possible that a reporter's error is responsible for this statement, and that what Dr. Routh really said was, that some women preferred men to women doctors. It is difficult to believe that Dr. Routh ventured to say more than this, which is certainly all his experience can justify him in saying. No one has a right to speak as if he were omniscient, and even Dr. Routh's acquaintance has its limits, and must, at any estimate, leave him a stranger to the preferences of a vast number of women. Fortunately for women doctors, there is another side to the shield—a side which they, at any rate, see now, and which the profession generally will come to see in time.

I have no wish to enter upon a long discussion of the decision arrived at by the Obstetrical Society. In my opinion, however, it is to be regretted that the decision was not made to rest frankly upon the supposed interests of the Society. I am quite willing to admit that, in a corporate body, due weight must be given by the leaders to the opinions, nay, even to the prejudices, of the majority, and that, from this point of view, my admission might have done some temporary harm to the Society. On that ground, I accept, for the present, my exclusion. I, nevertheless, cherish the hope that, in the not far distant future, a wider construction of the bye-laws of the Society will be acceptable to its members, or, at any rate, that women will not be for ever denied the advantage of being placed *en rapport* with the living current of experience and scientific thought in the medical or any other profession in which they may have fairly gained a footing.

I am, etc., ELIZABETH GARRETT ANDERSON, M.D.

20, Upper Berkeley Street, March 10th, 1874.

EXEMPTION OF MEDICAL MEN FROM SERVING AS JURORS.

SIR,—The Medical Act of 1858 contains the following two clauses.

"XXXIV. After the first day of January, 1859, the words 'legally qualified medical practitioner', or 'duly qualified medical practitioner', or any words importing a person recognised by law as a medical practitioner or member of the medical profession, when used in any Act of Parliament, shall be construed to mean a person registered under this Act.

"XXXV. Every person who shall be registered under the provisions of this Act shall be exempt, if he shall so desire, from serving on all juries and inquests whatsoever, and from serving all corporate, parochial, ward, hundred, and township offices, and from serving in the militia; and the name of such person shall not be returned in any list of persons liable to serve in the militia, or any such office, as aforesaid."

One would think there was not much doubt attached to the meaning of these clauses. But I lately received a juror's citation; and, on claiming exemption and producing the Act, I was informed that, since the passing of the above Medical Act, another had passed—viz., the Court of Session Act, 1868—containing the following clause.

"XLIII. All exemptions from liability to serve as jurors in Scotland depending on any Act passed subsequently to the Act sixth George the Fourth, chapter twenty-two, are hereby abolished."

Consequently, the fact of my being registered would not exempt me from serving as a juror. It will thus be seen that one of the provisions of the Medical Act has been most unjustly and unfairly cancelled, through the instrumentality of an Act which few members of the profession would ever think of consulting on the subject. I now lay these facts before the medical profession in Scotland, in order that steps may be taken in any future Medical Act to have these clauses reponed, should the profession deem it desirable. I am, etc.,

Aberdeen. A. J. KINLOCH, M.D.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

AMENDMENT OF THE PUBLIC HEALTH ACTS.

THE following proposed amendments of the law of public health have been lately agreed to at a meeting of the Sunderland Health Committee.

1. *Water-Supply.*—Provision should be made, as proposed in the Bill submitted by Sir C. Adderley last year, that any inhabited house without an adequate supply of wholesome water for domestic purposes, should be deemed a nuisance within the Nuisance Removal Acts.

2. *Buildings, Foundations, Damp, etc.*—Power is urgently wanted to secure that inhabited houses shall be built on proper, dry, and wholesome foundations. Frequently, in this and other large towns, vales, quarry and other holes are filled up with rubbish and filth, often of the most objectionable kind, and after a short time built upon, and no power is vested in the sanitary authority to prevent it. Power should also be given to require spouting for inhabited houses, not simply as now, where the drip would be upon a public footpath, but in all cases, where necessary, to secure freedom from damp.

3. *Drains.*—The sanitary authorities should be enabled to lay the house-drains in case of new houses, and charge cost to the owners.

4. The Registrars of Births and Deaths should be bound to furnish immediate notice to the Medical Officer of Health of any death occurring in their districts from any infectious disease, and weekly returns of all deaths, and to be paid at the same rate as for returns under the Vaccination Acts; and all medical practitioners, in any hospital or establishment which receives money from the rates or taxes, should be compelled to furnish returns of sickness from infectious diseases, and specifying the neighbourhood where such cases have arisen.

MILITARY AND NAVAL MEDICAL SERVICES.

ENGAGEMENTS ON THE ADVANCE TO COOMASSIE.

THE following abstract has been prepared from the nominal lists of casualties enclosed in the several official despatches of Major-General Sir Garnet Wolseley to the Secretary of State for War. It does not include the casualties in the Naval Brigade reported to the Admiralty.

Numerical Return of the Officers, Non-commissioned Officers, and Men, Killed and Wounded in the several Actions during the advance to Coomassie between the 29th Jan. and the 4th Feb., 1874, *inclusive.*

Action.	Troops.	Killed.	Wounded dangerously.	Wounded very severely.	Wounded severely.	Wounded slightly.	Total killed and wounded.
Borborassie, 29th Jan.	Officers	1	0	0	0	0	1
	Non-com. officers & men, native troops .. .	1	1	2	1	0	5
Amoaful, 31st Jan.	Officers	1	1	1	4	9	16
	Non-com officers & men, white troops	2	7	2	29	80	120
	Non.com. officers & men, native troops	1	0	0	10	18	29
Becquah, 1st Feb.	Officers	0	0	0	0	1	1
	Non-com. officers & men, native troops	0	0	1	5	1	7
Between Amoaful and Adwabin, 2nd Feb.	Officers	0	0	0	0	3	3
Fommanah, 2nd Feb.	Officers	0	1	0	0	1	2
	Non-com. officers & men, white troops	0	1	0	3	3	7
Between Agamamu & River Dah, 3rd Feb.	Officers	0	0	0	0	1	1
	Non-com. officers & men, white troops	0	0	1	2	3	6
	Non-com. officers & men, native troops	0	0	0	5	4	9
At River Dah, 4th Feb.	Officers	1	0	0	1	4	6
	Non-com. officers & men, white troops	0	1	2	9	20	32
	Non-com. officers & men, native troops	1	0	0	8	15	24
All actions included.	Officers, non-com. officers and men, white and native troops	8	12	9	77	163	269

SEVERAL correspondents write to us to deny that Surgeon-General Mouat, C.B., V.C., has any likelihood of succeeding to the office of Director-General. We cannot profess to balance very nicely the probabilities of what will occur if Sir Galbraith Logan retires and Sir William Muir declines to propose a successor; but we are led to believe that the contingency will not arise, and that in the case of vacancy, the office will be made acceptable to Sir William Muir.

OBITUARY.

FORBES WINSLOW, M.D., D.C.L.

DR. FORBES WINSLOW, who died at Brighton on March 3rd, at the age of 61, was a direct descendant of Edward Winslow, one of the Pilgrim Fathers who went to America in the *Mayflower* in 1620. He became a member of the Royal College of Surgeons of England in 1835, a Doctor of Medicine of King's College, Aberdeen, in 1849, a Fellow of the Royal College of Physicians of Edinburgh in 1850, and a member of the Royal College of Physicians of London in 1859. He also possessed the degree of D.C.L. Oxon., which was conferred on him in recognition of his valuable services to psychological medicine—a department which he earnestly cultivated, and to the literature of which he made several valuable contributions.

At the age of 21, he wrote his first work on Insanity, entitled *An Essay on the Application of the Principles of Phrenology to the Elucidation and the Cure of Insanity.* Eight years later, he wrote an elaborate work, called *Physic and Physicians,* with memoirs of living physicians and surgeons; and, some time afterwards, he wrote his work on the *Anatomy of Suicide,* being, we believe, the first work on this subject. For sixteen years, he was sole proprietor and editor of the *Psychological Journal,* a quarterly journal, the first number of which appeared in 1848. Dr. Winslow was examined before the Select Committee of the House of Commons in reference to the legal care of dipsomaniacs. He was the first English physician who introduced the plea of insanity in criminal cases, and, although not subpœnaed as a witness in the case of Mac Naughton, the murderer of Mr. Drummond, private secretary to the late Sir Robert Peel, he was called from the body of the Court and examined in the case. He also gave evidence on the trials of Mrs. Vyse, Mrs. Brough, and in other important cases. The last trial in which he appeared as a witness was that of Albert Victor Townley. He was well known in the various Law Courts, and his evidence was always regarded with interest, his opinion carrying much weight.

Dr. Winslow was a staunch Conservative, and, at various general elections, he was asked to represent Cambridge, Norwich, Maidstone, and Barnstaple respectively; but, in consequence of his severe professional work, he, on each occasion, declined the honour.

He died at Brunswick Terrace, Brighton, at noon, on Tuesday, March 3rd, of granular disease of the kidneys. He had been in good health up to February 7th, on which day, feeling weak, he did not leave his room. On the evening of that day, œdema of both lungs came on, followed, in a few days, by dyspnœa and cardiac spasm, resembling an attack of *angina pectoris.* The urine was very albuminous. Vomiting was now added to the symptoms, and caused an increase of weakness. On the Monday week before his death, a large carbuncle formed, which caused much prostration; but, on the following Friday, he appeared much better. On the Sunday, the kidneys, which, up to this time, had been acting freely, gradually ceased to perform their duty, and, on the Monday, there was suppression of urine, uræmic coma coming on at 11 on the morning of Tuesday, March 3rd. Dr. Winslow was conscious till within one hour of his death, and he was full of mental vigour till the end.

He was buried in the family vault at Epping on Tuesday, in the presence of a numerous circle of sorrowful friends and relations, amongst whom we noticed Sir William Fergusson, Dr. Farquharson, Mr. A. B. Myers, Dr. Waller Lewis, Dr. Rudderforth, Dr. Wane, Mr. J. N. Radcliffe, Dr. Semple, Dr. Lyttelton Winslow, Dr. Seaton, Rev. Forbes Winslow, M.A., vicar of Epping, Rev. Octavius Winslow, D.D., brother of the deceased, who performed the ceremony, etc.

DR. F. LŒFFLER,

SURGEON-GENERAL OF THE PRUSSIAN ARMY AND DIRECTOR OF THE FRIEDRICH-WILHELMS INSTITUTE AT BERLIN.

ALL army medical officers who have watched the progressive changes which have been taking place in the organisation of the medical departments of armies of late years, will be greatly grieved on hearing of the death, at Berlin, of General-Arzt Dr. Lœffler, who took a prominent part in bringing about in Prussia those reforms, the influence of which has been felt, not only in the other armies of Germany, but also, indeed, in those of all the principal states of Europe. After the decisive war of 1866 between Prussia and Austria, during which Dr. Lœffler served as principal medical officer in the field of the Prussian armies, he published his admirable work in two parts, *Das Preussische Militär-Sanitätswesen und seine Reform;* and it is an acknowledged fact that the Royal Commission, which was appointed in 1867 to consider the reorganisation of the medical department of the Prussian service, was chiefly guided in its decisions by the arguments and projected arrangements expounded in this work. The main objects of the work were to cause the organisation of the medical service in the field to be as settled and complete in every detail as that of the other branches of the military service, and, at the same time, to secure for the medical officers the necessary military authority to enable them, while being held responsible for the correct execution of the hospital duties, to have the power of ensuring the established regulations being carried into effect. The new system which was then inaugurated, with limitation to sanitary service in the field, was seen to be attended with such success in the war of 1870-71, that, as generally known, it has led to further reforms in Germany in the extension of the same principles to all army hospitals, in time of peace as well as in time of war.

Dr. Lœffler had for some years held the second place in the army medical department of Prussia, and it was fully understood that, whenever the present Director-General, Dr. Grimm, retired, Dr. Lœffler would be his successor. The appointment is not one merely of succession in Germany; but Dr. Lœffler was so distinguished in his profession, had seen so much active service in the field, and was so highly esteemed by the Emperor, as well as by the Crown Prince of Germany, that there was no doubt of his being selected for this responsible and important post whenever a vacancy might occur. A German friend of high position in the army, in notifying Dr. Lœffler's death to the writer of this obituary notice, remarks as follows:—"The worst loss of all is to the Prussian army. Lœffler was the marked future chief of the sanitary service of the German army, and I know no one of the same stamp and value. His death is a most grievous damage for the future. The interests of our profession are the same in all armies; and I am sure the news will be everywhere received with sorrow that such a champion as Lœffler does no more exist."

Dr. Lœffler was one of the earliest and most energetic friends of the system of volunteer aid to the wounded in time of war. He took a prominent part in the conferences at Geneva in 1863 and 1864, which culminated in the international convention now known as the "Geneva Convention", and he joined in all the subsequent international deliberations to which that treaty has given rise. The arrangements by which the Volunteer Aid Societies, in North Germany, were officially constituted auxiliaries to the regular army medical service in war time, were chiefly due to his influence and powers of organisation, and these societies have lost a firm supporter by his death.

The subject of this notice was also well-known, especially in Germany, as an author of numerous papers on points of military surgical practice. His work on the *Campaign against Denmark in* 1864, published in 1867, contains many observations of much interest, and has been frequently referred to in the recent surgical history of the United States' Civil War. Unfortunately, Dr. Lœffler had been so constantly employed in the active duties of his profession, since the publication mentioned, that he had been unable to complete it as he intended.

Dr. Lœffler, at the time of his death, had just attained his fifty-ninth year. Early in January last, he had an attack of perityphlitis, but made so favourable a recovery that he was considered to be convalescent. A few days before his decease, he was attacked with pericarditis. His death occurred suddenly, after slight exertion, on February 22nd.

ANDREW DODSON, M.B., Birmingham.

DR. ANDREW DODSON died on February 15th, at the Children's Hospital, Birmingham, of which he was lately elected house surgeon. Dr. Dodson was a distinguished student at Queen's College and the General Hospital, at both of which he took a number of prizes. He also filled various clinical offices in the hospital. He became M.R.C.S.Eng., L.S.A., and M.B.Lond., in 1873, being placed third in honours in medicine and in obstetrics at the latter examination.

Dr. Dodson had just entered upon his first public appointment—that of House-Surgeon to the Children's Hospital—when he was seized with a slight cold, consumption rapidly set in, and he passed away. Upwards of one hundred of the students joined in the funeral procession, as it passed by the Queen's College to the Great Western Railway Station, *en route* to Wellington, his home; whilst a large number of the medical staff of the Queen's College and the hospitals followed his remains.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, March 5th, 1874.

Crossman, John, St. Thomas's Hospital
Robinson, Richard Edward, Leeds

MEDICAL VACANCIES.

THE following vacancies are announced:—

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Resident Medical Officer: £60 per annum, rooms, board, etc. Applications 2 rd instant, to the Medical Committee.

BLOOMSBURY DISPENSARY—Resident Medical Officer. Applications, 16th instant, to F. Latreille, Secretary.

BRISTOL GENERAL HOSPITAL—Physician's Assistant; Assistant House-Surgeon: £50 per annum each, board, lodging, etc. Applications, 20th instant, to Henry Fox. R.N., Sec.

CASTLEBLAYNEY UNION, co. Monaghan—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballybay Dispensary District: £100 per annum, and fees. Applications, 24th instant, to Benjamin Browne, Hon. Sec.

CHESTERTON UNION, Cambridgeshire—Medical Officers and Public Vaccinators for Districts 5 and 6: £50 and £30 per annum, and fees, respectively. Applications, 19th instant, to F. Barlow, Clerk, Cambridge

CHIPPENHAM URBAN SANITARY DISTRICT—Medical Officer of Health: £10 for six months.

DROITWICH UNION, Worcestershire—Medical Officer for the Hartlebury District: £50 per annum.

DUNFANAGHY UNION, co. Donegal—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Cross-roads (Falcaragh) Dispensary District: £100 per annum, and fees. Applications, 20th instant, to the Rev. V. P. Griffith, Hon. Sec.

EAST SUFFOLK HOSPITAL—House-Surgeon. Applications, 18th instant, to the Secretary, 11, Tavern Street, Ipswich.

EAST RETFORD UNION, Notts—Medical Officer for the Scrooby District.

EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN—Extra Physician.

EDMONTON URBAN SANITARY DISTRICT—Medical Officer of Health: £30 for one year. Applications, 14th instant, to W. Pulley, Clerk.

ERPINGHAM UNION, Norfolk—Medical Officer for the North Walsham No. 2 District: £52 per annum.

GENERAL HOSPITAL, Birmingham—Physician. Applications, 28th instant, to W. T. Grant, House-Governor.

HIGHLAND AGRICULTURAL SOCIETY—Chemist: £300 per annum.

HOLBEACH UNION, Lincolnshire—Medical Officer for the Sutton Bridge District: £20 per ann., and fees. Applications, 16th instant, to E. G. Ayliff, Clerk.

KILBURN DISPENSARY—Two Resident Medical Officers: £120 and £80 per annum, apartments, etc., respectively. Applications, 6th April, to the Hon. Sec., 32, Boundary Road, N.W.

KIRKDEN, Forfarshire—Parochial Medical Officer.

LANCASHIRE LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, and increase of £10 per annum, board and lodging.

LIVERPOOL DISPENSARIES—Two Honorary Medical Officers to the North Dispensary. Applications, 25th instant, to W. Lister, Secretary.

MACHAR (Old), Aberdeenshire—Medical Officer for part of the Southern Division, and the Poor House. Applications, 10th April, to Thomas Skeene, Inspector of Poor, Aberdeen.

METROPOLITAN ASYLUM DISTRICT—Medical Superintendent: £400 per annum, unfurnished house, coals, and gas.

MIDDLESEX HOSPITAL—Assistant Physician; Assistant Obstetric Physician; Dental Surgeon. Applications, 31st instant, to the Weekly Board.

NARBERTH UNION—Medical Officer for District No. 1, and the Workhouse: £35 and £20 per annum, and fees. Applications, 21st instant, to John Thomas, Clerk.

NORTH LONDON CONSUMPTION HOSPITAL—Physician. Applications, 15th April, to W. Hornibrook, Sec.

NOTTINGHAM COUNTY AND BOROUGH LUNATIC ASYLUM, Sneinton—Assistant Medical Officer: £100 per annum, board, lodging, etc. Applications, 26th instant, to the Chairman of the Committee of Visitors.

ONGAR UNION, Essex—Medical Officer and Public Vaccinator for No. 1 District: £105 per annum, and fees. Applications, 24th instant, to Charles Mott, Clerk, Chipping Ongar.

QUEEN'S HOSPITAL, BIRMINGHAM—House-Physician and House-Surgeon: £50 per annum each, board, lodging, etc. Applications, 21st instant, to Walter Young, Secretary and General Superintendent.

ROMNEY MARSH UNION—Medical Officer for the new Romney District, and the Workhouse: £110 per annum.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN—Assistant to the extra Physicians: £52:10 per annum. Applications, 21st instant, to John Henry, Hon. Sec.

RUGBY UNION—Medical Officer for the Workhouse: £50 per annum.—Medical Officer and Public Vaccinator for the Rugby District: £50 per annum, and fees. Applications, 16th instant, to G. V. Hefford, Clerk.

ST. GEORGE'S HOSPITAL FOR SKIN DISEASES, Liverpool—Honorary Assistant-Surgeon. Applications, to Thomas John, Hon. Sec., 4, Water Street.

ST. NEOTS UNION—Medical Officer for District No. 1, and the Workhouse: £76:16 per annum, and £40 per annum.

TORRINGTON UNION, Devon—Medical Officer for the Peters-Marland District.

TOWCESTER UNION—Medical Officer and Public Vaccinator for the Blakesley District: £60 per annum, and fees. Applications, 16th instant, to William Whitton, Clerk.

UNIVERSITY OF LONDON—Examiners, viz.: two in Medicine, two in Surgery, two in Anatomy, two in Physiology, etc., two in Obstetric Medicine, two in Materia Medica, etc., and two in Forensic Medicine: £150, £150, £100, £150, £75, £75, and £50 each, respectively. Applications, 31st instant, to Dr. Wm. B. Carpenter, Registrar.

WATERFORD UNION—Medical Officer for the Kilmacthomas Dispensary District: £120 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BAILEY, James Johnson, M.D., appointed House-Surgeon to the Sheffield General Infirmary.

*CRAWFORD, Cooper Hayes, M.D., appointed Assistant Physician to the Staffordshire General Infirmary.

*LUCAS, R. Clement, B.S., M.B.Lond., F.R.C.S., appointed Surgeon to the Evelina Hospital for Sick Children.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

CLARKE.—On February 27th, at Bank House, Morley, the wife of J. C. Clarke, Esq., Surgeon, of a son.

ROBERTS.—On March 9th, at The Elms, Coningsby, Lincolnshire, the wife of Thomas Andrew Roberts, M.R.C.S.E., L.S.A., of a son.

WOODCOCK.—On March 2nd, at 4 4, Stretford Road, Manchester, the wife of Samuel Woodcock, L.R.C.P.Ed., of a son.

DEATHS.

CURTIN, Charles Joseph, M.D., at Egmont Place, Kanturk, on February 28th.

LAMB, Samuel, Esq., Surgeon, at Stourport, on February 11th.

PEARSON, Henry, M.R.C.S., L.S.A., at Swinton, near Manchester, aged 36, on February 23rd.

*SWAIN, Thomas, L.R.C.P., M.R.C.S., Professor of Medical Jurisprudence in Queen's College, Birmiugham, at Newhall Street, Birmingham, on Feb. 27th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. One Hundredth and First Session. The President's (Mr. de Méric) Address. Dr. Dowse will exhibit—1. A Basilar Artery (abnormal); 2. An Elbow-joint, showing Dislocation of both Bones backwards, of thirty years' standing. Dr. J. Fothergill, "On some points in the Treatment of Diseases of Children."

TUESDAY.—Pathological Society of London, 8 P.M. Adjourned Discussion on Cancer.—Statistical Society, 7.45. Henry Beverley, M.A., Inspector-General of Registration in Bengal, "The Census of Bengal".

THURSDAY.—Harveian Society of London, 8 P.M. Special meeting to consider the present position of the Society. Dr. W. H. Day, "On Milk as a Diet and a Medicine".

FRIDAY.—Medical Microscopical Society, 8 P.M. Mr. George Giles, "On Staining with Aniline Dyes for Balsam-Mounting"; Dr. E. C. Baber, "On Staining with Picro-Carminate of Ammonia".

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. SNOW BECK has forwarded us a letter denying the accuracy of the answers of Dr. W. Playfair, the past honorary secretary of the Obstetrical Society, and of the present honorary secretary, to the complaints made in his paper. We do not, however, feel justified in giving space to a personal discussion of the kind. The letters are from official persons, relating to an official subject, and if Dr. Snow Beck challenge their accuracy, he must do so to the Society itself.

ON THE TREATMENT OF HOOPING-COUGH.

SIR,—I beg to thank those gentlemen who kindly informed me of the mixtures they found most beneficial in this disease. After giving all a fair trial, I must give the preference, in an ordinary case, to small doses of compound tincture of benzoin, frequently repeated. If the cough be more than usually spasmodic, I find dilute hydrocyanic acid, combined with bromide of potassium, and camphor mixture, very serviceable; in the latter stage of the disease, I much prefer alum, combined with dilute nitric acid and gentian, to any other astringent tonic; although in all cases everything depends upon the diathesis of the patient. I was greatly disappointed in the use of chloral hydrate, as in one case only could I detect the slightest benefit.

Bronchopneumonia, I am sorry to say, has been a most frequent complication since Christmas, especially with infants under twelve months of age; which may be accounted for by the damp unsettled weather since the commencement of the year.

As I have mentioned my disappointment in the use of chloral hydrate in this disease, I must beg to be allowed to speak on behalf of croton chloral hydrate in cases of neuralgia; in one case, its action was really remarkable. A young woman had been suffering from acute neuralgic pains in the side of the face for several days, and after taking three three-grain doses of croton chloral hydrate, she slept for six hours, and awoke perfectly free from pain, and has since had no relapse.

I am, etc., EDWARD STEPHENS, L.R.C.P., etc.

The Chantry, Ilminster, February 28th, 1874.

NOTICE TO ADVERTISERS.—Advertisements for insertion in the BRITISH MEDICAL JOURNAL, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

DR. CRICHTON BROWNE'S Lecture in an early number.

MEDICAL PROVIDENT INSTITUTIONS.

WE cannot refer Mr. Strickland to any Provident Institution which is entirely self-supporting. As yet, they all require the aid of honorary subscribers, and they will continue to do so until they are better known and appreciated. We would recommend him to procure the Report and Suggested Rules for such institutions, published by the Charity Organisation Society, 15, Buckingham Street, Adelphi (price 6d.); also, a pamphlet entitled "Provident Dispensaries", by Mr. John Becke of Northampton (price 6d.); and the recent Reports of the Provident Dispensaries at Coventry and Derby.

WILL some of your readers kindly state the result of their experience of the hypodermic injection of caffiene in the insomnia resulting from chronic alcoholism?

I am, etc., E. W. W.

DAY OF REST.

SIR,—I see in your correspondence a reference to me, as a writer upon the Sabbath as a Day of Rest, and to Picart, as proving that certain days were set apart by certain nations for the worship of the sun. In opposition to your correspondent, E. N. Smith, I affirm—"1. That no day of rest, such as the Sabbath (Exod., xvi, 29; xxxi, 15, 17; Num., xv, 32, 36), was ever known to any people except the Jews after the time of their Grecian captivity", a short period before the time of the first Isaiah. 2. That "the Sabbath was peculiar to the Jewish race"; and, as it was put on by Hebrew authority, it was taken off by a similar power when advisable (see Maccabees, ch. ii, 32, 59). 3. That Jesus distinctly abrogated the Sabbath, and the Apostle Paul paid no respect to it.

I know—who does not?—of Baal, Hadad, Chemosh, Ezar, Surya, and the thousand and one names given to the sun, but I never yet heard or read of any race, sect, or people, who kept a solar festival as the Jews were taught to keep their Sabbath—once a week; but not one Christian in a million knows how the Hebrews were directed to comport themselves on the Sabbath-day. Mr. Smith is certainly not one of the few, which I may wonder at, inasmuch as in my article on the Sabbath in *Ancient Faiths*, I have quoted every verse in the Pentateuch which bears upon doubtful points. The fact is, that the Hebrews, as opposed to Baal-ists, had not a distinct *Sun* Festival, but they had "new *moons* and Sabbaths"—the Sabbath not being a *Sun* day, but a day dedicated to *Saturn*, the most high god in the sky, to human eyes.

If any one desire to write an article upon a day of rest, he ought to include amongst his authorities a Cruden's Concordance and a Marginal Bible. I am perfectly familiar with Picart's *Cérémonies*; they are thoroughly French, and unreliable; so are all the other authorities quoted by Mr. Smith. I have studied them all, and discussed them with an acute Anglican divine.

On reading Mr. Smith's letter, I am not surprised that he has not derived any information from my article in *Ancient Faiths*. But I must, in the first place, declare that I am not a gnostic—doubting even whether the meaning of the term is known to Mr. Smith—and in the second, that I will, with pleasure, furnish to any inquirer genuine information upon the points connected with the Day of Rest. My motto is, *Magna est veritas et prævalebit*. I will help any one who desires to prove that which is true. I am, etc., THOMAS INMAN, M.D.

8, Vyvyan Terrace, Clifton, March 1874.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Liverpool Weekly Albion; Allen's Indian Mail; The Retford, Worksop, Isle of Axholme, and Gainsborough News; The Scotsman; The Torquay Directory; The Carlisle Daily Journal; The Blackburn Times; The Newcastle Daily Journal; The Leeds Mercury; The Northampton Herald; The Bradford Observer; The Liverpool Weekly Albion; The Edinburgh Courant; The Salford Chronicle; The Melbourne Age; The Newcastle Daily Journal; The Blackburn Journal; The Carlisle Express and Examiner; The Eastern Morning News; The Australian and New Zealand Gazette; The Somerset and Wilts Journal; The Halifax Guardian; The Daily Review; The Merthyr Express; The North Wales Chronicle; The North British Daily Mail; The Blackburn Times; The Glasgow News; The Glasgow Herald; The Manchester Courier and Lancashire General Advertiser; The Bath Express and County Herald; The Birmingham Morning News; The Tottenham Advertiser; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. J. F. Payne, London; Mr. T. H. Bartleet, Birmingham; Mr. T. Spencer Wells, London; Dr. Smart, Haslar; Mr. Thurston, Ashford; Dr. J. Hughes Bennett, Nice; Mr. H. Morris, London; Mr. C. H. Rayne, Oxford; An Associate; Mr. Berkeley Hill, London; Dr. Yeld, Sunderland; Dr. J. Crichton Browne, Wakefield; Mr. Day, London; Dr. Heaton, Leeds; Our Edinburgh Correspondent; Dr. J. W. Moore, Dublin; Mrs. Garrett-Anderson, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Robinson, Dublin; Mr. S. Lee, London; Mr. Nelson Hardy, London; Mr. Tennant, Leyland; Dr. W. Ogle, Derby; Mr. Haviland, Northampton; Surgeon-Major, Malta; Mr. Ashworth, Bourne; Mr. Lowndes, Liverpool; Dr. Snow Beck, London; Mr. Fairlie Clarke, London; Mr. T. D. Taylor, London; Dr. Baylis, Tunbridge Wells; Dr. Langmore, London; Mr. T. A. Roberts, Coningsby; Mr. J. B. Curgenven, London; Dr. W. Hinds, Birmingham; Dr. Lyttelton Winslow, London: Mr. J. Garner, Birmingham; Mr. R. Clement Lucas, London; Mr. McClure, Tiverton; Mr. Burford Norman, Southsea; Dr. D. M. Williams, Liverpool; Mr. Knott, Swimbridge; Dr. Rutherford, London; Our Paris Correspondent; Dr. Eason Wilkinson, Manchester: Mr. Curton, Kantuck; Mr. Dalby, London; Mr. Day, London; Mr. Groves, London; Mr. Harper, Highgate; Dr. Bradbury, Cambridge: Mr. Lawson Tait, Birmingham; Dr. Joseph Rogers, London; etc.

THE GOULSTONIAN LECTURES
ON
THE ORIGIN AND RELATIONS OF NEW GROWTHS.

Delivered at the Royal College of Physicians.

By J. F. PAYNE, M.B.Oxon., F.R.C.P.,
Assistant-Physician to St. Thomas's Hospital.

Lecture I.—*Concluded.*

Before leaving the subject of hypertrophy, it will be desirable to inquire what are the minute changes by which the increase of parts is effected, and whether these are comparable to those which are concerned in embryonic development, and in the production of tumours. Enlargement of organs appears to be partly effected by increase in size of the elementary parts, and partly by multiplication of these parts. The latter, or hyperplasia, is no doubt the more important process when the overgrowth is considerable.

It is a little difficult to get direct evidence of the minute changes; but in one of the commonest instances, hyperplasia of connective tissue, or fibrous induration, it is quite evident that the first step is the multiplication of nuclei; and the proliferation of connective tissue thus resulting is an important factor in many diseases.

In order to exhibit a very similar process in another part of the body, I will recur to the point which was touched upon just now, the structure of the omentum. The human omentum is a structure which undergoes considerable, though very gradual, changes as life goes on. As is well known, we comparatively rarely find, in elderly persons, an omentum as thin and pellucid as that of children. It becomes thicker, shorter, and often adherent to neighbouring parts, while adhesions are also formed between the parts of the membrane itself. When minutely examined, it is found that these changes are twofold. On the one hand, the amount of homogeneous intercellular substance contained in this membrane in early life becomes diminished, the fibrous element increases, and fibrous outgrowths are formed which effect adhesions and contractions of distant parts. It therefore becomes completely fenestrated as life advances, while, at the same time, the fibrous bundles are actually stronger and thicker. Minute examination reveals, even in perfectly normal structures, some of the ultimate changes connected with these transformations. We see what I have represented in the diagram (Fig. 1). Here may be noticed a comparatively large amount of intercellular substance, a few connective tissue corpuscles, and besides, many cells and groups of cells attached to the outside of the fibrous bundles. These represent the endothelium or serous epithelium of the surface, but of course only in part. The conditions under which these structures are examined in the human body prevent us from getting these structures, so liable to decay, in a perfect state, and from applying the most satisfactory process for their demonstration, viz., nitrate of silver, since this only acts properly on quite fresh tissues. But what can be seen is enough to show in the normal structure phenomena of germination quite comparable to those involved in the processes of inflammation, tubercle, and new growth. Dr. Klein has shown the same thing much more completely in the serous membranes of animals, and regards the process as one strictly normal.

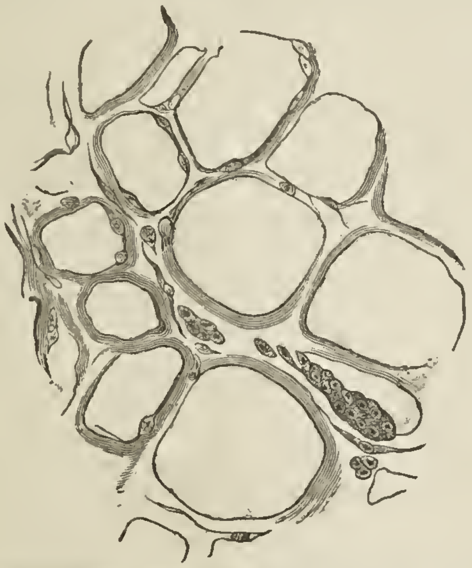


Fig. 1.—Apparently healthy Human Omentum, shewing elongated connective-tissue cells, and masses of germinating endothelium; groups of three, four, or more nuclei, surrounded by some protoplasm. Magnified about 250 diameters.

Compare with this the appearances shown in the diagram (Fig. 2) representing the early stage in a minute secondary sarcomatous growth of the omentum of a child. It was a case in which the rupture of a cystic sarcoma into the peritoneum set up a large number of small secondary growths, which appeared superficial and were easily detached. In Fig. 3, one of these is shown more highly magnified, and is seen to be made up merely of a mass of simple elements, cells, or nuclei. Other parts of the same preparation gave more distinct evidence of germination in the elements, connective tissue or endothelial, of the part.

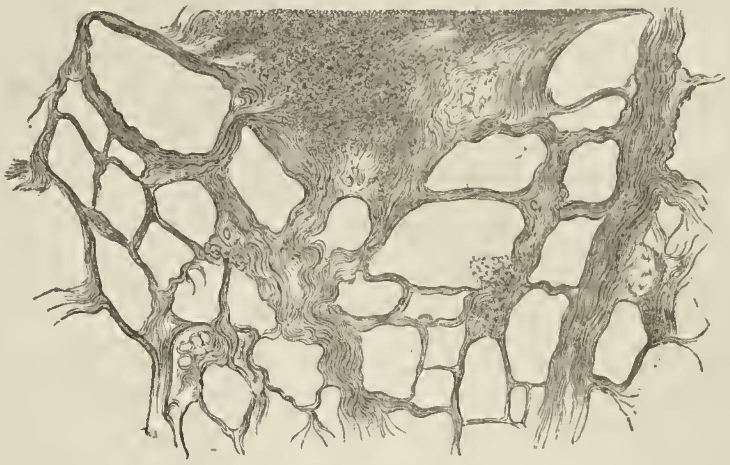


Fig. 2.—Portion of Human Omentum, shewing one larger and two smaller sarcomatous tumours in an early stage. Magnified about 80 diameters.

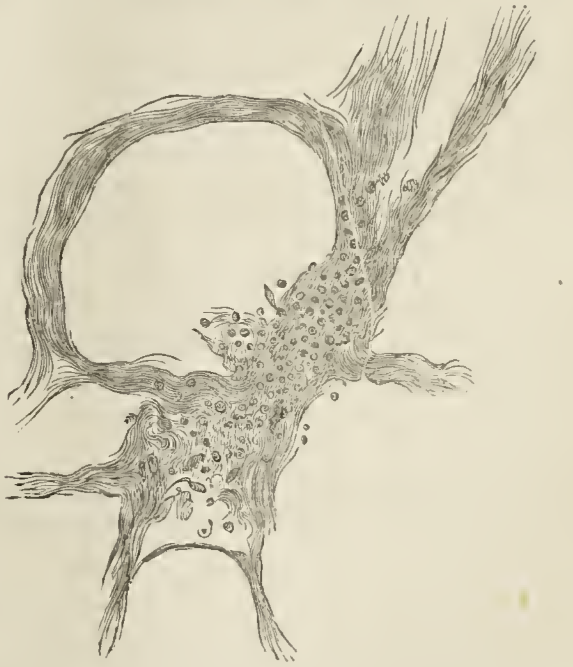


Fig. 3.—Portion of Fig. 2 more highly magnified, shewing a minute sarcomatous tumour arising wholly by multiplication of small cells. Magnified 250 diameters.

I conclude, then, that a hyperplastic process is one of the chief factors in hypertrophy, in the embryonic development, in repair and inflammation, as it is in the growth of tumours. It would also appear that the element common to all these processes is one which is also a normal one in certain parts at least of the human body, and connected with the chronic processes by which certain fundamental changes are effected in it.

New growth, then, is distinguished from the other processes just referred to—embryonic development, repair, inflammation, and hypertrophy—not by its minute characters, but by what may be called figuratively its direction and end, or by its relation to the rest of the organism; and the physiological factor which is common to all these processes, far from being strange or alien to the soil, is probably even a part of the normal life of the body.

LECTURE II.—*Abstract.**

MR. PRESIDENT,—The application of the laws of growth, which were considered in the last lecture, is most obvious in the case of the simple tissue-tumours; in which new growth is obviously a phase of the continuous production of homogeneous tissue. We now reach the point at which we have to consider how far these principles apply to tumours not like normal tissues. Such tumours have been called heterologous, a term referring to structure, or malignant, referring to properties. It is with the former term only that we are now concerned.

The tumours, unlike simple tissues, form two great divisions, the sarcomata and cancers. Both of these are heterologous, but in somewhat different senses.

The sarcomata are essentially embryonic, representing early stages of tissue-formation; and parts of them are not unfrequently found forming a transition to simple tissues, but only to those of the connective tissue group. All varieties of sarcoma arise from some tissue of this group; and hence, though they may be called heterologous, they are so only in a limited degree, since they arise from tissue which, though not identical with their own, represents another phase of the same development. Hence they have been included by Waldeyer, with tumours of the connective tissue class, in one group, the desmoid tumours.

With regard to cancers, the case is somewhat different. They are even more unlike the tissues from which they spring, being, in fact, strictly speaking, unlike anything in the body. Nor can it be said that they are more like embryonic tissue. The only normal structure to which they bear any resemblance being that of glands; and here the resemblance is only partial, the cells being something like epithelial or gland-cells, but the arrangement entirely different. It is an undoubted fact that the majority of such tumours arise in or near glands, or near epithelial surfaces. Hence, some suppose that they grow entirely from such parts, and that their elements are derived from epithelium exclusively. Directly opposed to this is the theory of Virchow, who holds that these cells are not derived from the epithelium, but produced *in loco* from the connective tissue. If the former view be correct, they can hardly be called, strictly speaking, heterologous; but on Virchow's view they are undoubtedly so. The question is important as involving the problem whether there really is or not such a thing as heterologous growth. Virchow's view implies that there is in the body a tissue having a certain embryonic character, and still susceptible of growth and differentiation. It also involves a certain opposition between specialisation and reproductiveness. The opposite theory, with which the name of Waldeyer is now associated, but which was originally suggested by Remak, rests much upon embryology. Remak was led, in his embryological researches, to distinguish in the fowl's embryo, at a certain stage of development, three layers, to which he gave the names of the corneous, the motor-germinative, and the intestino-glandular, respectively. This distinction has been generally accepted; and Huxley has applied the simpler names of epiblast, mesoblast, and hypoblast. From the upper layer are developed, with other parts, the epidermis and its glands; from the lower, the digestive and respiratory mucous surfaces with their glands; and from the middle layer, many other parts, including the connective tissue. There is thus a certain antithesis between the middle layer and the other two. Remak supposed that this distinction was maintained, even in the adult organism; and that elements pertaining to one layer could never be derived from the tissues developed out of the others. The chief criterion would be the production of epithelium; and thus the motto of this school might be the thesis, *omne epithelium ex epithelio*. The evidence for this proposition comes chiefly under two heads; 1. The normal regeneration of epithelium; 2. The origin of morbid growths containing epithelial or quasi-epithelial elements.

Before discussing these lines of evidence, it was pointed out that there is a certain antithesis between the tissues of the different layers in the morbid products other than new growths to which they give rise, and in the diseases to which they are subject. Fibrin seems to be, notwithstanding some apparent exceptions, exclusively produced by tissues of the middle layer; the tissues of the other layers being subject chiefly to catarrhal inflammations.

It is quite clear that epithelial surfaces do not give rise to a new growth of vessels or connective tissue; this is illustrated by the surgical rule, that wounds of the intestine unite not by the mucous, but by the serous surfaces; the latter belonging to tissues of the middle layers.

The question of the origin of epithelium, produced for the purposes of repair, has been much discussed of late years. Surgeons are not yet agreed whether the epidermis which forms on a granulating wound is produced from the granulations or only from the pre-existing epithelium at the edges. The appearances, seen in sections through granulations, are very ambiguous. Of late years, much importance has been attached to the evidence derived from the process of skin-grafting. In this operation, the transplantation of a portion of skin or epidermis alone to a granulating surface, causes an abundant production of epidermis, which it has been supposed grows only from the graft. The phenomena of the transplantation of a piece of negro's skin to the surface of a white body, seem to show that some multiplication of the graft must take place, since a black patch is formed, much larger than the original piece transplanted. But of all the observers who have examined the question microscopically, one only, Jacenko, has brought any histological evidence to show actual germination of the elements of the graft. Others have referred the origin of the new epidermis either wholly or chiefly to the granulations, stimulated by the presence of the foreign epidermis. Moreover, very similar results have been obtained by the transplantation of periosteum, muscle, or even by adding blister fluid to the granulations. These results cannot, then, be quoted as evidence for the production of all epithelium from epithelium.

Direct observations of the growth of epithelium have been of late years numerous but conflicting; and the subject cannot be regarded as being by any means in a settled state. The phenomena of the repair and regeneration of epithelium do not, then, certainly confirm the law of Remak. Evidence respecting the same law derived from the growth of tumours, especially cancer, will form the subject of the next lecture.

ON HYPEREXCITABILITY AND PARESIS.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital, etc.

THE conditions of nerve-tissue giving rise to functional disorder are essentially two, viz., hyperexcitability and paresis. The first may be defined as an undue readiness in the tissue-elements to assume the active state on very slight provocation, perhaps, even, without any, except what may be afforded by the circulating blood. The second is an apparently opposite state, the nerve-tissue being less excitable than normally. Feebleness and deficiency of vital action is a necessary part of paresis, but not of hyperexcitability, though it is present in the great majority of instances.

These morbid states may exist in either of the three great departments of the nervous system—the intellectual, sensory, or motor. They may be of various grades, and may occur combined in various proportions. Thus there are produced a multitude of disorders, which we commonly meet with. It would be highly desirable if microscopical or chemical scrutiny could disclose to us the ultimate changes in the nerve-cells and fibres on which the derangement depends, or if it could be shown what alterations (if any) in the circulation, or in the interstitial fluid—as the subarachnoid—coincide constantly with the two states above named. It must be considered, however, extremely doubtful whether it can ever be possible to bring the nerve-elements under the lenses of our microscopes in the same state as when they were actual components of the living organism, or whether chemical analysis will ever be so discriminating as to show a difference in composition between healthy nerve-cells and those which have been hyperexcitable or paretic. And supposing it to be possible, and to be done, it does not at all follow that we should gain thereby any more control over these morbid states than we have at present. It is not our knowledge of the pathology of gout that has given us our best remedies against it. The most hopeful way of attaining to a more complete and more useful knowledge of the morbid states in question seems to be, to study the circumstances which affect their development.

Before commencing, we may remark that both are disorders, deteriorations of the healthy state. This is a truism; yet the point needs to be noted, lest any of the various manifestations of hyperexcitability, under the shelter of the term "increased action", should be imagined by any to imply a real increase of vital energy.

In studying the nature of hyperexcitability and paresis, we may first remark *that the amount of blood-flow to the nerve-centres is certainly an influential cause.* Brown-Séquard regards hyperæsthesia as associated almost always with increased temperature, which is itself dependent on hyperæmia. At pages 87 and 88 of my work on *Functional Nerve-Disorders*, I have cited instances where active hyperæmia of the head produced delirium. On the other hand, we know that deprivation of blood, as in syncope, produces a cerebral paresis, which continues until the flow of blood is restored. A middle-aged friend of mine used for years to suffer from indigestion after a late dinner. He had acid-rising and heart-burn, with very great heat and flushing of head and restlessness; was obliged to apply wet cloths to cool his bald head; and was unable to apply himself to anything. Here was hyperexcitability from increased blood-flow. On the other hand, Gooch tells us how he himself, an anæmic sufferer, knew well what it was to lay down his head and doze away half the day. Here was paresis from deficient blood-flow. The temporary hemiplegia produced by ligature of the opposite carotid is another and more striking example. The amount of blood coursing through the encephalon is therefore a factor of these two states: if excessive, it causes hyperexcitability; if deficient, paresis. This has, therefore, always to be taken into account. But it is also certain that the blood-supply is not the only condition to be considered; *that the state of the nerve-tissue is also very influential on the result.* I cite the following cases in proof. A patient of my own, aged 63, a wheelwright, had copious hæmatemesis, which deprived him at the time of sight, but not of consciousness. Six days afterwards, having been kept on low diet in the interval, delirium set in, and continued more or less for eleven days, then yielded to bromide of potassium. The diet was materially improved on the third day of the delirium, and the three ounces of brandy he was taking before *per diem* were increased to six ounces. He sank eighteen days after admission. A small ulcer was found in the lesser curvatures. The brain was very pale, rather wet, otherwise healthy. Here the spanæmia produced cerebral hyperexcitability, and not paresis; this is no uncommon result. On the other hand, in the *American Journal of Medical Science*, 1870, i, p. 280, there is recorded the case of a young lady, aged 23, very intelligent, who was attacked with hæmatemesis after a hearty meal. She lost 94 oz. of blood in fourteen days, and gradually sank and died twenty-four days after the first attack. A punched out ulcer was found in the stomach. She exhibited remarkable fortitude during her illness, and her mind remained unclouded to the last. Here the anæmia did not disturb the cerebral functions. I have cited an analogous instance in my Lumleian Lectures, where a prodigious accumulation of ascarides lumbricoides in the small intestine of a girl, aged 11, produced almost complete extinction of the pulse, and at last death by asthenia. Yet the intellectual and motor powers were apparently intact. In cases of choleraic collapse, the same has often been observed, although the circulation in the encephalon must have been extremely reduced. I had lately a hospital patient who, while moribund and pulseless from peritonitis, was perfectly conscious, and could move all his limbs. His brain must have performed its functions with a very defective supply of blood. On the other hand, we often meet with patients suffering from overwork, whose brains are well supplied with blood, but are yet quite incapable of even moderate exertion. The conclusion to which these and similar cases lead is, that the influence of blood-supply is not so important as that of the vital state of the nerve-tissue, since a defective blood-flow may give rise to hyperexcitability and not paresis, or may not disorder the working of the nerve-centres at all. In fact, in a great many instances, the vital condition of the nerve-centres takes the initiative, and the amount of blood-flow varies accordingly. In common sleep, the brain is pale; but this is surely not because the arteries are primarily contracted, but because the exhausted tissue no longer attracts the blood to itself. During sleep, the brain is simply in the same state as regards blood-flow that all organs are in during their time of repose. When the stomach is empty, its mucous membrane is pale, and contains but little blood. Dr. Maudsley writes, with reference to the point above stated —"The truth is, that the first step in insanity often is, as it is in inflammation, a direct change in the individual elements of tissue, the change in the blood-vessels being secondary." He cites the case of strychnia-poisoning as showing that, with great excitement of nerve-cells, there may be no morbid appearances, and that, when there are any, they are congestion of the spinal cord, aneurismal dilatation of the capillaries, and perhaps small effusions of blood into the grey matter. "The congestion is plainly a secondary result of the intense morbid activity of the directly poisoned nervous element." He believes the very same occurs in attacks of transitory mania, where the face is flushed during the attack, the head is hot, and there is plainly an active determination of blood to the brain. I have taken the same view in commenting on a case of psychical intoxication recorded by Dr. Crichton Browne (see *Functional Nerve-Disorders*, p. 160). Of these two factors, then, of hyperexcitability and paresis, the amount of blood-flow and the vital condition of the tissue, the latter seems to me the more important.

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* As these lectures will be published in a separate form by Messrs. Smith and Elder, they will only be given in abstract.

The next point for notice is *the efficacy of states of debility in generating the two disorders in question.* I cite, as instances, overwork, hyperlactation, rickets, the collapse succeeding acute diseases, anæmia, and influenza. *Overwork* often produces insomnia, as in a case recorded by Dr. Hammond, where the patient had not slept a particle for six nights. He committed no excesses, except in the way of mental strain. Moderate brain-work, on the other hand, which causes no excessive fatigue, decidedly tends to induce sleep, though not so much as muscular work in fresh air. Even this, however, if excessive, is apt to cause insomnia. A person may easily be too fatigued to sleep. It is, therefore, certain that this cause of exhaustion produces hyperexcitability. Dr. Farquharson records an interesting case, in a lad, aged 16, where undue mental and bodily exertion so seriously enfeebled the brain that, after the more urgent symptoms had subsided, the patient was long unable to make any approach to a resumption of head-work. A patient of my own so weakened his brain by hard mental work, that he could not read more than three or four minutes at a time, nor more than fifteen minutes in the twenty-four hours. Such cases of paresis are not rare.

With regard to *hyperlactation*, Dr. Tilt says that he knows no condition "that so speedily drains the ganglionic system of all energy as nursing in some women, even when they can take abundance of food and are surrounded by every comfort. The overpowering debility soon brings on extreme nervousness, and a state of despondency leading up to insanity." Dr. Ashwell mentions headache, insanity, amaurosis, chorea, and even epilepsy, as results of this cause. A patient was lately under my care, who had succumbed, after ten confinements, in the attempt to nurse her last child. She found she was too weak. She did not seem, however, to have suffered from want of food, and her pulse was good and steady. Her nerve-disorders comprehended smart hysterical fits, great nervousness, inability to sleep without sedatives, a feeling of heavy weight on the head, and of excitement, as if she could not refrain from running away, besides a dreadful burning sensation referred either to the abdomen or the limbs, and some vomiting of food. The ward-sister described her mental state as "never satisfied, never contented, a most miserable being", in fact, a melancholic. Under treatment, she improved. Hyperexcitability and paresis are well-marked results in cases of this kind. *Rickets* affords a remarkable instance of the concurrence of hyperæsthesia—sensory hyperexcitability—with a state of marked debility. The child sits or lies unnaturally still, for all movement is painful, and dreads to be touched or handled by those whose caresses used to delight it. It is impossible not to regard this striking derangement of sensibility as the result of the nervous system being involved in the general cachexia.

The *delirium of collapse, succeeding acute diseases*, so well described by Dr. H. Weber, is a very remarkable instance of the generation of hyperexcitability by general exhaustion. This is surely a very instructive occurrence, as it is the apparent contrary of what one would *à priori* have expected, and of what often actually occurs—viz., a condition of paresis. Dr. Buchanan says that, if the head-symptoms in typhus have been prominent, and yet the patient recover, a childishness of intellect is often left for a few weeks. Loss of memory of languages that had been acquired has also occurred under like circumstances. These are evidently pareses.

The influence of anæmia in producing hyperexcitability and paresis has already been illustrated, but I may add two more examples. A military man, who had been loved and esteemed by all, and had an excellent wife, got white flux, and in consequence his temper utterly changed, became infernal, so that his wife used to apprehend personal violence. (Sir R. Martin.) I have recorded (*Functional Nerve-Disorders*, p. 75) a case of extreme anæmia from hæmorrhoidal losses, where the patient for thirty-six hours or more lapsed into a state of rather active delirium, being quite unconscious, but very restless, and struggling a good deal. Under the use of opium he recovered from this state, and regained health completely when the loss of blood was finally arrested. A female, aged 43, marked rather severely by long-past syphilis, extremely anæmic, is now under my care. She suffers from great hyperæsthesia of the legs and feet.

The prostrating effects of influenza are notorious, and one may often observe instances of paresis produced by it. Hyperexcitability is less frequent; but Graves refers to patients who became, after five or six days, excessively nervous, lost all sleep, had continual subsultus and tremors, and talked very incoherently, particularly at night.

I may finally allude to senile and mercurial tremor, and to many instances of paralysis agitans, as affording marked instances of motor hyperexcitability induced by conditions which gravely impair vital energy.

Another important point for notice is, the fact *that hyperexcitability and paresis can be generated by remote irritation.* Brown-Séquard has long held the opinion that many neuroses are produced by a peculiar kind of irritation starting from almost any centripetal part of the nervous system. The reflex paralyses of the same observer are produced quite in the same way. Here is another proof of the great similarity of the two morbid states. The irritation, it is important to observe, may be felt or unfelt, *i.e.*, may not declare itself by any sensory warning. Taking as an example the occurrence of epilepsy from some cause of remote irritation, the idea commonly entertained is, I suppose, that the diseased bone, syphilitic deposit, intestinal worms, etc., provoke the convulsive paroxysm directly, just as when a muscle is made to contract by pinching its nerve. But there is more in the matter than this, I feel convinced, at least in many instances. In Mr. L. Holden's singular case of anomalous affection of the nervous system in a boy, aged 13, the tetanic seizures were brought on, not only by pressing his "bump", but any spot over the ten upper dorsal vertebræ; moreover, occasionally the "bump" lost, for a time, its peculiar power of producing the phenomena, though this seems to have persisted in the spinal integument. The same, or very similar, effects seem to have been produced by raising him into the upright posture. Again, the periodic quasi-maniacal daily paroxysms occurred without any provocative stimulation. The whole series of nerve-troubles seem to have depended mainly on the bump, since they disappeared as soon as the tumour was removed, and had not recurred four years later, when the last report was made. The only view I can take of such a case as this is, that the terminal extremities of the nerves in the bump, being organised in some peculiar way—say, having their axis-cylinders exposed—kept up a constant state of hyperexcitability or tension in the nervous centres, which was ever ready to display itself demonstratively on slight provocation, or even without any. This peculiar organ of excitement being removed, the nerve-centres reverted to their ordinary condition. A case which I have recorded in *Functional Nerve-Disorders*, p. 570, presented some resemblance to Mr. Holden's. The occurrence of physiological hyperexcitability in the male frog at the copulating season is well known, and is worth referring to in connection with such cases as the foregoing. The thumb of each hand becomes covered with large papillæ, and, so long as these are present, the animal is enabled to grasp the abdomen of his mate distended with ova without any exertion, apparently, of volition, or any fatigue, even for weeks. If, however, the papillæ be shaved off, the power of grasping in this remarkable way is lost. (Todd and Bowman's *Physiology*, vol. i, p. 315.) They regard the cord of the frog, or, rather, that segment of it with which the nerves of the anterior extremities are connected, as being, during this period, in a state "of exalted polarity".

[*To be continued.*]

A CONTRIBUTION TO THE PATHOLOGY OF ALBUMINOUS EXPECTORATION AFTER THORACENTESIS.

By ALFRED B. DUFFIN, M.D., F.R.C.P.,
Physician to King's College Hospital.

DURING last summer, a lively discussion took place in Paris on the causes of albuminous expectoration after thoracentesis for pleuritic effusion. A very complete analysis was published in this JOURNAL during October last, reviewing not only M. Terrillon's thesis, which started the discussion, but also the various hypotheses that were advanced in explanation. They were four in number: 1. Perforation of the lung by the trocar (MM. Woillez and Marrotte); 2. Spontaneous rupture of air-vesicles after destruction of pulmonary epithelium (Féréol); 3. Resorption of the residual liquid from the pleura after puncture; 4. Transudation of the sero-albuminous liquid through the alveolar walls by means of rapid pulmonary congestion and œdema (Héraud, Moutard-Martin, Béhier, Terrillon, etc.). The reviewer strongly expressed his adhesion to this last hypothesis, which I also believe to be the true one. Neither of the authors named has, however, pushed his theory to its consequences, so as to indicate the mechanism by which the characteristic expectoration may be presumed to be secreted.

Before contributing my quota to this task, I may say a word regarding a fifth hypothesis, which has been suggested by Professor George Johnson (BRITISH MEDICAL JOURNAL, Oct. 25, 1873). "While the lung is compressed by a copious liquid effusion into the pleura, it is probable—nay, it is certain—that, in consequence of the more or less complete blood-stasis within the compressed lung, coagula will form in the minute pulmonary vessels, and especially within the pulmonary veins." After thoracentesis, "it is obvious that the obstruction of the pulmonary veins by coagula would cause a backward passive congestion of the capillaries, and a consequent serous transudation into the air-cells and bronchi." The objections that tell against this view appear to me as follows. 1. Albuminous expectoration has generally been confined to those instances where the amount of pleuritic effusion has been greatest, and the lung consequently most crushed and anæmic. 2. Thoracentesis has been performed four times on the same subject, and each time albuminous expectoration has followed (Boule's case, Béhier's lecture, *Union Médicale*, 175). 3. In the four fatal cases* recorded, no mention is made of coagulation in the pulmonary vessels. The lung was in each instance choked from top to bottom with the characteristic fluid, so that the coagula would require to be extremely numerous. 4. The phenomenon is itself a very transient one, seldom lasting beyond twenty-four hours, although in that time many pints of fluid may be expectorated. How are the coagula assumed to be subsequently disposed of?

Reverting to the hypothesis of rapid pulmonary congestion and œdema: the authors who uphold this have assumed that it is brought about by the intervention of the pneumogastric nerves, but they fail to inform us by what links of the chain the result is arrived at.

The effects of section of the vagi on the pulmonary circulation have afforded very variable results in the hands of different observers. To obtain any at all, both nerves must be divided. Legallois (*Expériences sur le Principe de la Vie*, 1812), whose experiments were chiefly performed on young rabbits, found section of the pneumogastric in the neck to be almost constantly followed by engorgement of the lung. De Blainville and Provençal (Claude Bernard, *Système Nerveux*, vol. ii, p. 353), on the other hand, missed all trace of pulmonary change. Claude Bernard (*ibid.*, p. 354) admits that death is not necessarily the result of asphyxia at all. He regards the pulmonary lesion, when present, as primarily of traumatic origin, and as induced by the difficulties that arise in the mechanical act of respiration. "The movements gain in amplitude what they lose in frequency; they tend to introduce the same amount of air into the lung." An animal breathing from a bell-jar takes in a notably larger amount of air at each breath after its vagi have been divided than before, and a traumatic emphysema rapidly results (*ibid.*, p. 367).

Dr. John Reid (*Experimental Investigations into the Functions of the Eighth Pair of Nerves*) admits the great frequency of pulmonary congestion and the effusion of frothy serum after section of the vagi; but he has also repeatedly known both to be absent. "The effusion of frothy serum into the bronchial tubes is not a necessary consequence of division of the vagi, even when the lungs were found loaded with blood, and when the respiration before death was very laboured." "I have also satisfied myself that this frothy fluid is not mucus, but is the frothy serum so frequently found in cases where the circulation through the lungs has been impeded for some time before death" (p. 202). He believes that all the morbid changes observed in the lungs may be traced to the diminished frequency of the respiratory muscular movements. Reid also quotes observations on the human subject of death with extremely slow respiration, where the vagi were apparently healthy, but great congestion and œdema of the lungs existed (*ibid.*, pp. 207-209).

It will thus be seen that Bernard and Reid are practically at one in ascribing pulmonary congestion after division of the vagi to interference with the mechanism of respiration; and I may add that, so far at least, Traube is of the same opinion. That we have not the whole truth even here, is rendered very probable by Valentin's observations (quoted by Schiff, *Nerven-Physiologie*, p. 411). He has shown that marmots, in whom the vagi have been cut during hybernation, get pulmonary congestion; although the mechanism of breathing is rarely materially disturbed, the animals do not swallow, and no secretions are formed in the mouth.

Such being the facts in reference to the pneumogastrics, I was led to inquire what evidence there might be of the existence of some vaso-motor tract influencing the pulmonary circulation, and capable of being interfered with by the pressure of an extensive pleuritic effusion.

It seems to me that we have in a limb compressed by Esmarch's bandage and rope a condition closely analogous to that of a lung compressed by an extensive pleurisy. When the apparatus is removed, it is often observed that a blush of redness diffuses itself over the part. Sometimes, but by no means invariably, a troublesome hæmorrhage will then ensue from the cut surfaces. The reason of these I take to be, that the pressure has not only emptied the vessels, but has also compressed the nerves of the limb, and among others the vaso-motor nerves. When the blood returns to the extremity, it finds the small vessels not only empty, but lax, owing to vaso-motor paralysis. A similar condition exists in a lung which has just been relieved from the pressure of a considerable effusion. Its vaso-motor nerves, I take it, are also compressed. As the lung again expands, the tension thrown upon its small vessels is not only sudden, but very great. When the nerves have had a few hours to recover, and blood to revive upon, their controlling action again asserts its influence, and the arterial tension is brought up to the normal. We can thus account for the rapid and violent onset, as well as for the very short duration, of this albuminous expectoration. It has generally been found proportionate to the rapidity and extent to which the lung again expands, and to the amount of pressure previously exercised. In eighteen out of twenty-one of M. Terrillon's cases, from 2000 to 5500 *grammes* of fluid were evacuated from the pleura, and in all instances rapidly.

Ranvier's researches on the nature of œdema (*Comptes Rendus*, lxix, p. 25) strongly suggest that the vaso-motor nerves of the lung play an important part in this proceeding. He found that in dogs, in whom he had tied the inferior vena cava, œdema of the legs only ensued when the sciatic nerve was also cut. If the nerve were only divided in the one limb, the œdema was confined to that side. It is well worthy of notice, that the limb became œdematous from one to two hours after the section—a time closely corresponding with that of the first appearance of albuminous expectoration after thoracentesis. Proceeding further, if, instead of dividing the sciatic, he cut the three last lumbar and the sacral nerves in the spinal canal, then, in spite of complete paralysis of motion and sensation, *no œdema ensued*. Ranvier concludes that a paralysis of vaso-motor nerves must be added to the venous stasis to produce acute dropsy.

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* Two quoted by Terrillon, one by Béhier (*Union Médicale*, June 24th, 1873), one by Dumontpallier (*ibid.*)

Of the vaso-motor nerves of the lung itself but little is known. In some experiments on the peripheral stumps of the spinal roots of the first thoracic ganglion, Schmiedeberg ("Ueber die Innervations-verhältnisse des Hundesherzen," Ludwig's *Arbeiten*, 1872) inquires whether, in the phenomena which result, we may not be dealing with a change in the calibre of the pulmonary vessels. Bernard, after removing the same ganglion (*op. cit.*, vol. ii, p. 519) found violent pleurisy and an extraordinary injection of the whole of the lung-substance. After removing all the four upper cervical ganglia (p. 537), he found an enormous liquid effusion into the pleura and pericardium, with hepatisation of portions of the lung. The important observations of Schiff (*Nerven-Physiologie*, p. 409) induce him to ascribe the lung-œdema consequent on the section of the vagi to a *neuro-paralytic* hyperæmia. "The vagi usually contain a great part of the vaso-motor nerves of the lung. The more of these vaso-motor nerves course in the track of the vagus, the more general the hyperæmia, the younger the animal, the more rapidly does it set in, as is always the case with neuro-paralytic hyperæmias." He further accounts for the discrepancies among observers by suggesting that the vaso-motor nerves of the lung may be entirely absent from the vagus, and take some other track. With regard to the vaso-motor nerves of the liver, the contrasting experiments of Cyon and Aladoff (*Bulletin de l'Académie de St. Petersburg*, vol. viii, p. 91), and of Eckhard (*Beiträge*, vol. vii, part i, p. 19), indicate that irregularities in their course are frequent; and the observations alluded to in this paper point to the same inference with respect to the distribution of the pulmonary vaso-motor supply. In the majority of instances, they would seem to join the vagus high up, so as to be included in the section in the neck. In a few instances, they join lower down, and no lung-œdema ensues. For the production of albuminous expectoration after puncture, a previous crush of the lung by the pleuritic effusion sufficient to temporarily paralyse these nerves would appear to be the essential factor.

THE TEACHINGS OF THE GENERAL INFIRMARY AT LEEDS WITH REGARD TO THE OPERATION OF OVARIOTOMY.*

By C. G. WHEELHOUSE, F.R.C.S.Exam.,
Senior Surgeon to the Infirmary.

In the brief space of time allotted even to the major communications brought before this Society, it is impossible to do more than glance at some of the chief points involved in such a subject as that to which I ask your attention. I do not, therefore, intend to enter into discussion upon any of the points I bring before you, but merely to state what I, in the experience I have obtained in this institution, have learned concerning them ; discussion will follow more appropriately afterwards.

In approaching the operation of ovariotomy, we are brought face to face with many difficulties ; and, as the best method of dealing with these can only be solved by direct appeal to experience, it is with a view to bring out the accumulated experience of this institution that I have charged myself with the delivery of this Address. The points which I desire to bring briefly under your observation are the following.

1. The selection of cases for operation.
2. The influence upon the result of the condition of the peritoneum at the time.
3. The best method of dealing with adhesions.
4. The best method of dealing with the pedicle.

Upon each of these points, I am satisfied that the experience of this infirmary has taught me valuable lessons—lessons which I could have learned in no other way, and, in as few words as possible, I desire to make you sharers in the advantage I have thus reaped. First, then, as to the selection of cases. Bearing in mind that many of these tumours are of a mixed character, partly solid and partly fluid, we may yet, as a rule, classify them generally under these two heads. Accordingly, in examining an ovarian case, I always direct my attention, in the first instance, to this point ; for I know that, according as I have the one or the other kind of tumour to deal with, not only will widely different lines of treatment be required, but that as different an opinion also, as to the advisability of any operation being performed, will probably hang thereon.

Take, for instance, the case of a purely solid tumour first, and consider how great are the difficulties which, on the very threshold of our inquiry concerning it, may await our diagnosis. Consider how many things there are which *may* be, and every one of which *have* from time to time been, confounded with ovarian tumour: pregnancy, extra-uterine fœtation, uterine fibroma, or the many forms of internal disease or displacements to which the uterus is liable; peri-uterine hæmatocele, fæcal accumulation, mesenteric tumour, enlargement and disease of the kidney, enlargement and disease of the spleen—and you will not wonder when I tell you that I have learned, whenever a purely solid tumour is presented to me for examination, that I must never set the case down as one of ovarian disease, until, by an exhaustive process of elimination, I have assured myself that it can be nothing else.

The degree of fixity or mobility of such a tumour is a point to which I have learned to attach great importance, and also the presence or absence around it of ascitic fluid. I long ago learned to believe, and, up to the present time, I see no reason to doubt the correctness of the conclusion that, with a view to ovariotomy, no more favourable arrangement of circumstances can present itself than a solid ovarian tumour, freely movable, and surrounded by ascitic fluid ; whilst, on the other hand, a solid ovarian tumour, fixed and immovable, I invariably approach with the most serious consciousness of impending difficulty. It is easy, I think, to understand why this should be so. If a solid ovarian tumour be tied in position by adhesions, the probability is, that such adhesions will be pelvic and posterior ; they will be situated at the very points at which it will be most difficult to separate them, and, even supposing this successfully accomplished, the raw surfaces produced will occupy the very positions which are fraught with the greatest after-dangers to the patient. It will be into the pelvis, and to the back part of the body, that blood and effused fluids will gravitate; and from this part should they undergo decomposition, they will find the readiest and most direct entrance into the circulation, to the almost certain death of the patient.

I have said that a solid tumour, movable and surrounded by ascitic fluid, has, in my hands, proved the most favourable of all forms for operation ; and that leads me to an observation which, I believe, all practical ovariotomists will endorse, though few attempts have been made directly to explain the reason why, after such operations, the patient generally progresses towards recovery in so remarkably quiet a manner. The question whether it is better to perform the operation whilst the patient is in robust health, or to wait until she is somewhat enfeebled by the disease, has been ably discussed both in this country and America ; and, whilst all the earlier operators recommended that it should be done under the former condition, nearly all are now agreed that the greatest success has attended such as have been undertaken under the latter. Many reasons have been given for this, but I have nowhere seen it distinctly stated that the difference in the result is mainly dependent, as I believe it to be, upon an altered condition of the peritoneum.

Peaslee comes nearest to this point when he says, "At all events, a long distended state of the peritoneum very much diminishes its sensibility and the danger of traumatic peritonitis" (*Ovarian Tumours*); but neither he, nor any of the authorities whom I have consulted, lay any stress upon the altered structural conditions of the membrane itself. If you consider for a few moments what is the normal condition of the peritoneum, both in structure and as to function, you will have no difficulty, I think, in understanding the ground upon which I assert that I would rather operate in a case where I know that it has undergone structural change than in one in which it is presumably perfectly healthy.

Physiologically the largest lymph-sac in the body, it is, as you are aware, perpetually engaged in the process of absorption ; and if, in its unaltered condition, septic fluids be presented to it, their immediate absorption is, of course, the result ; and structurally the largest serous membrane in the body, it is, of all others, the most liable to become inflamed under conditions of provocation. Thus, in the performance of ovariotomy with a healthy peritoneum, we have the greatest liability to the two conditions which, of all others, are fraught with the greatest danger to the patient, viz., peritonitis, which alone destroys one-fourth of the cases which die, and septicæmia, which carries off at least as many. If, however, the membrane have undergone such changes, as the result of disease, as either weaken its power of absorption, or so change its structure that it is, in reality, no longer an active serous membrane, by so much, according to my experience, is the chance of the success of an operation improved; and this is a fact which, I think, my colleagues will bear me out in saying was very early recognised in this institution, and has oftentimes served usefully to assist us in forming our prognosis as to probable results in individual cases. I always hail the presence of ascitic fluid in the peritoneum as of highly favourable augury; and even adhesions of lymph, so only that they be soft and easily broken down, generally impress me favourably rather than otherwise. I can in no way, other than on this supposition, account for the perfectly calm recovery of many cases I have seen—which, to a stranger, would have appeared absolutely hopeless—where adhesion after adhesion has had to be broken down or cut through, and in which, notwithstanding, the patient has progressed afterwards with most singular felicity.

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* Read before the Leeds and West Riding Medico-Chirurgical Society.

In the case of fluid or cystic tumours, considerations of another order regulate my judgment, and, in a measure, my method of procedure also. Adopting the commonly accepted classification of these cysts into uni- and multi-locular, I have learned to deal very differently with them, as they belong to one or other of these orders. In the case of an unilocular cyst, I have long held, with Mr. Southam of Manchester, that it is advisable, in all cases, to give the patient the benefit of tapping once, at all events, and that for more reasons than one. 1. It occasionally happens, in some rare cases, that such a cyst, once fully emptied, may never refill, and the patient may, by this simple proceeding, be permanently cured. Two such cases have happened in my own practice, and I think my friend and colleague Mr. S. Hey will be able to support me in this doctrine by the result of a third case which I saw in consultation with him. A young lady, tapped two years ago, has, up to this time, shown no liability to return of the disease, and has since married. 2. When the cyst *does* refill, it often does so very slowly, and, by a repetition of the tapping at long intervals, the patient may not only be kept in tolerable comfort, but the necessity for the major operation, with all its attendant risks, may be altogether staved off. Mr. Southam mentions several such cases, and one in particular, in which the patient only required the operation twice in nineteen years (*Ovarian Tumours*, 1869). 3. It should be done as an aid to diagnosis. It not unfrequently happens that a case may be so involved in doubt that an inspection of the contained fluid may prove of material assistance to us in this direction.

As a rule, it is not difficult to distinguish between the fluids of ascites and of ovarian dropsy, and thus a single tapping will often serve to clear up any doubt that may exist on this point. I say *often*, because it will not always do this. Cases have come under my own observation, and others are recorded, in which it has been exceedingly difficult, even with the fluid extracted, to say which of the two it is.

To tap a manifestly multilocular cyst is, in my judgment, to run a very serious risk, and one which is not generally counterbalanced by the amount of relief likely to be obtained by the operation; and hence it becomes a matter of considerable moment to be able to form a probable diagnosis as between the two forms. To a practised eye and a practised hand, this is, I believe, generally possible, but not in all cases. Hence it sometimes happens that the simple operation of tapping leads to very serious consequences, and occasionally even to death; and the next point to which I wish to advert is the lesson I have recently learned on this point.

If, after tapping a given cyst, it should turn out that we have not been able to empty it completely, what are the dangers which may arise from the procedure? The cyst may inflame; it may suppurate; or it may gangrene; and, under any of these circumstances, the life of the patient may be brought into imminent danger. In the very last case in which I operated in this institution, my patient positively refused to listen to any proposal to tap her, because, as she said, her sister, who had been, like herself, the subject of ovarian disease, had been tapped and had died. She was quite willing to submit to the major operation, and take all the risks attendant on it, but the minor one she steadily declined.

Now, bearing these risks in mind, I think it should be an invariable rule to take the patient fully into our confidence, to explain to her all the danger that may arise even from tapping only, and to see that she is prepared, should any of the accidents I have named unfortunately supervene, at once to submit to any further procedure that may be deemed advisable for her safety. That we have it in our power, even in that extremity, to make a manful fight in her defence, has been very recently proved by my friend Mr. Teale, who will be able, I believe, this evening to bring forward a case which, I think, he may proudly detail to you as one of the most brilliant triumphs of modern surgery.

A patient, the subject of ovarian disease, was tapped; the half emptied cyst failed fully to collapse; rapid decomposition of the remaining contents ensued, and the case was clearly about to end fatally in a very few hours. At a consultation, it was determined, notwithstanding the apparently desperate condition of the woman, that her only chance lay in the immediate performance of the major operation, and that was forthwith done. By Mr. Teale's permission, I am enabled to show you the cyst. In the posterior part of it is a large patch of gangrene, which, in a very short time, must have separated or have given way, and must have caused immediate death; and I am sure that you will join with me in congratulating my friend that, notwithstanding this desperate condition of affairs, he has succeeded in carrying this patient through her difficulties, and that she is now quite recovered.

With regard to the operation itself, I desire explicitly to record my feeling in favour of a full and free primary incision. For a long time, the comparative merits of the large and the small incision were vigorously debated, and each could claim many supporters. On the one hand, it was argued that, if, after tapping and emptying a cyst, it could be withdrawn through a small opening, it was so much gain to the patient; but, on the other hand, it was soon ascertained by those who performed the operation most frequently that, in reality, the risk of peritonitis was quite as great after the small as after the large opening; and, moreover, it was so frequently found necessary to enlarge an opening, originally small, to meet some unexpected complication, that, slowly but steadily, the larger opening has been gaining ground, until, I think, it may be said to be very generally adopted. At all events, I would speak for myself, and I have no hesitation in saying, that I undoubtedly prefer a large opening.

I invariably feel, in commencing an ovarian operation, however well I may have thought the case out beforehand, that I may have to deal with difficulties and complications which could not be foreseen; and, in dealing with such, I greatly prefer to be able to see clearly all I have to do, and I feel certain the advantage is great to the patient, as well as to the surgeon. When, for instance, he has some unlooked-for adhesion to separate, or some bleeding vessel to secure, or some unexpected difficulty to encounter, how much more safely he can do it all when he can see what he is about, than if he be groping about in the dark; and I do not believe that, when once the peritoneum is opened, it makes the slightest ultimate difference whether the opening be three inches long, or six.

Moreover, I think, much less harm is done to the peritoneum itself whenever a tumour is lifted without strain through a free opening, than when one is liberated only after force has had to be used to drag it through a small incision. I do not think this position could be better illustrated than it was in another case in which I recently assisted Mr. Teale, and where, through the whole operation, up to a certain point, all went as smoothly as we could any of us desire. A monocyst, easily emptied, turned out almost of its own accord, and seemed just on the point of escaping altogether from the body, when, at the very furthest point behind, it was held back by a firm adhesion. To liberate it, this had to be divided; in doing so, a large feeding vessel was severed, and, unless we had had a tolerably free opening, I think Mr. Teale will agree with me in thinking that, to secure that vessel would have been almost, if not quite, impossible. I do not consider it necessary, in all cases, to make an incision from ensiform cartilage to pubes; but, judging by the size of the tumour or cyst I have to remove, I always so calculate its length as to give myself free space for all reasonable manipulation.

As to the best method of dealing with adhesions; if they be recent and soft, they are easily broken down; and, following them carefully with the finger and the eye, to detect any vessel that may seem inclined to bleed, I generally so deal with such; but, if the tumour be firmly adherent to the abdominal walls, or to any of the viscera, this cannot be done. If they be old and well organised, and pretty certain to live, I much prefer to cut out the portions of the cyst, and leave them attached than to attempt to dissect them away. In doing this, it is impossible to avoid a great deal of diffused bleeding at the time, and the oozing is very liable to continue after the completion of the operation. There is also the further risk, in attempting to loosen such adhesions, of injuring the organ to which they are attached; it is easy thus to tear into an intestine. I have seen the bladder lacerated, and I have heard of other accidents which have all proved fatal. On the other hand, I have adopted the method of leaving portions of the cyst attached, and I have never, in any instance, seen any evil arise from doing so. Upon the best method of dealing with the pedicle, more than anything else, hangs the success or failure of most cases. We have dealt with the pedicle in this institution, I believe, in every known way. We have used the clamp in all its forms; the ligature, both cut short, and left hanging out of the wound. We have retained the stump in the lower part of the incision, and we have let it go free. We have tried the ligation of the whole pedicle, and of individual vessels, the searing iron, and torsion. Every method has succeeded in some and failed in other cases; and so, feeling thankful that I have so many strings to my bow, I try to deal with each case according to its special requirements. I am careful, above all things, if it be possible, to avoid having any drag on the stump; and when, having severed a tumour, and arrested all hæmorrhage in the stump, I feel that I can safely drop it into the pelvis, and see it no more, I am the most easy about it.

The two methods from which I have decidedly seen the happiest results have been "searing" and "torsion". The former is effected by seizing the pedicle near the uterus with a clamp, and then cutting off the tumour with the searing iron, and carefully burning away every atom of the eschar; the latter by simple twisting. The uterine portion of the pedicle, having been grasped by a clamp made specially for the purpose, is firmly held, and the end from which the tumour has been detached is enclosed in a second clamp, and the portion is then slowly and deliberately twisted off.

In using either of these methods, I am still careful, when the clamps have been removed, to search carefully over the end of the stump, and if I see any bleeding point to tie it; and having done this, and assured myself that all is safe, I delight to feel that, henceforward, I have done with the pedicle.

I do not attempt more minutely to describe the method of torsion used, as I understand that Mr. Jessop is about to do so, and to go over the ground twice would be simply to waste the time of the Society. There is yet one other point on which I desire to add a few words. It has once fallen to my lot, after removing one ovary in the case of a young lady aged 19, to find that the other one was also in a state of incipient disease. This I removed at the same time, and thus perfectly unsexed my patient.

It is three years ago this month since the operation was performed, and I have watched the case ever since with the greatest anxiety. There has never been any attempt at menstruation, nor has any vicarious discharge ever taken the place of the natural one; but, beyond this, I see no change of any kind. The general health is now as perfect as it ever was, and, so far from any uncomfortable symptoms of masculinity having occurred, the voice remains as soft, the bust as full, and the whole aspect and demeanour are as perfectly feminine as in any other young lady of my acquaintance.

NOTES ON PURPURA AMONGST THE CHILDREN OF THE POORER CLASSES IN LIVERPOOL.*

By S. LEWIS, M.D.

THE subject which I intend to bring under your notice may perhaps appear at the first glance to be one of minor importance. Purpura simplex, being unattended as a rule by any apparent deviation from health, might appear as insignificant as the small spots which I am about to show. Such, however, is far from being always the case; and, further, we must acknowledge that the extravasations of blood into the texture of the skin seen in purpura are akin to the petechiæ and vibices in typhus—a fact on which I lay particular stress. I have collected ample material regarding purpura in Liverpool since the summer of 1872,† when I first became interested in the investigation, having examined upwards of nine hundred children; and some of the cases which I will bring under your special notice will prove beyond doubt that the subject is worthy of the earnest study of medical men, and of the serious attention of the friends of the poor. I think it right here to state that Dr. Whitehead of Manchester, in his *Third Report of the Clinical Hospital of Manchester for the Year* 1859, published by Churchill, communicates similar facts. He calls the spots "maculæ cachecticæ", and attributes them to interrupted cutaneous transpiration in consequence of uncleanliness. Dr. Whitehead says: "A maculated state of the skin is frequently met with in the children of this class of people, consisting of small circular spots of the size of face-freckles; not, however, occupying the face and hands as freckles do, but every other part of the body except the feet. They have a purple colour like the maculæ of typhus, not a pale yellow like freckles, and are unassociated with any form of disease saliently expressed; but they seem, nevertheless, to indicate a depraved habit of body."

I was not aware of this fact till a friend in Manchester called my attention to it on November 9th of last year. Dr. Whitehead and myself have seen the same thing, but we arrive at widely different conclusions as to its cause; still I acknowledge that to him belongs the merit of previous observation.

Purpura, as I have noticed it here in Liverpool, is widely spread, more than 60 per cent. of the children of our poor being affected. It appears in the form of minute spots, chiefly on the thorax, throat, and upper arm, and in some cases on the face. I have only rarely seen them on the scalp, abdomen, and legs; never on the feet. The colour on their first appearance is bright red; after some days, they become darker—brown or yellowish; and it is weeks or months before they disappear. In a few of the cases which were shown by me to Dr. Vose in 1872, the morbid process has been going on ever since. I will presently introduce some of the children to you, and, for the sake of brevity, will call them 1, 2, 3, and 4.

The *diagnosis* presents no difficulty. There are only three discolorations of parts of the skin at all similar. 1. Freckles or sunburns appear on the face, neck, arms, and hands, from exposure to the rays of the sun, and are about the same size, but differ in colour. 2. Pannus hepaticus in pregnancy, and obstruction of the large vessels of the abdomen, differ in colour, and generally become confluent. 3. Regarding flea-bites, you are aware that fleas have a predilection for parts of the body which are kept warm and covered; that they will not go to the face, the eyelids, or the hairy scalp; and you know that all writers on the subject agree in pointing out a diagnostic criterion that will admit of no doubt—namely, the dark point in the centre of the spot, where the proboscis of the insect has penetrated the skin. Again: flea-bites are larger and lighter in colour than purpura spots, and are further characterised by the fact that they disappear for the moment under firm pressure, while purpura spots remain unchanged when so treated. A flea-bite leaves no trace whatever beyond a few hours; and, when you consider the fact that the bite of a leech, which is many thousand times larger than that of a flea, leaves no discoloration beyond a day or two at the utmost, you will agree with me, I think, that the spots of purpura could not possibly be mistaken for the remains of flea-bites. In a flea-bite, the skin has been punctured, and the blood drawn off, so that no ecchymosis takes place; on the other hand, a discharge of blood beneath or into the texture of the skin will leave discoloration until absorption takes place.* I have gained a considerable knowledge of purpura, and I have also had some personal experience of flea-bites; and I think it is no more possible to mistake a flea-bite for a spot of purpura, than it is for any medical man to mistake a pustule of variola for a spot of morbilli. As, however, I do not wish you to take anything for granted, I have acted upon a suggestion which was made to me, and have marked a few flea-bites and a spot of purpura with nitrate of silver in the presence of Dr. Caldwell, in whose practice some of the cases of purpura occurred. On the morning after marking them, the flea-bites *had entirely disappeared*, whilst the purpura spot remained unchanged. I am going to show you these cases, and you can judge for yourselves.

The parents of children affected with purpura very rarely seek medical aid; and this I believe to be the reason why the affection has not been brought under the notice of the profession long ago. People of that class are not very observant as a rule, and are quite satisfied so long as the child goes about and eats, which most of the children continue to do, though suffering from the disease. Bleeding from the nose often occurs; and that is considered favourable, being supposed to relieve the head. Bleeding from the bowels may occur without their knowledge, as even young children are sent to the common privy in the yard, and the stools are not examined. The child is often languid, but that is ascribed to fatigue from play; and, even when I pointed to hundreds of spots on the body of the child, I have almost invariably received the answer, "That is nothing; they are flea-bites." Two cases, however, which came under my notice within the last few weeks, greatly alarmed the respective parents; and the first of them, I own, greatly alarmed me also.

The first case was as follows. In the forenoon of December 2nd, I was called to attend R. H., a boy twelve years old. I found the patient lying on a straw bed, covered with a dress; and the room presented the appearance of extreme poverty. The patient, who was covered with spots of purpura, had had bleeding from the left nostril, which the remedies known to the mother and landlady had failed to check. I plugged the nostril, and recommended acid drinks and the recumbent position. An hour afterwards, I was called again, and found that the child had removed the plug, and bleeding had returned. The patient was covered with a clammy perspiration, and felt sick; and, while I was there, he turned ghastly pale, and vomited about an ounce of coagulated blood. I again plugged the nostril, tied the child's hands, and gave him a quarter of a grain of ergotin. When I saw the patient two hours afterwards, there had been no return of hæmorrhage, and the pulse had improved. I gave one-eighth of a grain of ergotin in the evening, and the same dose next morning. On December 3rd, there was no bleeding, and everything was satisfactory. When I ordered abstinence from animal food for a day or two longer, the mother told me that she had not been able to give butcher's meat to the child for a long time. The ergotin was discontinued; and on the third day the child was in his previous state of health, but a number of fresh purpura spots had made their appearance.

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* Read before the Liverpool Medical Institution.

† Purpura proved fatal in Liverpool in 1872 in six cases. Five of the cases occurred in patients under fifteen years of age, and all occurred in districts largely inhabited by the poorer classes.

* In order to determine whether reddening of the skin is due to inflammation or to hæmorrhage, the pressure of the finger is sufficient. The redness caused by the hyperæmia or stasis *fades*, but returns when the pressure ceases; whilst that due to hæmorrhage remains *unchanged*. (*Skin-Diseases*, by Perman, translated by Pullar, art., "Purpura".) Again: "The eruption in the skin is known from other non-hæmorrhagic eruptions by its not disappearing or fading on pressure." *A System of Medicine*, by J. R. Reynolds, M.D., art. "Purpura", by Drs. Hillier and Tilbury Fox.

The second case is that previously mentioned as being under the care of Dr. Caldwell; and I am glad that I am able to produce the patient here to-night. W. B., three years old, the child of poor patients living in Blundell Street, and moderately healthy-looking, was found by its mother to be covered with very numerous spots of purpura on January 24th. At first, there was no other symptom of illness; but, diarrhœa coming on, and the stools being much mixed with blood, the patient was taken to the South Dispensary on January 26th, where appropriate remedies were administered. The diarrhœa had decreased on the second day; but bleeding from the bowel continued, and blood trickled from the anus when the child walked about. I saw the child on the 27th; and, hearing that there was an improvement, I recommended the same treatment to be continued. Finding, on the 29th, that blood was still discharged, I ordered one-eighth of a grain of ergotin three times a day. On January 31st, the child was seen by Dr. Caldwell and myself. There was no more bleeding, and the ergotin was discontinued. The little patient was improving under a more generous diet, but a few new spots of purpura had appeared. The father of this child earns, on an average, ten or fifteen shillings per week, out of which rent and cost of maintenance of a large family have to be defrayed.

These two cases I consider as indicative of what purpura might result in, if unattended to. Dr. Neligan, in his excellent article on Purpura, says that bleeding from the gums, particularly when excessive, is, in his experience, one of the gravest symptoms, even although there may be but little eruption on the integuments. He has rarely seen a case of purpura recover, in which it was present to any extent.

A third case, that of E. S., No. 4 of the patients I am going to introduce, who has had purpura since 1872, but no other illness, will prove that this morbid state of the blood has greatly interfered with the development of the body, and has stamped the child with a sickly look.

The *causes* of purpura are considered by writers on the subject to be unhealthy dwellings, want of cleanliness, and insufficient animal food. The two former, I believe, have little or nothing to do with it; and, after carefully sifting all the evidence, I have come to the conviction that want of animal food is the main cause. The accusation of being dirty is too often made broadcast against the poor; whereas we all know that, with the exception of cleaner hands and faces and clean collars, the children of a better class are often not superior as regards the cleanliness of their bodies. We would, therefore, expect to find purpura amongst the better class also, which is certainly not a common occurrence. Now and then we do find purpura in a person in better position; but it is always rare, and generally traceable to different causes. The pupils of one of the public schools I have examined—the Caledonian School in Oldham Street—can compare most favourably regarding cleanliness with the pupils of any college or institute in this town, only their clothes are of inferior quality; and here I found the same conditions—namely, that the poorest of the children, belonging to widows and to men of small and uncertain incomes, were affected. About one hundred and fifty of the pupils of another school have been regularly sent to the baths every week during the summer months, without any reduction in the number of purpura cases. The habitations of the poor can have nothing to do with the production of the disease, as I found, in the courts and alleys which I visited, all the children of one, two, or three families affected, while their next-door neighbours were entirely free. I have made myself acquainted with all the facts relating to the matter, and in particular with the circumstances of some of the parents, so that I have become able to predict purpura almost to a certainty in children whom I know to be suffering from want of nutritious food. My theory has been met by the objection, that large numbers of Irish children receive throughout the year no other cooked food than potatoes. Not having seen these children, of course I cannot tell; but I believe that the same causes will produce the same effects under the same climatic influences, and that these children will be found to be also suffering from purpura. As a striking illustration of the correctness of my view, I can point to the following telling fact. I have examined a great number of children at the Kirkdale Industrial School, and I have found there only one boy suffering from purpura; and this boy had only recently returned to the institution, after a prolonged absence. You know what care the Rev. M. Lester bestows on these children, and it is most gratifying to see such results following his efforts.

As to the *treatment* of purpura, I have little to say. If, as rarely happens, the case be one of plethora, the usual remedies for that condition may be employed. If the case be one of weakness, and the circumstances permit it, change of air, less exertion of mind, tonics, and, above all, a well regulated diet, with a liberal allowance of animal food—best given in the form of scraped raw meat—will be the proper means of treatment. In cases of hæmorrhages from purpura (as well as from other causes), I have chiefly recourse to ergotin, and have had ample cause to be well satisfied with its effects. Internally, I give ergotin dissolved in tincture of cinnamon, from one-eighth of a grain to young children to a grain or two grains to an adult. In this form it will keep, whilst the watery solution soon spoils. For external application, a solution of from one to two drachms in two ounces of water is extremely useful. When poor children are affected—and it is almost entirely a disease of the poor—all we can do is to give tonics, and be ready to combat complications when they arise. But we might do something more. We might draw the attention of benevolent people to the fact that a great number of young children become or remain debilitated from want of an article of food which nature has intended for them, but which is, at the present high prices, beyond the reach of their parents; we might point out that it is bad economy to give medicine when something to eat might have obviated the necessity for drugs. However, I am aware that the consideration of the social and political significance of the fact that numbers of our growing-up generation are underfed does not come within the scope of a medical paper; but, on the other hand, I consider it not only the privilege, but also the duty, of medical men to draw attention to it.

P.S.—Since this paper was read, a number of children affected with purpura have been seen conjointly with me by Drs. Glynn, Wallace, Bruce, Heath, and Warburton; and I tender them my best thanks for the trouble they have taken.

LEAVES FROM MY DIARY DURING THE ASHANTEE WAR.

By ALBERT A. GORE, M.D., Surgeon-Major.
Late Surgeon 34th (Cumberland) Regiment.

WHEN the idea of sending a small European force to the Gold Coast was at first talked of in the pleasant month of June 1873, humanitarians were aghast with horror. The most gloomy forebodings were almost universal. In the face of this, the professional advisers of the Secretary at War were, not only from their own great experience, but from the opinions expressed by officers of long service in Africa, in a position to state positively that, with certain hygienic precautions, such an expedition could be undertaken with every prospect of success. The Government of the day put no limit to the nature of the measures to be adopted for the preservation of the health of those about to engage in penetrating for the first time under such conditions—a primeval forest devoid of all local supplies, intersected by numerous streams and rivulets, abounding in marshy levels and hollows, and impregnated with the poison of malaria. A certain amount of sickness and mortality was of course inevitable. War always demands some victims to the hardships incidental to its progress; but our latest telegrams from the Gold Coast show that this sickness and mortality are not of a nature to cause alarm, and that they have been kept within the limits that scientific teaching and practical experience had already indicated. Our troops have marched more than one hundred miles through a dense bush, fighting for five days with desperate valour against a surrounding horde of howling enemies; and the medical and engineering departments of the army may well be proud of rendering such an attempt even possible. Landing on the 1st of January of the present year, the last of our brave fellow-countrymen left the shores of Africa on the 23rd ultimo, to be met on their return with all that honour they have so deservedly won. It may not, then, be uninteresting to trace back how this happy event has been consummated, as this expedition will in many respects remain a typical one, as pointing out how malarial regions may be invaded with any prospect of success.

Cape Coast Castle, the base of the recent operations against the Ashantee power, was transferred to England by the treaty of Breda in 1672. During these 202 years, the country or people have made very little, if any, progress; and the question must soon be decided, as to what will be the future of the Gold Coast. The first attempt to hold this seaboard with an European garrison was not a fortunate one. The Royal African Corps—raised in London from the dregs of the populace, and recruited from men who were about to undergo terms of imprisonment or receive the punishment of the lash for their offences, described as consisting of the "greatest rascals under the sun, the offscourings of the army, drunk day and night, sleeping in the dews, and drinking new rum or old palm wine, or anything they could lay their hands on"—lost no fewer than 1298 non-commissioned officers and men out of 1658, who had been sent out between the years 1822-30, from the effect of climatic causes; 387 were invalided, 17 dying on the passage home, and 157, on arrival, were found incapable of further service. Of 180 qualified for garrison duty, only 33 were ultimately fit for active duty in the ranks—a sad and melancholy history of disease and death.

In 1827, in consequence of the expenses accruing from the war carried on by Sir Charles Macarthy, the forts were given up to the merchants as factories, £4000 *per annum* being allowed for their repair; a force of one hundred men raised by the then Governor Maclean constituted the garrison. In 1844, the Crown again resumed possession; and in 1851 the Gold Coast Corps was raised. It originally consisted of 200 men and 17 officers; 120 of whom were stationed at Cape Coast Castle, a similar number at Accra, and the rest at various out-stations. Recruited from Fantees redeemed from servitude, who were granted 7d. a day as pay, it was kept up for a total cost of £20,000 *per annum*. The men were generally healthy, but the officers and European non-commissioned officers suffered much from the effect of climate at times. The regiment mutinied on October 23rd, 1862, and was shortly afterwards disbanded, two of the ringleaders being shot, and others of the most guilty being sentenced to various terms of imprisonment. A detachment of the 2nd West India Regiment succeeded them.

In the following year, 1863, commenced another Ashantee war, one in which, however, we never met the enemy. The force of native regiments on the Coast was largely increased, 51 officers and 1402 men having arrived in the shape of reinforcements between March 6th and April 9th, exclusive of officers and men of the Naval Brigade landed for the protection of the forts. Marching from Cape Coast on December 30th, 1863, the field-force arrived at Prahsu between the 26th and 30th January, 1864, in good health and spirits, having remained for a short time at Mansu on the way. In three weeks the rains set in, causing the whole camp to become a vast swamp; and fever, dysentery, and diarrhœa soon made sad ravages among the men and officers. The days were excessively hot, the nights damp and chilly, and the food indifferent, consisting principally of salt provisions. By the beginning of June, half the force was on the sick list, although previously relieved by fresh detachments from the new arrivals from the West Indies. Towards the end of the month, the expedition was abandoned, the officers and men withdrawn to Cape Coast; in August, the detachments of the 1st and 2nd West India Regiments embarking for Jamaica and Barbadoes, their respective head-quarters. The result of these operations was an increase of the ratio per thousand *per annum* of the mortality from 31.89 to 93.79, and an actual increase in sickness per thousand *per annum* as below.

Paroxysmal Fevers	735.8
Dysentery and Diarrhœa	326.4
Sore-Throat and Influenza	7.3
Rheumatism	36.7
Respiratory Affections	123.0

In consequence of these unfortunate results and constantly recurring expenses from wars in Africa, a Committee of the House of Commons came to a resolution deprecating "the needless employment of English officers and military as such on shore, as costly to the country, not only by actual mortality, but by the number invalided in body and mind, and rendered unfit for active service". This resolution largely influenced the subsequent military history of the Coast. The force of regular troops was gradually reduced to four companies, two of which were stationed at Sierra Leone and two on the Gold Coast. The military were withdrawn from the Gambia, Kulama, Accra, Therborough, and Lagos—an armed police replacing the northern garrisons; a Houssa force, originally raised from the Mahomedan tribes in the vicinity of Lagos, those withdrawn from the latter station and the Gold Coast, men loosely disciplined, simply clad and fed (each Houssa obtaining 1s. a day and 3d. to find his own subsistence), being substituted. A small number of Fantee police were also raised, clothed, and armed, bringing up the strength of the Leeward garrisons to fully what it had been in the time of the old Gold Coast Corps, who occupied the forts from 1851 to 1862, eleven years. The men of these irregular levies were rarely in hospital, preferring their own country medicines (a priest or medicine-man accompanying each detachment of Houssas) to those supplied by the colony. They were mostly married. From these and the other causes enumerated before, they were uncostly and effective; the more so, as between them and the Fantees there was little love lost—rather an advantage than otherwise, where one native tribe is required to keep another in order. These Houssa troops, although perhaps not equal to perform all that their admirers had thought they would do, yet did good service during the first phase and subsequent operations of the late war, being, with the men of the 2nd West India Regiment, the only disciplined troops to sustain the courage of our cowardly allies, who, but for them, would have frequently left their officers in the lurch. That they have pluck and more endurance than the Fantee and other allied tribes, is shown by their accompanying Captain Glover through a hostile country fourteen miles north-east of Coomassie, thus effecting a powerful diversion in the rear of the Ashantee army, then engaged with Sir Garnet Wolseley's forces southward of the goal of the expedition. Men who, under such circumstances, remain with their officers, can always be depended upon. In this instance, a small force of Yurubas accompanied, and were incorporated with, the Houssas. As a rule, Mahomedan tribes are warlike, simple in their habits, and, as having some definite ideas of a Supreme Being, more to be respected than those debased wretches who, upon being asked what they think will become of them when they cease to breathe, give a grinning reply, "Me know no". Such men can never make good soldiers, for they lack the first attributes of brave men—that sense of honour, *esprit de corps*, and simplicity, which, combined, drive out all personal considerations in the general sense of duty to one's corps, profession, or country. Such ideas never entered the minds of our Fantee allies, who were as debased and cruel, when they had the opportunity, as they were pusillanimous. Their hereditary enemies, although equally cruel to their unfortunate fellow-beings, the Donkos and prisoners, had one advantage over the more debased tribes of the Coast—courage, and a personal devotion to their country and sovereign. Their refusal to give up at the last, when beaten and humbled, hostages sacred in their eyes, shows a superior people in certain respects, which their architecture, native manufacture, sanitary precautions in war, sense of dignity in certain classes, love of colour and splendour, and debate in grand councils, also prove. It is much to be regretted that hitherto all efforts to civilise and Christianise this peculiar people have been futile. The Wesleyan Mission has been established for years in Coomassie; but, beyond impressing the inhabitants with a sense of respect for the white men, appears to have been unable to make any permanent impression, or mitigate in any way their savage customs. All native soldiers seem to differ from our countrymen in that coolness in danger which gives to the acts of the more northern and cold-blooded Caucasian race a precision and certainty which can be relied upon. A disciplined English soldier will take a quiet "pot" in the midst of the excitement of an action, when at the same time his black *confrère* will waste his ammunition in a wild and reckless manner—a characteristic, unfortunately, of our Houssas and West Indian troops. It is only with the greatest difficulty that this can be prevented, the bugle sounding the "cease firing" for at least half-a-dozen times before it is attended to. As an example, I may mention the action at Dunquah, where eighty men of the 2nd West India Regiment expended 6,000 rounds of Snider ammunition in about two hours. There is another peculiarity also observed among some native soldiers—the difficulty of getting them to make a dash at the proper moment. Whether it is that they at the moment believe it impossible to advance further, or are afraid to do so, is difficult to say, but certain it is that such instances are not unfrequent. As a recent example, may be taken the case of the Houssas at Requah, where, until the Naval Brigade dashed through them, they could not be moved. Another peculiarity of these people is, that they form attachments to certain officers, only giving others a sulky obedience. By humouring such curious traits, men who would be otherwise useless may be made excellent servants of the crown.

We have here, then, examples of the two great African families: the noble race originally north African, and showing constant signs of increase—Negroid, semi-Semitic, Mulattoes, and Asiatic Ethiopian, closely allied to the Abyssinian, Gallas, Nubians, Mandingoes, Foulahs, etc.; and the second, or ignoble race, or pure breed of the aboriginal and typical African, exceptionally degraded in Guinea, with low cast, prognathous face, retreating forehead, more scalp than face, calfless, lack-heeled, with broad flat feet, rank smell, crisp curling hair, and weak intellect, indicating a defective *morale* and destructive power—a race gradually giving place to the growth of El Islam, which for seven centuries has been slowly progressing from the Great Sahara southwards. It has been our fortune in this war, curiously enough, to fight on the side of the least noble of the more degraded race—a people who seem to lead a mere sensual existence, but a simple life. Upon a food almost entirely vegetable, they can support great fatigue and travel very long distances, supporting at the same time very considerable loads. Greatness is with them so mixed up with the idea of physical power, that, without the latter, any appeal to their higher feelings of humanity and honour is useless. Deprive their so-called kings of their privilege of cutting off the heads of their subjects, and they are no longer respected. They still acknowledge a kind of nominal sovereignty, feudal in character, but entirely different from that yielded by their neighbours, the Ashantees, to their king. It is more than probable that the latter people will, now that the kingly power is broken, become not very dissimilar. Small communes, jealous of each other, and constantly at war upon the most trivial pretexts, the tribes of the Gold Coast only repeat our own earlier history, when the half-naked Anglo-Saxon fought against the more disciplined and trained Roman, or, later still, the Celt ineffectually against his Anglo-Norman conquerors. We read of the same barbarous reprisals and mutilation of the dead and wounded, the latter being only preserved in the prospect of a ransom. In other words, recent African wars are only those of our own more savage periods repeated. Those who have studied the histories of the Middle Ages must be struck with the similarity of the savage customs. The long knife of the Welsh was in no way dissimilar from that of the Ashantee, or the headless trunks which in those early days were no uncommon accompaniment of war. Three hundred years since, the fear of the block in England was as potent to charm to obedience as is to-day a similar threat from the envoy of an African monarch. It may be said that the mention of these peculiar ethnological and other characteristics of the Fantee tribes is of no practical interest. It is a mistake to think so; for, until we learn and study thoroughly the habits and customs of a people, we cannot attempt to govern them with advantage, or train them into those habits of obedience so necessary to a healthy existence of their body politic. Until the great doctrines of Christianity diffuse their gentle teachings among these savage peoples, and education stirs up their better and dormant energies for good, we must hold them under subjection by the sense of our superior power and hopelessness of any attempts against it. This has been impressed upon them by the result of the late war. It behoves those in power to see that the lesson is not lost by the exhibition of subsequent weakness. Being the more lasting, such a policy is in the end the most economical and humane.

Curiously enough, we owe to the mutiny of the Gold Coast Corps in 1862 the first inklings of the fact that Europeans might for a short time, and under proper precautions, remain healthy on the shores of the Gold Coast. On that occasion, an officer and twenty-one men of the Royal Marines were landed for the purpose of garrisoning the ancient fortress whose guns frown upon and command the filthy town which surrounds it. Confined to the precincts of the castle between the hours of 9 A.M. and 4 P.M., and carefully looked after, they only lost one man from the result of an accident. The next attempt at landing a portion of this corps was, unfortunately, not so happy; for, of one hundred and ten men and officers who arrived in the *Barracouta* in June 1863, eighty-one were invalided by the following August to England.

From the foregoing brief preliminary remarks, it will be seen that in the climate, races, topography, and health-statistics of Western Africa, there are many professional points of interest. Several of these have been alluded to by the Special Correspondent of the JOURNAL during the continuance of the war. It may be, therefore, not uninteresting to touch upon some others hitherto not alluded to.

[*To be continued.*]

DR. HUGHES BENNETT'S STRICTURES ON THE "TUBERCLE" AND "PYÆMIA" DISCUSSIONS.

By LIONEL S. BEALE, M.B., F.R.S.

"IN truth, in this, as in many other discussions which take place in medical societies, accurate definitions and logical precision of language have been too frequently forgotten." Such are the words in which Dr. Bennett criticises our discussions last year on the subject of tubercle. He speaks of the speakers having "bewildered one another" and "puzzled themselves", but tells us that he thinks the confusion which prevailed upon the subject of pyæmia "may be dissipated".

Dr. Bennett tells us there is a "true pyæmia or suppuration of the blood"; and that, in a case of "hypertrophied spleen and liver", the blood was crowded with "pus-cells". As "pus existed in the blood", the case, he declares, was one of "suppuration of that fluid without inflammation". It is now, Dr. Bennett affirms, "*recognised that pus-cells, lymph-cells, young mucus and epithelial cells, and the colourless cells of the blood, are identical.*"

I know not what other pathologists may think of Dr. Bennett's effort to dissipate the confusion which exists; but I cannot allow his paper to pass without expressing my dissent from every one of the above propositions. Dr. Bennett uses the word "pus-cell", as it seems to me, most improperly. He has not proved that the bodies he calls pus-cells are of that nature. But to assert that pus-cells and young mucus and epithelial cells are *identical*, is certainly open to grave objection. That they are like one another to look at, that they may exhibit similar reactions when tested, that they may be alike in chemical composition, may be true; but surely things may be like one another in many particulars without being *identical*. Although the bodies referred to by Dr. Bennett are alike in many points, no two are alike in all, and each has properties peculiar to it; each has a very different life-history, and performs a different office. They may be called by the same name, but differences cannot be dissipated in that way. As Dr. Bennett says, they have been *called* leucocytes or "white cells"; but they are not *cells*, nor are they *white*.

Dr. Bennett is surely as much open to the charge of forgetting "accurate definitions and logical precision of language" as any of those who joined in the discussion of tubercle last year. Dr. Bennett would introduce terrible confusion by calling leucocythæmia "suppuration of the blood". For my part, I cannot imagine any phrase open to more serious objections than this; and, whatever may be the fate of *pyæmia*, I do hope neither the Pathological Society of London nor any other society will consider *pyæmia, suppuration of the blood, and leucocythæmia* identical.

SO-CALLED ICHTHYOSIS LINGUÆ, AND ITS RELATION TO ICHTHYOSIS.

By TILBURY FOX, M.D., F.R.C.P.,
Physician to the Department for Skin-Diseases in University College Hospital.

I AM anxious to be permitted to offer a few remarks upon the subject of so-called "ichthyosis linguæ", which has been under discussion in the JOURNAL; and the more so, as I was unable to be present at the meeting of the Royal Medical and Chirurgical Society at which Mr. Fairlie Clarke's communication upon the topic was read and discussed.

I do not accept the definition of ichthyosis of the skin which Mr. Hulke, Mr. Morris, and indeed all the speakers, with one exception (Mr. Nayler), at the recent meeting of the Royal Medical and Chirurgical Society, approved—a definition which recognises ichthyosis of the skin as consisting in hypertrophy of its epithelium and papillæ, and perhaps subepithelial fibrous tissue, solely. Ichthyosis of the skin is much more than this; it is a congenital defect of nutrition, involving not only such organic change, but also—as an essential element of its composition—serious disturbance of the important functions of perspiration and sebaceous secretion. The skin is not only scaly, and its papillæ more or less hypertrophied, but it is harsh and dry; it rarely perspires; or, if it do so, it does so in the most scant and occasional manner. The lack of proper sebaceous secretion accounts in part for its harshness, and its inability to resist the action of external irritants like the healthy skin; whilst the altered character of the secretion explains in part the "caking" upon the surface, which is more marked in some cases, and in some places in the same subject, than in others. If such be the case, "ichthyosis" of the tongue *is an impossible condition*, since it entirely lacks any similarity in its parts to those functional derangements of the skin which are essential elements in ichthyosis of the skin. In a word, as a dermatologist, I decline to accept the limited definition which has been given of ichthyosis of the skin, such, for example, as that given in the very excellent paper of Mr. Morris on so-called ichthyosis of the tongue (BRITISH MEDICAL JOURNAL, Feb. 21), and which runs as follows. "True ichthyosis is primarily and fundamentally a deviation from the natural state of the epithelial structure of the skin, although in severe cases it may be associated with a hypertrophy of the epithelial sheaths of the papillæ, and in still more severe cases with an hypertrophy of the cutis vera." This definition might apply roughly to warts, corns, psoriasis, but, as I have explained, not to ichthyosis.

In the early stage and in the less severe forms of ichthyosis—viz., in what is called xeroderma—the papillary hypertrophy is by no means well marked; and the analogy, *quoad* naked-eye appearances, between so-called "ichthyosis linguæ" and ichthyosis (of the skin), is even here not striking at all. Viewed solely from a morbid anatomy point of view, no doubt there is resemblance between ichthyosis of the skin and so called ichthyosis of the tongue; but, clinically and etiologically, these two conditions are to me totally different.

Mr. Morris remarks, "that the objection (in relation to the similarity under notice), that ichthyosis of the skin is a congenital malformation, is not a strong one;" and he adds, "though often congenital, it often does not attain its greatest development till towards puberty, and it is stated on authority to appear occasionally late in life." But, under such circumstances, there are well marked evidences of the ichthyotic condition present, in the dry, harsh, more or less ill-nourished, non-perspiring skin, which exists in most cases, if not all, from the earliest date, and is generally recognised by the friends of the patient.

But I may be expected to state more definitely what my views are in regard to the nature of this so-called ichthyosis of the tongue. In Mr. Morris's first paper, the remark is made that, on section of a portion of the diseased mass, "the papillæ appeared to be no more than re-arrangements of the epithelial cells proper to the part, with definite fusiform shapes, which then became welded and fused together, and so came to have somewhat of a horny texture; in truth, they would appear to have a similar relationship to the tongue as have horny growths of the skin." It is, indeed, a relationship of the kind here indicated (to warty growths) that I recognise in regard to so-called "ichthyosis linguæ". The latter, no one, I suppose, now doubts, is an early stage of epithelioma; and it seems to me to bear the same sort of relation to epithelioma as do the little warty growths which are frequently followed by, or develope into, rodent ulcer of the face. At all events, the term "ichthyosis linguæ" ought to be discarded at once, and some such substitute as tylosis, as suggested by Mr. Fairlie Clarke, or keratosis linguæ, substituted for it.

OBSTETRIC MEMORANDA.

TREATMENT OF *POST PARTUM* HÆMORRHAGE.

XIII.

I HAVE had eighteen years' extensive midwifery practice, during which time I have attended about four thousand cases—yet *I never lost one* from *post partum* hæmorrhage; never had occasion to introduce ice into the vagina, nor to inject cold water. I remember only one case in which I was compelled to introduce my hand into the uterus to check hæmorrhage. The means I have employed are the usual ones already referred to by other correspondents, with two trifling additions. 1. After the birth and separation of the child, I grasp the fundus uteri, turn the patient on her back, and, with the first pain, generally succeed in expelling the placenta, and thus completing the labour in from five to ten minutes' time. Then I make the patient comfortable, remove all wet clothes, and put on a tight calico binder next the skin. 2. If hæmorrhage occur, and remain unchecked by the usual means, I flex the leg (nearest the edge of the bed) on the thigh, get the bed-clothes slightly raised, and fan the patient freely with cold air. She feels the air colder than the water, for obvious reasons, and the hæmorrhage is soon checked.

Like Mr. Kettle, I find the binder most useful in multiparous cases, and have to thank my friend Dr. Speer for the hint; and I also think Dr. Dabbs's remark about putting the child to the breast worth remembering.

D. M. WILLIAMS, L.K.Q.C.P.I., M.R.C.S.L., Liverpool.

XIV.

In a recent number of the JOURNAL, Mr. M. Foster, after narrating a happy experience of the use of laudanum in *post partum* hæmorrhage, notices—what has much astonished me also—the absence of any reference to this use of it, and inquires, "Am I singular in this treatment?" I have a distinct recollection of seeing it once employed by an excellent accoucheur, in my student days. But I had nearly lost sight of it, when, in India, my attention was again powerfully called to the subject by a reviewer in the *Lancet* of January 20th, 1866, who, after taking to task the writer of a pamphlet on *post partum* hæmorrhage, for his scant notice of laudanum, quotes these words from the medical and physiological problems of Messrs. Griffin:—"When, after severe uterine hæmorrhage, the countenance is sunk, the eye hollow and glassy, the lips blanched, the skin cold, and the whole person corpse-like; when the pulse is almost gone at the wrist; when the beat even of the heart is scarcely perceptible, and stimulants, even brandy or rectified spirits, are either vomited or uninfluential, there remains yet one remedy capable of restoring the patient to life, and that is opium". As if on purpose to test the truth of the above, I was hastily summoned a month afterwards, about 10 A.M., to the aid of a medical officer, who wrote me that, since 5 A.M., he had on hand the worst case of flooding he had ever seen in his thirty years' experience. He also stated that another medical gentleman had been present for two hours, and that he feared his patient was slipping through their fingers. The lady, the wife of an officer, and of a very stout habit, was blanched, speechless, and with scarcely a pulse at the wrist. After delivery, a large quantity of blood had been suddenly lost, and there had since been a steady trickling, which nothing could arrest. All the usual means—uterine support, repressure, stimulants, ice externally and to vagina, etc., had been employed in vain. I at once examined and removed a small fibrinous clot, and passed a bit of ice into the uterus, and this checked the oozing for a considerable time. When it returned, I proposed giving immediately a teaspoonful of laudanum; but this excited such fear of uterine relaxation in the minds of the two medical attendants that it was only after great urging on my part that half this quantity was given. This was so soon followed by such visible improvement, that I had less difficulty in getting the full dose made up by instalments, and, steadily, the patient came round in such a way that, in an hour, she seemed out of danger, when, again, slight oozing took place. At my suggestion, the child was put to the breast, but refused it. On thinking of a substitute, the idea of trying a young puppy (nearly always within reach in India) crossed my mind, and one was soon procured, and it fastened on with such vigour as soon to cause sharp uterine pains, which speedily put an end to any recurrence of uterine relaxation. The patient, as soon as she could speak, said the medicine had no sooner gone down her throat than she had the delicious feeling of life returning with each moment. The action of the opium went no farther than giving quiet repose, and the patient made a good recovery. My two seniors agreed that the patient owed her life mainly to the laudanum.

In such a case as the above (speaking of the time when I first saw it), two things have to be done: the leaking vessels must be closed, and the patient's system has to be roused by sending, if we can, blood to the anæmic brain. Iron-injection can do the former directly, while, in the case related, everything had failed to do the latter, except laudanum, which also, for a time at least, contributed to the other result, by exciting the nervous system, and thereby the uterus, to action. In this way, without making one valuable remedy supplant another, we assign to each its proper place. It is not difficult to imagine a case where the practitioner, while busy about arresting a slight oozing, and when he has, perhaps, succeeded in doing so, suddenly finds his patient, who is already at the lowest ebb from past loss and shock, tossing about, and ready to expire just as he flatters himself he is making all secure. When, then, the time has come for using such means as iron-injection or transfusion, it would be well at once to administer this potent restorative, which may sometimes render unnecessary either of these last resources, and, in any case, would be a great helper to the one or the other. Where opium would not be likely to be borne, it occurs to me that a large dose of quinine would be worthy of a trial; as, besides its powerfully tonic action, there has been recently a good deal of evidence shown as to its efficacy in causing uterine contraction.

W. FARQUHAR, M.D., Surgeon-Major, Madras Army.

XV.

The truly lamentable case of *post partum* hæmorrhage referred to by Mr. Godrich in the JOURNAL of March 4th, brings out forcibly a fact I have long noticed, viz., that ergot given injudiciously may cause *post partum* hæmorrhage. Mr. Godrich says, "The pains becoming regular and severe, her medical attendant was sent for". "About midnight, the os being fully dilated, the pains strong and frequent, but the head making no progress, a dose of ergot was given. Now, I venture to assert that ergot was altogether contraindicated in this case, and that, had the forceps been used instead, there would probably have been no hæmorrhage at all. In this case, there was evidently some disproportion between the size of the child's head and the maternal passage, but there was no want of uterine effort; "the pains were strong, frequent, and severe"; hence the administration of ergot was simply putting an extra strain upon the already overtaxed uterus.

I have more than once seen fearful flooding follow this unwarrantable use of ergot, and am led to conclude that the "violent and incessant pains" which it causes injure the uterine fibres, more especially at the site of the placenta. The placenta is frequently more or less detached before the expulsion of the child, which accounts for the "pumping out of an immense quantity of blood". In the case referred to by Mr. Godrich, not only the mother, but, in my opinion, the child, suffered from the effects of the ergot; the great pressure arising from the "incessant and violent pains" accounting for its asphyxiated condition. With regard to the India-rubber dilator recommended by Mr. Godrich, I should never feel justified in distending a bleeding uterus. He also places much emphasis upon cold administered in this way. Why not apply cold water, or, better, cold vinegar and water, by means of a uterine syringe, in a continuous stream, to the womb itself? The way in which I have, for some years, acted in cases of flooding is as follows. I grasp the uterus with the right hand, and empty it of all clots with the left. Hæmorrhage continuing, I introduce the uterine pipe to the fundus, and inject cold water. This failing, I add liquor ferri perchloridi; and hitherto I have never lost a case.

H. ERNEST TRESTRAIL, F.R.C.S., Aldershot.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

Friday, March 13th, 1874.

Prescott Hewett, F.R.C.S., President, in the Chair.

General Paralysis, supposed to be of Syphilitic Origin.—Dr. Buzzard showed a patient, aged 46, who had recovered from an attack of general paralysis supposed to be of syphilitic origin. The man had been brought to the National Hospital for Paralysis on January 8th, 1873, with paralysis of both facial nerves, of all four extremities, and incomplete paralysis of respiration, deglutition, and of the right sixth nerves, together with general cutaneous anæsthesia. His condition was so grave, that he was at once admitted. He could not lie down, and could only take fluid nourishment by spoonfuls. His attack had commenced one month previously with numbness in the finger-ends, and weakness of the legs and arms, which progressed so rapidly that in three days he could not leave his chair. One week after the onset, his speech became thick, and he felt a sense of constriction around the waist. After another week, his powers of deglutition and breathing were involved. He continued to become more and more feeble, so that when admitted he could not move his legs, and had the slightest power only of using the muscles of his thighs and arms. He was permanently lame in the right leg, from an attack of infantile paralysis in childhood. His health previous to the attack had been uniformly good. There had been no injury, nor diphtheria, nor exposure to cold; and the attack was unaccompanied by fever, pains, or muscular contractions. His pulse on admission was 76, and his temperature 99 deg. He had suffered from a chancre and bubo fourteen years previously, which were not followed by sore-throat or skin-eruption. On admission, he was placed on a water-bed; beef-tea, eggs, and wine, were ordered; and ten-grain doses of iodide of potassium given three times a day. Within twenty-four hours, he had improved; and in a week he could lie down, could close the right eyelid to some extent, and could swallow solid food. The muscles of the legs, in which contractility to faradism had been abolished, now responded slightly to the induced current. In four days more, the right eye could be completely closed, his breathing was no longer difficult, and his limbs were regaining power. At the end of January, he could close both eyes; and in a few weeks more, all the facial muscles had recovered. Towards the end of March, he could stand with assistance; and on May 6th he could walk with some help. On May 21st, four months and a half after admission, he was discharged, and a week or two afterwards resumed his employment, which he has since regularly carried on. At the present time, he shows no traces of his attack. His treatment consisted of iodide of potassium in gradually increasing doses, amounting at last to sixty grains three times daily; and this was followed by subcutaneous injections of the chloro-albuminate of mercury for two months (for the formula, see *Lyon Méd.*, June 1872). Dr. Buzzard was of opinion that the attack was due to syphilitic thickening of the dura mater about the basilar process and upper part of the spinal column, causing pressure upon the pons Varolii and spinal cord.—Mr. Spencer Wells inquired why the mercury was administered subcutaneously.—Mr. R. B. Carter desired to know why the case was diagnosed as syphilitic; whether from the effect of the iodide of potassium, or from any other circumstance.—Dr. Buzzard had long been anxious to find some solution of mercury which, being injected, was not followed by abscess, and had read that the solution used in the above case was such an one. No abscess had followed its use on several occasions with this patient, nor in many other cases in which he (Dr. Buzzard) had used it. The diagnosis was founded partly on the almost magical effect of the iodide, and partly upon the fact that there was no other antecedent cause to explain the attack. The symptoms apparently depended upon compression, either from a tumour or thickening; and a thickening or tumour which was readily removed was, generally speaking, of a syphilitic character. He had seen many cases of the kind.—Mr. Wells explained that his question had not been answered. Why give the mercury subcutaneously?—Dr. Buzzard thought hypodermic injection preferable to the bath or inunction.—Dr. Moxon wished to know if there were any objection to the swallowing of the remedy.—Dr. Buzzard was glad to find the opinion of the members so favourable to the ordinary methods of administering mercury. His own experience led him to prefer the plan of subcutaneous injection.

PYÆMIA IN PRIVATE PRACTICE.

The discussion on the President's paper, on Pyæmia occurring in Private Practice, was resumed and concluded.

Mr. Spencer Wells: The difficulty that I have in entering upon this discussion, arises from the extreme amount of material that is thrown before us in your paper, and in the various debates which have been held upon it. I have been looking them through, in the very admirable reports that have been given in the medical journals, and it seems to me there are so many points for discussion, that the difficulty is in selecting any one of them which one could bring before the Society in any reasonable time. If, however, I confine myself to the concluding sentence of your paper, in which you ask the Society to investigate the causes of pyæmia (and I suppose, by that, you would mean causes of pyæmia in private practice particularly), the subject will be narrowed, and one may, in the few minutes at one's disposal, endeavour to throw a little light upon it. If we look upon pyæmia in the same light, the causes of the disease must be pretty much the same either in hospital or in private practice; and the only question would be, in which the disease is the most frequent. There is just one question, which I hope you will answer when you come to reply, namely, the sort of proportion that the twenty-one cases in your paper bear to the number of cases which have occurred in your hospital practice during that time. It seems to me, indeed, that the number of cases is very considerable, even during the twenty or thirty years of your practice over which they have run; and the information I should like to obtain is, whether, during that time, in St. George's Hospital, there has not been a very much larger proportion of cases of pyæmia. So far as my own experience goes, looking back to the very commencement of my professional life, I should say that it is only in crowded hospitals that I have ever seen the disease. In St. Thomas's Hospital, during my student days, we had hardly began to recognise it. Erysipelas was very rife, but I really saw nothing of pyæmia until years afterwards, at Palermo, when the hospitals there were crowded after the bombardment; and again in Paris, in 1848, when I was sent by the Medical Department of the Navy to report upon gunshot-wounds. There one saw the disease every day in the crowded hospitals, where the wards were filled with surgeons and soldiers, who had been wounded at the barricades during the fight under Cavaignac. Previously to that—from 1841 to 1848—I had been in a very large naval hospital in Malta. The number of patients was considerable, but we had enormous wards. They were like churches; and, although there were some forty or fifty patients in each ward, the breathing space was so ample, that I do not believe there was a single case of pyæmia during the whole of the six years that I served there. I cannot recall a single case. I have seen cases of erysipelas come in from ships; but, with care in isolating those patients, the erysipelas did not spread. When I went to Paris in 1848, and visited the crowded hospitals, I saw the disease every day. I come to London, and see no pyæmia at all. Then I go to the Crimea, and the very first thing I meet with in the hospitals at Smyrna is pyæmia. The wards were crowded; patients were there with frost-bites, and a few with gunshot-wounds; and on the least disturbance of any of the sloughing tissues about their feet or hands, pyæmia came on, and all the patients died, just as they die here in London, in some of the hospitals that are crowded, and are placed under conditions that might be improved. Then, sir, returning from these two spheres, where pyæmia was observed, I practised in London, a good deal in private, I may say, and partly in a small hospital; and in these two situations I performed a very large number of operations, in which the patient is supposed to be extremely susceptible of any poisonous influence. Various speakers in this discussion have pointed to ovariotomy as an operation which cannot be performed in hospital wards with an ordinary chance of success, or as an operation which is much more likely to be followed by some poisoning influence upon the patient than almost any other operation in surgery. I have now performed more than 600 of these operations, and a great many other cases in which the abdominal cavity has been opened, and a certain number of other operations during the last fifteen years; but neither in private practice, nor in the hospital, have I seen one fatal case of pyæmia. Saying that, I must just explain, for a moment, what I mean by pyæmia. I mean the disease which we know by recurrent chills, by high temperature, by profuse sweatings, followed by deposits of pus in some joint, or in cellular tissue, or in some internal organ. Taking that as what I mean by pyæmia, and what, I fancy, is pretty generally meant by it, I have never seen one fatal case, either in the hospital or in my private practice; while the only cases that I could call pyæmia, that I have seen, have been slight cases of feverishness following operations, with swelling of some joint, called rheumatism, with some little hurry of breathing, probably accounted for by some pneumonia, or some pleurisy, or with some little jaundice, accounted for possibly by some congestion of liver, but the patients getting well. With the exception of these slight cases, I may say that pyæmia has been to me quite unknown, both in the hospital and in private. What I have known other people call pyæmia is a condition which I should call septicæmia—a condition in which, a cyst being emptied of its contents, and air admitted, the contents left in the cyst, or contents which have formed afterwards, have putrefied, and then the patient has been poisoned by this decomposing fluid. That condition I have frequently seen, ending sometimes in death and sometimes in recovery; generally ending in recovery, if the cyst containing the putrefying fluid were removed early enough; frequently ending in death, if it were only drained, or if it were imperfectly drained, or simply washed out, by a continuous injection of some antiseptic—iodine or carbolic acid. Under any of these modes of treatment, death has generally followed, but there has been no secondary deposit of pus, no pus in joints, no pus in internal organs; therefore, I do not believe that the disease could correctly be called pyæmia at all. But I think we might safely say, any mode of preventive treatment, or any kind of condition which could prevent a patient from suffering from septicæmia, might also fairly be looked upon as likely to protect him from pyæmia; and all the difference that I can see between the probable causes of septicæmia or pyæmia, in hospital practice, or in private practice, is the greater liability of the patient, in hospital practice, to contagion. It seems to me you have very much the same conditions to guard against, and the patient is very much under the same conditions, whether he be in a small room with one or two people—a patient, for instance, in a small room, in a lodging-house in London, with a nurse and some one of his relatives—three people together, in a small room, with imperfect ventilation—or whether he be in a ward of a hospital, where there are twenty or thirty patients all crowded together, with a certain number of nurses; with this exception, that in the one case you have a contagious influence bearing upon your patient, and in the other you have not. It seems to me that your private patient is guarded more or less from contagion, to which the hospital patient is subject. Thereupon the question of prevention bears mainly upon the question of contagion or infection, or its absence: that you must, when you are searching for the causes of pyæmia, and endeavouring to avoid them, in the first place, put aside everything that is likely to expose the patient to the inoculation of the poison, or its reception through the breathing organs, and then you have to look to all the conditions about the patient which would render him liable to receive the poison. If he be breathing pure air, I suppose his blood is likely to be in a much better state, and he is much more likely to throw off any injurious influence to which he is exposed, than a patient who has been depressed by bad air, or by imperfect clothing, exposure to cold, insufficient or bad food or drink, or any other cause which may put a patient into a state of health in which he is less likely to throw off any poison, or the effects of any injurious influence, to which he may be subjected. The point which Mr. Callender raised, and which, I think, is of very great interest in this matter, particularly with regard to the causes and the prevention of pyæmia, is that, by very great care in the treatment of wounds, by maintaining the wound in a state of perfect rest, by maintaining the most scrupulous cleanliness, by avoiding anything that can possibly injure the patient, locally or generally, you may obtain, in a hospital, just as good results as can be obtained in private, and may have pyæmia under control. In that I most fully agree with him. I do believe that, although you may occasionally find pyæmia arising in the most healthy country-house, and in the best situation, as a rule the disease is one which is under our control, which ought to be, and which will be, prevented, when we have obtained, in our hospitals, as good general conditions as we have in private houses. When you can place a patient, in a hospital, in the same conditions as one who is in a private house, with all the comforts of life about him, and can protect him from contagion and infection, then I believe you will get just as good results in the hospitals as you do in private practice, and pyæmia will be no more rife in the one than in the other. If this discussion tend to spread that belief amongst us, I believe it will lead to a much less mortality following operations than exists now, and that there will be no such thing as what may be called cases of excessive mortality in operation. I hope that will be the result, and that we will avoid the error, which we are apt to fall into, of people saying, "Oh, it does not matter; you do an operation; you cannot tell whether the patient is going to get well or not; you may do a slight operation, and the patient will die; you may do a serious operation, and he will recover, and you do not know why it is so." I trust that we shall be led by this discussion, and by your paper, to examine more carefully into the causes of excessive mortality after operation, and determine to avoid them, exercising the most rigid self-examination, whenever a patient dies that ought not to die. If you do a serious operation, attended necessarily with great risk to life, and the patient die, nobody is to blame; but when, after some trivial thing, some little operation of no moment, the patient is cut off, and cut off by some causes which might possibly be prevented, then, I say, the most rigid self-examination should be made by the surgeon, and we ought to go into every circumstance surrounding the patient, everything about the operation, everything about himself and his assistants; and I believe, if that be done, and every case be carefully examined into, some cause or another will be found. If that be the result of this paper, I think you will have to be congratulated most sincerely upon having brought the subject before the Society. Your example will be handed down to others, and the good you have done yourself will be multiplied exceedingly by those who follow after you.

Dr. Gordon: I have had the honour of being invited to this most interesting discussion. I feel that I am very imperfectly able to take part in it, but it has been my lot to see a good deal of pyæmia under peculiar circumstances; and I think, and I act upon the feeling, that it is the duty of everyone who has had any personal observations in such an important disease to contribute the result of those observations for the benefit of the profession. I may observe that I am totally unaccustomed to appear before such a Society as the present, and I trust that any shortcomings in my expressions may find some indulgence. My career hitherto has been rather one of action than of speaking. I had the honour, as, perhaps, some of you may be aware, on the outbreak of the Franco-Prussian war, to be sent to the French army as medical commissioner for the War Office. In that capacity, I was, through the chances of war, besieged in Paris, and I had many opportunities, through the great courtesy of the French medical men in military service, of seeing the wounded on and from the field of battle upon a scale such as I hope I may never be called to witness again; and I also had many opportunities of seeing the terrible ravages committed amongst those wounded men by pyæmia and allied diseases during the time they were under treatment in the ambulances and in the hospitals. Those hospital diseases by which mortality was chiefly occasioned included hospital gangrene and erysipelas, although both were in a much smaller degree than seems to have prevailed according to the accounts of the old medical officers who served in the Peninsular army. Pyæmia prevailed to quite as great an extent, I should think, as it did during the Peninsular or any other war. I may mention, with reference to the observations made by a previous speaker with regard to the clear distinction between pyæmia and septicæmia, that we saw a number of cases in the hospitals in Paris, some of which were described as pyæmia and others as septicæmia; and I must say that, although others, no doubt better qualified than myself were able to draw distinctions between those cases at the bedside, I very often failed to do so. It seemed to me very much that the one was simply a stage or form of the other. I may observe that since this discussion commenced I have referred to the works of the French authors on the subject, and I find that, whereas one set describe septicæmia as being an acute and very fatal form of pyæmia, the patient seldom or never recovering, another set (and among them, if I mistake not, M. Legouest) describe it as a chronic form of pyæmia, from which recoveries are very frequent. I mention this point as indicating that, according to my view, the distinction is not yet completely drawn between the two. There have been many discussions in Paris as to the particular poisons by which pyæmia and septicæmia are respectively occasioned; and I have no doubt that you, sir, and others present, have read the discussions which took place upon this very subject some time ago, shortly after the war, before the Academy of Medicine. If I mistake not, it was M. Verneuil who described the active principle of septicæmia as being capable not only of being collected, but of being tested. He described it as an alkaloid. He further described it as capable of being converted into a sulphate, and the solution of the sulphate when inoculated as being capable of producing the disease. I mention these things in order to support the view that I have just expressed, that in many cases I was unable to draw a distinction between the two diseases, further than that I believe the one to be a modification and a stage of the other. I may observe also with reference to the statements that have been made before the Society regarding the prevalence of pyæmia in civil life, that I have been more or less intimately associated with military hospitals and with soldiers for a period of thirty-three years, during which period, except in a time of war, I have never had occasion to see a single case of pyæmia in a military hospital. I believe that nothing can more testify to the success and efficiency with which sanitation is carried out in military hospitals and barracks than that fact, when compared and taken in connection with what we have heard with regard to the occurrence of the affection in ordinary civil life. The period at which pyæmia usually happened, and the class of cases in which it usually happened, during the late war, were these. As a rule, it followed more particularly severe injuries, such as shell-wounds affecting the large bones and joints when implicating the heads of the bones. In these cases, the symptoms usually showed themselves from the fourteenth to the sixteenth day after the receipt of the wound. It was very seldom indeed, whatever method of treatment was followed, that the symptoms appeared before that date. After the manner in which the last speaker has described the symptoms, I need not again refer to them. I will only say, that the symptoms, as observed in Paris, were precisely those that have been already mentioned, but in many instances in an extremely aggravated degree; that is to say, that the first chill, instead of being an ordinary shiver, was sometimes extremely intense. The succeeding fever was equally intense, the temperature frequently rising to 104 deg. The state of perspiration was so intense, that very frequently the whole bed became so completely wet as to appear soaked. There is one symptom, however, that I may mention that has been alluded to in this discussion; that is, the peculiar odour arising from the perspiration in these cases. I have seen and heard it described as an odour similar to that of malt. To me, it is anything but like the odour of malt, which is more or less sweet and agreeable; the odour arising from pyæmia—at all events, such pyæmia as I have seen—is extremely sickening and heavy, and of a kind that when once perceived can never be mistaken. Another symptom that I may mention, is the peculiar aspect of the countenance. Immediately on the occurrence of the attack, the countenance becomes anxious, sharp, and desponding; the whole expression is that of despair; the mind very soon becomes disturbed; but I have seen many instances in which, after considerable mental disturbance and delirium, the patient seemed to recover his ordinary senses for some time before death. But a remarkable indication was the extreme despondency with which all patients attacked with this terrible disease were seized immediately on the symptoms displaying themselves. Another indication was the attack of local pain. Sooner or later, usually after the first attack, local pains manifested themselves, sometimes in the form of arthritis, always ending with purulent deposit, sometimes in the form of pneumonia and bronchitis; and I have reason to believe that many deaths in Paris that absolutely depended upon pyæmia were returned officially as arising from those diseases. Therefore, I think that in such instances either the precise nature of the cases could not have been apprehended, or probably there might have been other reasons for returning them otherwise than they were. I may also observe, that the period during which life was prolonged after the first attack of pyæmia was, as a rule, from four to ten days. It was very seldom indeed that pure pyæmia permitted the patient to survive beyond the tenth day. Instances were seen and recorded in which life was prolonged to the twentieth day, but these were extremely rare. As to the appearances after death, I have no doubt that they are extremely familiar to all here. Besides, when I was in Paris, I really avoided very much going into a dead-house. In the first place, my duty lay chiefly with the living; and, in the second place, the scenes in the dead-houses, on the few occasions on which I entered them during the siege and when great mortality was prevailing, were such as to prevent any person who was not absolutely obliged to go from entering them. With regard to the treatment and the question of recovery, I find, according to the reports of the meetings of this Society, that the recoveries are recorded as being not by any means unfrequent. As I have remarked in the work that I published on the war, so far as I remember, I have never seen a case of pyæmia as it occurred in Paris recover. And, on reading the work on *Military Surgery*, by Legouest, I find that he only records in the whole of his experience, and he is a very old French army medical officer, that the chances of recovery from pyæmia when it has fairly commenced in a state of war (I say nothing with regard to ordinary civil practice in times of peace) are very small indeed. There were several kinds of treatment employed. One was—and I believe it is that which was adopted most frequently—the administration of very large doses of quinine. Various disinfecting agents were applied to the wounds. Bisulphites, such as the bisulphite of soda, were also employed, but, I believe, not followed by any success. M. Demarquay, whom I followed a good deal during the siege, in order to prevent the occurrence of pyæmia, was in the habit of spreading a chlorinated tincture of iron over the raw surfaces; but I am afraid that the circumstances conducive to pyæmia were so very powerful that the application of his remedy had very little effect in preventing them. There was one important measure that I think ought always to be adopted in such cases, but, unfortunately, on such a large scale as we saw in Paris, it was impossible to carry it into effect; that is, immediately on the occurrence of a case of pyæmia, to isolate the patient. In some instances this was done; but after the great battle the wounded came in and had to be admitted on such an enormous scale that it was perfectly impracticable to isolate even a tithe of them. As to the predisposing causes of the affection as witnessed in Paris, of course, the usual conditions of war were the most formidable. These conditions included a great and constant fatigue, want of sleep at night, continual exposure to the weather, irregular, badly cooked, and insufficient food. Then, above this, was the loss of *morale* by want of success; and I believe it is the experience of all military surgeons that those diseases are always found to be more prevalent in an unsuccessful than in a successful army. This question of want of *morale*, and the despondency arising from it, became a matter of particular attention by one of the operating surgeons, M. Gosselin. In all cases admitted into La Charité, he took the greatest possible trouble to raise the confidence of the men. He appealed to them and to their friends to encourage them in every possible way, and I believe in many instances with very good result. Another point has arisen, as to whether this is a hospital disease or not. Now, in Paris we found that, according to the number of severe cases in a hospital, the disease seemed to increase. It oscillated, in fact, according to the number of severe cases in the hospital. That is to say, soon after each of the great battles, in a period of fourteen or fifteen days, pyæmia became extremely prevalent. And after the number had been thinned—as unfortunately was frequently the case—the relative prevalence of pyæmia became less. In some ambulances, again, in which only trivial cases were admitted, the relative prevalence of pyæmia was extremely small. Hence, I take it to be, that in hospitals the chances of patients becoming attacked with pyæmia are in relative proportion to the number of severe cases, either in the ward or in the building. In that way, it seems to me clearly to be depending upon hospital conditions. I may also say that the fatality of the wounded not only from pyæmia, but from the other diseases that I have alluded to, increased progressively during the siege. After the first battle that took place round Paris on the 21st of October, the success with which the wounded were treated was something so remarkable that we were led to believe that almost any case would recover. However, as the fatigues connected with the campaign, the exposure, the bad food, and other causes contributed their quota to lower the general system, the mortality became greater. In November it became very considerable. After the battle of the 21st of December, it was very great indeed. After the last battle, on the 19th of January, 1871, the mortality was so great, that it seemed that almost every person who had a severe injury died. It was also remarkable in the aspect of the wound that reaction seemed never fairly to set in. There was sanious discharge from the time of the admission of the patients. Their vital powers gave way, and they seemed to sink. Among the active causes of the disease noted at the time, one was the great loss of blood to which the soldiers already debilitated by the causes I have mentioned were exposed. Many of them were left for hours on the field of battle before they could be attended to. Many others, in consequence of the immense crowd of the conveyances by which they were brought into Paris blocking up the roads, were detained for hours before they could be brought into the hospital; and when they were brought in the surgeons were comparatively few, the attendants still fewer, and sometimes not well trained. The result was, that from these and other causes very great delay sometimes took place in performing the necessary dressings. Then, again, the patients as they were brought in had to remain in the clothes in which they had been wounded, many of them completely soiled with the discharges of blood and other matters, all of which began to decompose by the time they were brought into the hospital. In many instances, the clothing, after being taken off, instead of being immediately removed from the ward, was allowed to remain hanging about the walls. Cleanliness was neglected in the wards, and in that way I believe a great deal of pyæmia was caused. These circumstances arose from no fault of the medical officers, or of the private medical men. The hospitals were not under their superintendence. They had only to treat particular patients in particular beds, and the general arrangements were beyond their control altogether. Another cause, I think, was a very important one. In dressing the wounds after the patients were admitted into the hospital, sufficient attention was not paid to the necessity of removing them from one bed to another. The bedding became more or less saturated, if not with actual discharges, at any rate with emanations, and I believe that many cases of pyæmia were thus introduced. Although the bedding was apparently clean, the whole thing had not been changed, and thus pyæmia was occasioned. Professor Mosetig of Vienna, who had charge of the ambulance of the *Corps Legislatif*, adopted the plan at a very early period and carried it on throughout the siege, of having two beds for every wounded man. Whatever the nature of the wound, it was dressed at least once a day, and sometimes twice. Every man once in twenty-four hours was thoroughly cleaned, bathed, sponged, the whole of his dressings were changed, and he was moved on to a completely fresh clean bed, and I believe that had a very considerable effect in diminishing the mortality. Another plan of treatment which I believe had also a considerable effect in modifying or preventing the occurrence of pyæmia was that adopted in the American ambulance, that is, the employment of oakum in the treatment of wounds, especially of the lower extremity—wounds of such a nature as prevented the patient being in a recumbent position. Oakum was employed so as to completely surround in a thick layer the whole of the wounded limb. All discharges soaked into it, and in that way it seemed to me to prevent the decomposition of the discharges, and at the same time kept the wounds clean. In contradistinction to that, I may mention the French system of treating wounds. I believe many were in the habit of putting on too many folds of cloth. First, there was the charpie; over that, cotton; then compresses, then bandages. Immediately these were taken off, the emanations from them showed what was going on.

Dr. Burdon Sanderson: I may say, sir, with perfect truth, that when I first came to this discussion I made up my mind in the most determined manner that I would not take any part in it, because my whole object was to listen to the results of the experience of surgeons as to the important question which you, sir, have brought before the Clinical Society, viz., the origin of hospitalism or pyæmia from external causes. But, inasmuch as it is extremely difficult, when the causation of any disease is discussed, not to get on the other subject, the question of its nature, it is natural enough that that point should have been brought before the society by various speakers; and this constitutes my excuse, not for speaking at any length upon the nature of pyæmia, but for taking it as a starting point. If I were asked the question, straightforwardly and categorically, what do I think is the nature of pyæmia, I should certainly refuse to answer; or, at all events, I should content myself with placing before my interrogator the opposing opinions which are entertained upon the subject, and leave it to him to choose which of them he preferred. But if the question were asked by some one who really desired information, as, for example, by an intelligent student, I certainly should not give him the husks of opposing opinions. I should endeavour to explain to him that, although we know very little indeed about pyæmia, and should like to know a great deal more, yet we do know something. There are, I think, some certainties at which we may arrive with reference to pyæmia. In the first place, I think it is a certainty, and has been shown to be such during the progress of the present discussion, that there is such a thing as hospitalism. To deny it would be to deny the whole experience of surgical hospitals, and more particularly of hospitals devoted to puerperal cases. It is altogether impossible to disregard this evidence; therefore we may put this down as the first certainty with reference to the disease—a certainty which I am sure there is no one in this room disposed to question. Then the next certainty is, that pyæmia is not always dependent upon external causes. The evidence of this is to be found in the cases which you, sir, have brought before the Society, and there are a number of other cases more familiar perhaps to physicians than to surgeons, which very much strengthen this position. In the first place, there is the category of cases to which Dr. Stewart referred in the course of one of the discussions, resulting from typhus fever—cases which occur in the period of what would otherwise be convalescence. I do not, of course, refer to cases in which there is diffuse cellulitis, as, for example, in the neighbourhood of the parotid gland, often occurring after typhus fever, but rather to cases of actual pyæmia, cases characterised by all the symptoms of pyæmia, and usually associated with pyæmic arthritis. These constitute one series, and they lead on to another set of cases, which are likewise tolerably well known to physicians—cases of pyæmia of the most exquisite character, having both the local and constitutional conditions of pyæmia, and resulting from acute necrosis of various kinds. Of course, the most common of these cases are those which arise from necrosis of the temporal bone—cases which run a chronic course for a certain time, and afterwards symptoms of pyæmia break out; cases which are characterised, again, by pyæmic arthritis, and are accompanied by the characteristic off-and-on fever of pyæmia, alternate shiverings and high temperature, in fact, presenting the characteristics of the disease in its most exquisite form. Of course, the cases associated with necrosis of the temporal bone might possibly be supposed to be of external origin. The suspicion might arise in the case of the temporal bone, that the infection had been introduced into the primarily affected parts from without, but this certainly could not apply to the many other cases in which the disease commences from necrosis of other bones. Many such cases as these are on record, in which there is not even the possibility that the disease can have arisen from without. Well, by the combination of these two certainties, one comes to this conclusion, that one must not regard the question of the external origin of pyæmia, the influence of external circumstances in producing pyæmia, as an alternative question. It cannot be regarded as a question on which one must entertain one opinion or the contrary. We must admit both; we must admit the influence of hospitalism and of external conditions generally; and, on the other hand, we must admit that the whole process of pyæmia can originate in the organism independently of external influences. That is completely supported by the results of experimental pathology, it being well known that the whole series of pyæmic phenomena may be induced in animals under conditions which absolutely exclude the influence either of atmospheric or other external causes. Then, I think, another certainty which we may arrive at, with reference to pyæmia, is this, that it is a process which has a beginning and a termination of a definite kind; that is to say, that in every pyæmic process you may distinguish a focus, a centre of origin, lines of diffusion or of distribution, and secondary results from the distribution. In every case you have an initial process, in which infection commences, from which the infection spreads, and secondary processes which arise out of this primary one. Well, this at once suggests important questions, and perhaps the most important and fundamental questions, in the pathology of pyæmia. In the first place, we have to consider what is the primary process, what goes on at the focus or the foci (because, of course, you may have any number of foci); and, secondly, how the diffusion or distribution of the infective material takes place. As regards what goes on at the focus, I think there is one point we may assume to be tolerably certain, and which every one would admit, that you must have there the process of inflammation. And if that is the case, the next question that arises is, what is there special in this? Because we know the processes of inflammation, which are perfectly similar to each other in their general characters, may, in one case, prove to be infective, that is, may give rise to general symptoms and secondary inflammations elsewhere; and other inflammations, other local processes similar to them, may not do so, and, consequently, there must be some special character in a local inflammation which gives to it the power of infecting the system. One knows what answer would be given to this question by many pathologists, and by several who have spoken during this discussion. They would say at once, it is the septic character of the inflammatory process, it is the destructive character, the necrotic character of the process. Well, fact and observation do not support this conclusion; neither the facts of clinical experience, I think, nor certainly the facts of experimental pathology. In the first place, we know that purely septic products never produce the intense irritation which is produced by pyæmic products or by the products of pyæmic inflammation; and, on the other hand, we know, what I think is a striking enough fact, that all pyæmic products lose their irritative property—their property of exciting the tissues to inflammation—by being kept. That is to say, a liquid which, in the first instance, when it is perfectly fresh, is extremely irritant, and cannot be brought into contact with living tissue without exciting a most intense reaction, after a few hours, that is, as soon as the septic process has commenced, gradually loses that intensity of action, and passes into a much feebler kind of action, which one may truly recognise as septic. Consequently, we may entirely separate from each other those two modes of action—the septic action, and the action which is dependent upon the peculiar inflammations which are infective. But, at the same time, we must admit that there is no pyæmic action which has not, at the same time, septic qualities. It is now well established, I think, that, in every pyæmic inflammation—whether it be a primary or a secondary one—in every focus of pyæmic action you have always the presence of septic products. Then the other question is, how these products are diffused; and here, again, we come across the opinions which have been expressed by one or two speakers. The ordinary surgical answer to the question would certainly be, "I believe, at present, that it takes place through the venous system; that thrombosis of the veins, with phlebitis and the formation of embola in the venous system, are the necessary conditions to the completion of the pyæmic process". Well, there are a great many reasons why pathologists have now extended the meaning of pyæmia far beyond the limits of those cases which are characterised by the fact of embolism on the one hand, and the fact of phlebitis on the other. In the first place, we know that embola may be introduced into the circulation without producing phlebitis, may lodge in the tissues, and remain there, and not produce any results, even though embolism consist of fibrine. Secondly, we know that substances which are not large enough to be embolic at all, which are not of a sufficient size to plug any vessel, yet produce pyæmic results. And, further, we have many examples which show that, in many cases of pyæmia in which all the characteristic symptoms of the process are present, there is no affection of the veins of this nature; that, in fact, the channel of communication is the cellular tissue. So all pathologists, at the present time, I think, are agreed in believing that the channel of conveyance from the first focus to the secondary foci, and from each secondary focus to the other foci (which to them are secondary), may be either the lymphatic system or the veins. We must not assume the one or the other to be the exclusive carriers of pyæmia. The practical result of all this is, that we really do know very little about the process, but that one or two things we know with tolerable certainty.

Then, as regards its bearing upon the practical question, not only of the causation, but of the management of pyæmia, it strongly supports the desirableness of fixing our attention especially upon the origin of the disease; that is, upon the original primary focus from which the process starts, and, consequently, the desirableness of following out those indications of treatment which have been particularly referred to this evening by Mr. Spencer Wells—the immense importance of watching against those circumstances which surround the infecting surfaces at the time which must necessarily correspond to the beginning of the process. Then, further, as regards the prosecution of pathological research, which seems to me very distinctly to point to what way we ought to work for the purpose of advancing our knowledge of pyæmia, what we have to do particularly is, not to study the ultimate results of the disease in *post mortem* examinations, but to study the starting-point in each case, and investigate it, in the confidence that, by this method only, we can arrive at results corresponding to those which have been already arrived at in experimental pathology—to follow out, in fact, the same course that has already been followed in experiment, and to look for the primary indications of the channels of absorption. The examination of the lymphatic system in connection with the foci of infection is a question of great importance in human pathology, as it is in the pathology of the experimental studies which have been already pursued. It is not the case that no studies of this kind have been undertaken, but they are very few. I may refer to one interesting set of cases lately published by Dr. Heiberg of Christiania, with reference to puerperal pyæmia, in which this sort of careful anatomical investigation of the tissues immediately connected with the source of infection has naturally led to very interesting results. In surgical pathology, there is no doubt that it might also be pursued, as it often happens that amputated limbs give us very excellent opportunities of obtaining the tissues about parts which are the seats of origin or centres of location of pyæmic infection, and studying such tissues in a perfectly fresh state.

Dr. FAYRER: I came here this evening with no intention of speaking; but, as I have had, unfortunately, a very large experience in the disease which has been discussed here, I cannot sit still after the invitation that has been given me to say something. For the last thirteen years of my life, I have had to do with one of the largest hospitals in India, where, unfortunately, pyæmia was only too rife in all its worst and most concentrated forms. I feel much diffidence and great reluctance to say anything in the presence of men whose names I have hitherto known, with whom now I have had the opportunity of making personal acquaintance, and from very many of whom I have learned what little I may know, excepting in so far as it may have been supplemented by practical experience and observation. I have been somewhat surprised to hear pyæmia spoken of as a surgical disease. Perhaps, it may be that, being a military surgeon, and therefore also a physician, I am not accustomed to regard disease from the two points of surgery and medicine apart. Be that as it may, I regard pyæmia, as a disease which is not more surgical than it is medical or obstetrical. I believe you see the worst forms of it in all; I am perfectly certain that I have. I have not had the advantage of hearing the former discussions; I wish I had done so; and I confess I have not read, as I ought to have done, what has been written on the subject; therefore, I am hardly in a position to speak as to what may have been said here. I believe one point in the discussion has been whether pyæmia is simply a question of hospitalism, or whether it occurs in private practice. In my experience, it occurs largely in both. I have always looked upon it as essentially a hospital disease, a result of overcrowding, of too little superficial and too little cubic space, from the massing of sick men together. How it is produced in that way, I have never been quite able to know; but, when I was at the height of my conviction upon that point, when, for two, or three, or four years, I had had the worst forms of pyæmia under my care that could possibly present themselves, something that made all surgical operations so hopeless, that one dreaded to perform them, especially if they involved a bone; I then also, under the most favourable circumstances, in isolated rooms, at the top of well-ventilated houses, with every precaution that cleanliness and sanitation could devise, had some of the most aggravated expressions of the disease, pyæmia. For example, a man, operated upon for stone, died after a few days (although, for the first three or four days, he had been doing perfectly well), with his knee-joint full of pus, and his pericardium full of pus. Another man died in the same way, after operation for stone, in an extreme state of jaundice. You may say that is not pyæmia; at all events, it is blood-poisoning. I confess the term pyæmia is not one that, to my mind, commends itself. I am not aware that pus is taken into the blood, and, if it be not, why should it be called pyæmia? Septicæmia is a better term, or even hyperæmia. Toxæmia, to my mind, is better than any, because it is an undefined term which expresses the presence of a poison. Where it comes from precisely, I know not; but I believe it takes place in the presence of suppuration, not of healthy suppuration, not of the ordinary suppuration that takes place in a common wound or abscess, but under certain conditions, most frequently when men are crowded together in hospitals, but occasionally under other circumstances. It is quite unnecessary to detail the symptoms of the disease; Dr. Gordon has given them to you, and I have no doubt you know them all much better than I can describe them; but, perhaps, I might have said something about them as I have seen them. I believe they were in the most aggravated form, with rigors, profuse sweatings, and very rapid death. I should like to say something, because it is a subject that has always interested me, about the pathology, the structural changes that take place. I have heard constantly about diffused abscesses, and I have seen them frequently. I have seen a man take a long walk, become much fatigued, and very nearly die afterwards from diffused abscesses in the areolar tissue, underneath the muscles. That, I have no doubt, is a sort of pyæmia. I have seen that take place in people who lived in crowded neighbourhoods, ill-fed, and living under unfavourable conditions. That is, I think, idiopathic pyæmia; but it does not follow wounds, and does especially follow section of bones where the medulla becomes involved in that condition first described by the French surgeon, M. Roux as osteo-myélite, or osteo-myelitis. That, I think, has produced the worst form. Examination after death did not reveal collections of matter, but it revealed local gangrenes and local deaths in large numbers throughout the lungs, frequently in the liver, and not infrequently in the spleen. That they were abscesses, I do not deny; but that they were abscesses in the first instance, I do deny. They were deaths. Just as a bit of areolar tissue dies under the skin, and forms a core of a boil, around which suppuration takes place afterwards, to get rid of it, so a portion of a lung died; or of the liver or spleen, the kidneys, or of any of the viscera; and, if the person lived long enough, if he did not succumb to the poison, suppuration took place round about these portions of dead tissue, and you found a collection either of puriform, sometimes of purulent, matter as the result; but very frequently death took place before any suppuration could possibly have occurred. That is one frequent result of pyæmia, as I have observed it in Calcutta and in some other parts of India. But there is another, and a peculiar, condition of the blood, that poisoning of the blood, whatever it may be caused by, whether it be due to that indefinite thing, malaria, or to some defective power on the part of the liver or spleen, insanguinification, which leaves the blood in a peculiar hyperinotic condition, which makes it coagulate and form fibrinous clots where it ought not to do so. That, in my experience, has been one of the worst and most fatal results of the disease, which, for want of a better term, I have been accustomed to term pyæmia (but I have never been satisfied with the term), clots forming in the right side of the heart, or in the pulmonary artery, so causing death. These are conditions which we have been accustomed to look upon as results of what is called pyæmia—abscesses frequently under the muscles, in the liver, and elsewhere. Then, as to the curability of it, I think it would be hard to say it is always fatal, but it very frequently is; I believe, if it go on to structural changes, such as I have described, it always is. I am speaking of the disease as I observed it. I am inclined to think it is totally different in this country, because it is impossible that such things as I have seen could escape the observation of those who have studied the disease here. I only wish that there was some one here who had seen as much as I have of it in India, and who could speak upon the subject in the light in which I regard it. I think it may not be incurable at times. I remember one notable case, in which a young man, who had all the worst symptoms of pyæmic disease, with osteo-myelitis of the femur, recovered after amputation at the hip-joint, removing the whole of the affected bone, and doing it just in time before the structural changes took place, which must inevitably have resulted in his death. As to the milder cases, I should think they frequently recover. It is much too late to speak about prophylactic measures, but I believe they are all comprised in these: cleanliness, sufficient space, proper nutrition, and good air.

Dr. MOXON: I scarcely like, at this late hour, to occupy the time of the meeting, but what I have to say, fortunately, will compress itself into a very few words. This discussion has a similarity with one that is being carried on in a sister Society (the Pathological), and the similarity is, to my mind, instructive. In each case, the inquiry is as regards certain local changes—are they constitutional, or not? And it is curious to observe that the modes in which the local is thought to become constitutional are very similar in the two cases. Indeed, the question how a sore shall develope pyæmia is so like the question how a tumour shall develope a general carcinosis, that, I take it, it would be extremely difficult for anyone to define that difference. So that much of what is said in the sister Society will, no doubt, apply to the question before us, especially when viewed in the light to which I wish shortly to allude;

that is, in reference to the probable existence of a general constitutional condition, which, I think, has not received quite so much attention from recent pathological writers as might have been devoted to it. I have myself seen a good deal of pyæmia, having inspected nearly all the cases that have occurred at Guy's Hospital during eight years. I heard something of the circumstances in each of these cases. Of course, many of them turned out to be of little interest, being common and ordinary; but a few had special features, and it was to bring forward the special features of two of the cases that I rose. The cases were not unprecedented. You, sir, have mentioned two that were similar, and which occurred in your private practice; they were cases of pyæmia arising from gonorrhœa. I saw two of these cases myself, and I recollect, further, that I was made acquainted with another by Dr. Habershon, on the occasion of one of the inspections, when he mentioned to me that he had, several years before, seen a case of fatal pyæmia arising from gonorrhœa. I have also twice examined cases of idiopathic pyæmia; I do not mean of the kind alluded to by Dr. Sanderson, that is, pyæmia arising from acute periostitis, but I mean cases where the person had burst quickly into a pyæmic fever, so that, throughout the viscera and in the joints, pus rapidly developed in immense quantities, no local sores being discovered to explain the pyæmia. I searched for these carefully. Thus in one case, thinking that a carious tooth might have done it, and I pulled out all the man's teeth to examine the maxillary antra, and I had previously looked through every other corner of the body. These were certainly cases of idiopathic pyæmia—what else could they be? Now, one cannot suppose but that some very grave constitutional cause must have brought about such a result as this, both in the gonorrhœal and the idiopathic cases. What should make one person with gonorrhœa get pyæmia when so many thousands escape? There must be something very special in the constitution of the person, and that something, as a constitutional factor, must surely be very important when the local factor in the idiopathic cases is absent, and in the cases of gonorrhœa is so trifling. I examined the urethra in both cases of gonorhœa, and there was no breach of the mucous membrane. Such cases appear to me to be parallel with scarlatinal rheumatism. Certainly, one observes in young children, who have not any ulcers in the throat, but only scarlatinous inflammation there, a certain amount of rheumatic symptoms, not always running on to pus, but often doing so. All these forms of the disease must be thought of before we can regard pyæmia from so narrow a point of view as would see in it only a local condition spreading along very defined lines, and extending until it secondarily affects the constitution, as some would teach. I think, when we look upon these cases—I speak especially of scarlatinous rheumatism—we must say that the constitutional side of pyæmia is of very great importance. And, while I am speaking of scarlatinous rheumatism, I should like to remind the Society of certain very important statistics which Dr. Braxton Hicks has published. I believe he states that, after investigating carefully the causes, in a great number of cases, of puerperal fever, he found that a large proportion—about 65 per cent.—were clearly traceable to a direct exposure to measles, diphtheria, or scarlatina. I think that statement is of the utmost importance, and, coming from Dr. Braxton Hicks, it cannot be doubted. I believe I am right in saying that this kind of investigation is rare. If such investigations were more general—if, as Mr. Spencer Wells has suggested, all the circumstances that could throw light upon the general conditions of the system in these terrible cases were inquired into—if every contagion could be hunted up, we should get lights on the subject that would be more fruitful in our clinical success than are those mere pathological investigations which are now so fashionable. I confess I was sick of cutting up the veins and slitting up the lymphatics; and, when I came upon the accounts published by Dr. Hicks, it seemed to me that a new light was opened upon pyæmia; and I am still in hopes that the work initiated in this Society will be fruitful in teaching us something that will help us forward in this truly very promising direction.

Dr. GLOVER: Would Dr. Moxon tell us what he saw in the veins and lymphatics?

Dr. MOXON: It is a long story.

Dr. GLOVER: If he has seen every case in Guy's Hospital for the last eight years, and made a careful examination of the lymphatics and veins, I am sure, in a few words, he could tell us whether he saw anything to explain the facts that have been referred to.

Dr. MOXON: I may mention that, in one case, which I should certainly call a case of pyæmia, from the general conditions, there was a great wound about the hip, which had led to swelling of the leg. On examination, I found that the swelling arose from the inflammation about the wound having entered into the crural vein. The vein was full of clot, and the clot, when examined by the microscope, was pus. That is a point that, I think, has not been sufficiently asserted. It has been asserted, following Professor Goodsir's old observations, that clots in the veins are not pus. That is quite contrary to my experience. I quite admit that Goodsir was right in describing a process of disintegration of clot, but I am sure it is an entire mistake to say that clots that are found in the neighbourhood of suppurations—clots within the veins—are not pus. I say that, in nearly all cases of thrombosis of the cerebral sinuses, the clot is pus. It certainly was so in the case to which I referred. The clot ran right up the vein, and pointed its nose into the right auricle. In the pulmonary artery, of the upper lobe of the left lung, there was a large piece of clot which, under the microscope, was identical with pus. The portion of lung, which corresponded with that artery, was broken down into a mass which would be called abscess. There were no other abscesses in the lung. I give that as a typical example of secondary suppuration—the real conveyance of the disease from point to point.

The PRESIDENT: The time has now come when this discussion must close, and I will occupy the very few minutes that remain by speaking only on one or two points. First, it is quite clear that the discussion has brought out before us the great divergence of opinion, existing among surgeons, as to what is and what is not pyæmia. I find myself directly opposed to one of our first authorities and teachers in London, Mr. Erichsen; and also to another great provincial surgeon, Mr. Cadge. Those gentlemen would limit pyæmia, at any rate true acute pyæmia, to abscesses, which might be called visceral and multiple, so that any case that had no multiple abscesses, and no visceral abscesses, was not, for them, pyæmia. Now, that is a point I cannot admit. I admit that pyæmia has external abscesses, and that they are not altogether confined to the internal organs. I admit, whenever I find pus in the joints, in the serous membranes, in the peritoneum, or the pleura, or the pericardium, that they are all cases of pyæmia. I do not want, for a case of pyæmia, multiple abscesses at all. If I have one abscess, I consider that a pyæmic abscess, under certain circumstances. Mr. Erichsen pointedly asked me whether I consider the case of a slight wound, or chafing on the heel, combined, as it had been, with a large deep-seated abscess in the thigh, to be a true case of pyæmia. I have no hesitation in saying that I do consider that a true case of pyæmia, and I cannot conceive why it should not be admitted to be such. As a matter of course, there are certain restrictions. Supposing it can be clearly proved by the surgeon (and one must take the surgeon for what he is worth), and there be no inflammation whatever of the absorbents spreading over that wound, that there is no inflammation spreading along the cellular tissue of the leg; if it had spread along the cellular tissue of the leg, it must have spread under the subcutaneous cellular tissue of the thigh, and there was nothing of that kind present. There was merely this small wound at the heel, and this large deep-seated abscess in the thigh. Therefore, I must say—though I may be a teacher—that I teach differently from Mr. Erichsen. Then the discussion has brought out another point very markedly—that is, that pyæmia exists in private practice. And here I will refer to Mr. Spencer Wells's question. I had no intention, in bringing these cases before you, of instituting any comparison whatever between hospital and private practice. The title of my paper was, "Cases of Pyæmia in Private Practice". I did not mention anything about hospitals, neither had I any intention of doing so. I merely wanted to show that I had seen a certain number of cases in the years in which I had been in private practice. I therefore cannot answer Mr. Spencer Wells's question, and give him the relative number of cases that I have seen in hospitals and in private practice. Having settled that there are a number of cases occurring in private practice, it is clearly proved, as a matter of course, that all these cases are not due to what is generally called "hospitalism". And here, I would say that "hospitalism", in this discussion, has been used under two very different significations. It was first used, by Sir James Simpson, as meaning the hospital itself, and nothing else; and the deduction that he drew was, that we were to pull down our hospitals, and build new ones; that we were to divide the wards into smaller wards; that the larger the ward, the more infectious it was; and that the older the hospital, the more infectious it was. With such deductions as those, supposing them to be true, the word "hospitalism" is a proper word; but now I heard "hospitalism" described as being, simply, the overcrowding and aggregation of a certain number of bad cases in a ward. This has nothing to do with the hospital; it has to do with the surgeon—with the person who has charge of the hospital. It is simply a case of maladministration. I confess I am one of those who, like Sir James Paget, regret very much the use of the word "hospitalism" in this new sense. I do not know that there is any word that can do more harm. When Sir James Simpson first brought out his work, wherever I went, in my own neighbourhood, I found people declining to become governors of hospitals. "What is the use of it?" they said. "See what Sir James Simpson says. You are to pull down your hospitals, and build new ones. You are not even to have those; you must have tents and huts." That was constantly said in the West

End of the town. It was a subject of conversation wherever I went. I have no doubt that the result was, that our hospitals lost a great many subscribers. I therefore look upon the present use of the word with some little degree of fear, for we must bear in mind that these discussions are reported in the medical journals, which go into the clubs, and are read there. Patients will now say (and very naturally), "What is the use of my going into an hospital? I had better die of my own disease, than of one that I shall be sure to catch if I go there." Then there is another point that has been brought out very prominently in this discussion, in reference to what has fallen from some gentlemen with regard to contagion. It has been said that hospital surgeons can carry this disease about with them, and convey it to their patients. Now, I think, if the cases I have brought before you had been very carefully attended to, this question could not possibly have arisen. There were twenty-one cases under my own care, and of those there were twelve that I literally had nothing whatever to do with, but was simply called in on consultation. Some of them were 200 or 250 miles away from London. All that I had to do was to say, "This is not a case of typhoid fever, but a case of pyæmia"; and so it turned out. There were two cases of pyæmia, with ulcer of the tonsils, and in both these cases pyæmic symptoms had set in before I saw the patients. There were three cases of pyæmia, with fever. It is said that they were not cases of pyæmia. All I can say is, that I looked upon them as such, simply because there was ulceration of the bowel. If it be known that ulceration of the skin can lead to pyæmic symptoms, why may not ulceration of the bowel do the same thing? It is true that there is a form of fever called by Sir William Jenner pyogenetic, but in that case abscesses come on at a much later period than in the cases that I have brought under your notice. With regard to the case of injury to the foot, I was called to it fourteen or fifteen miles out of town, and the symptoms of pyæmia were there, the abscesses were there, when I arrived. In one case, I went 250 miles to see a young lady, with inflammation of the lateral sinus, spreading down the internal jugular vein. I told the surgeon that it was not a case of fever, but of pyæmia, and that, in all probability, in a week or ten days, we should have abscesses. In a week or ten days the abscesses came, and I had to open them. Then there were three cases of gonorrhœa, and another case of ulceration and abscess. All those cases I was called to see after the symptoms of pyæmia had set in; so that I had not on my conscience the crime of having taken pyæmia to my patients. Mr. Erichsen states that he has never seen pyæmia in private practice—

Mr. ERICHSEN: No, no; after operations in private practice.

The PRESIDENT: Mr. Erichsen has had a great number of cases of pyæmia in hospital practice. As a matter of course, they were contagious, and if the disease could be carried from one to another, why should he not have carried it about as well as myself? Mr. Cadge said that he was afraid of operating in his hospital, because pyæmia was so rife, though he was confident enough with regard to operations in private practice. Why should not Mr. Cadge carry about pyæmia as well as myself? I think one of the very best proofs we have had was that given by the first speaker—Mr. Jonathan Hutchison—who told us that he had a number of ewes that had died from pyæmia. Now, surely nobody could accuse Mr. Hutchinson of having given these ewes pyæmia, yet they all died of it. They were examined; they had multiple abscesses; and there was no doubt whatever of their having died from pyæmia.

The discussion terminated with a vote of thanks to the President, on the motion of Mr. CALLENDER, seconded by Mr. ERICHSEN.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MARCH 17TH, 1874.

SIR WM. JENNER, Bart., M.D., F.R.S., President, in the Chair.

DISCUSSION ON CANCER.

THE discussion on Mr. Campbell De Morgan's paper on Cancer was resumed.

Sir JAMES PAGET: I regret that I was unable to be present at the last meeting of the Society; but I have had the advantage of having been able to read the careful report of Mr. De Morgan's speech at the opening discussion published in the journals; and I probably find therein a very much more careful agreement between myself and him in reference to the pathology of cancer than I might have supposed if I had only heard the address delivered, and had seen the preponderance, to all appearance, though not in reality, of the view which he held of what may be generally understood as its local origin. For I find that Mr. De Morgan holds as I do—and not I alone, but I think the large body of those engaged in the study of pathology and of surgical practice too—that we must look, at the same time, for a local and for a constitutional origin of cancer. If Mr. De Morgan will allow me, I will read one or two sentences of his own on the matter, that they may serve as a warning to myself lest I should diverge too far. He says: "All, in fact, that we see of the life of cancer naturally leads to the belief that the disease must from the first be more than a mere local tissue-change; and in one sense, and to a certain extent, I must admit that this belief is well founded." And again: "The view which I would maintain is that though local in its origin, there is in some, possibly in all cases, a predisposition to the disease which may possibly be distributed through the system, but much more probably has its seat in some among the tissues of the body." To this doctrine I should entirely conform; and if I could find anything to discuss, or anything in Mr. De Morgan's address to which I could object, it would be, not in a doctrine such as this, but rather in what I may call the only half-willing manner in which he seems to admit it—the manner in which he seems disposed rather to deprecate the belief in a constitutional origin of cancer, or in a constitutional element in the origin of cancer, and to exalt more than I would the local element. For I could agree with him entirely that we must hold both a local and a constitutional element as a necessary condition in every, or nearly every, case of cancer that comes under our observation. And for the purposes of discussion, I will admit at once that I should adopt (though from some of them I might verbally dissent) all the definitions which Mr. De Morgan has adduced: his definition of constitutional disease, his limitation in the discussion of cancer to certain well known species of it; though I admit I should not include the rodent ulcer—I think it would be better to exclude it from the general name of cancer; still I think, for the purposes of discussion, we should adopt as fairly as we can the limits which the author has laid down, and not wander too far from them. If, then, we look at the pathology of cancer, which, after all, limit it as we may, is a very wide-spread disease, I think we might admit that there are some cases in which it is very hard to discern anything like a constitutional origin at all. If we take those cases, though they be of rare occurrence, in which cancer occurs in scars of old burns—such scars as we see from time to time fretting and ulcerating year after year, undergoing no unusual change, and then at last becoming the seats of cancer—we are almost ready to say that there must have been as little, if any, of a constitutional predisposition to cancer in such a patient that it required some tissue to be specially prepared through a course of years before it could either become cancerous, or, in other words, could become the seat of cancer. So, too, if we see the perpetual irritation of a lip which only after years becomes the seat of cancer, it is difficult to say that there has not been hitherto such a condition as required a constitutional predisposition for the production of cancer in it. Nevertheless, even in these cases we not unfrequently observe that, after passing a large number of years only as what we may call simple ulcers, or ulcers of various names not implying cancerous disease, they suddenly make a change, and become, as I would say, the seats of cancer, indicating that there may have been some conditions besides mere irritation out of which the cancer has been generated. And so, again, if we look at the regular series of morbid growths which can be traced, without any apparent interval whatever, from the simplest forms of fatty or fibrous tissue up to the most marked forms of cancer, it may be very hard to indicate the point at which we should maintain that a constitutional predisposition or any constitutional element has had to be introduced. If these, then, were the only cases to be studied, I think we might hold almost that cancer may be completely a local disease, needing, if any, only what we may regard as the lowest degree of some constitutional element for its production. But we must look to the further end of the scale before we decide that; and at that further end we find growths unlike any that are produced in the body, rapidly produced, rapidly multiplying, rapidly destroying; things so unlike anything that we can call local disease purely and simply, that we are bound to adopt another pathology for it; or, rather, we are bound, as I think, to believe that in the long group of diseases which we call cancers, there may be at one end diseases in which it is hard to discern any constitutional element at all; and at the other end diseases in which the constitutional element may far predominate over anything that we can suppose to belong to locality. If, then, I now proceed to show the grounds on which I should hold the very great importance of giving a very full consideration, I will not say a dominant one, but a very full and complete consideration to constitutional element in the origin of cancer, it is only that I may, if possible, avert what I think may be the consequence of such a paper as Mr. De Morgan's—a paper of great weight, great clearness and wisdom, drawn from long experience, and likely enough, therefore, to have great weight among those who read it. Now there are certain things in the history of cancer in which it is impossible not to discern a very large predominance of what, for brevity's sake, I will call the constitutional element; for I presume that about the existence of two elements in the origination of cancer we are all very well agreed. And the first of these is the manner of its inheritance—not the mere fact of its inheritance, but the manner in which it is inherited. And I am anxious to state that I think we cannot overestimate the importance of inheritance in the origination of cancer. The more I have seen of cancer as occurring among families whose family history is known, the larger becomes the number of cases in which well marked inheritance can be traced. When I was engaged almost solely in hospital-practice, I thought it was about one in six. When I came to know something more of private practice, I found I could count one in four. Now I can without difficulty count as actual facts not less than one in three of all patients with cancer in whose families the occurrence of cancer is well known. But this number does not nearly represent what we may very safely assume to be the predominance of inheritance in cancer. A large number of persons die of internal cancer, and convey it to their offspring, though it is never known that themselves have been the subject of cancer, or, at least, never recorded. A large number more die before they have transmitted the cancerous predisposition which is in themselves; for, paradoxical as it may seem, if a man have not lived up to the whole age of man, we are bound not to believe that he might not have been the subject of cancer, for cancer is eminently a disease of degeneracy, a disease of which the frequency increases as years increase; that is, in proportion to the number of persons living at each period of life, the number of cancers increases as age increases. Hence, unless a man, as I say, have lived to the full age of life, he may have died of some disease, and never manifested the cancer which he yet conveys in predisposition to his offspring. The cases are very far from rare in which offspring die of cancer long before their parents. The parent lives, and maintains that cancer was never known in the family; but a few years elapse, and then the parent dies of the very same disease as the offspring, having been himself or herself quite ignorant of the conveyance of the disease of which the offspring died. I am disposed, therefore, to hold that it is not possible to conceive of the origin of cancer, or, I would add, of any disease of the like kind, except by inheritance. I merely state this without dwelling on it; for it is not only constitutional diseases that are inherited; local diseases are inherited with just as much surety as constitutional ones. And I mention it only that one may be able to express strongly the very great importance of studying the inheritance of cancer as indicating its origin. Local diseases are as well inherited. The ordinary fatty tumour is often by inheritance; much more commonly still the ordinary cartilaginous tumour is by inheritance; most commonly of all, the ordinary cutaneous cyst of the scalp and of other parts, is by inheritance. Malformations to which we cannot, with the widest stretch of the term, apply the term "constitutional", are always inherited. It is therefore not to the mere fact of a general, or, as I would suppose, of a constant inheritance, that I would assign the constitutional condition of cancer, but to the manner of it, for the contrast between inheritance of a local disease and inheritance of a constitutional one is very striking. When a local disease is inherited, it passes from progenitor to offspring in the same tissue, if not in the same place. A malformation may pass from parent to offspring, but a malformed finger does not generate a malformed heart or a malformed brain. A cutaneous cyst may be inherited from parent to offspring, but it is in the cutaneous tissue. We do not find cutaneous cysts growing in the stomach or testes of the offspring of those that have had them on their scalp. Fatty tumours, fibrous tumours, and cartilaginous tumours, may pass by inheritance; but, as they pass, they pass from the fatty, or the fibrous, or cartilaginous tissue of the progenitor into corresponding tissues of the offspring; and it is a rule to which I suppose no fair exception can be made, that the transmission of a local disease is of a disease from the same part, if not from the same place, in the progenitor as we find it in the offspring. Now that rule is in no sense a rule of limitation in regard to the transmission of cancer. Mr. Baker published, I think, in the *Transactions* of the Royal Medical and Chirurgical Society, a statistical report of the cases of transmission by inheritance of cancer. Amongst my manuscript cases which he had the opportunity of looking over, about half of them passed from the progenitor to the offspring as cancers, and as affecting the same organ; but this is a half which affects almost entirely the uterus and the breast, respecting the tendencies of which towards cancer I would speak hereafter; but in the other half, which are the more characteristic in this respect, there is no rule at all. The cancer of the breast in the parent is marked as cancer of the lip in the child; the cancer of the cheek in the parent becomes cancer of the bone in the child; there is in these cases absolutely no relation at all of place or texture. And it is but fair to mention one striking instance which comes within my own knowledge of total disregard of all locality, of all tissue, in the transmission of cancer from parent to offspring. A lady died with cancer of the stomach; one of her daughters died with cancer of the stomach; another died with cancer of the breast; and of her grandchildren, two died with cancer of the breast, two of cancer of the uterus, one of cancer of the bladder, one of cancer of the axillary glands, one of cancer of the stomach, one of cancer of the rectum. Now it seems to me inconceivable that we can here speak of the transmission of anything local. That which was transmitted in this case must have been something which we are bound to call constitutional, and of which the locality in each person was determined by some other circumstance than that of the inheritance. And herein the transmission of cancer accords with the transmission of all other hereditary constitutional diseases, with gout, with syphilis, with tuberculosis, with scrofula; for here I may mention that I think it will be well if we study the whole matter of the pathology of cancer, not by its accordance with certain verbal definitions of our own, but in its relations with those diseases which we are all of us ready to admit to be either constitutional or local. And I assume that we are all of us quite ready to admit that gout and syphilis, and tuberculosis and scrofula, are constitutional diseases; and I say then that the transmission of cancer by inheritance accords perfectly with what we see in them, not with what we see in local diseases. The gout of the parent may appear in all the possible various textures of his offspring, never, it may be, in the great toe of one of them, but in the joint of one, in the skin of another, the bronchial tubes of another, the pulmonary textures of another. Of all the variety of diseases which we class under the general name of gout, the whole may be derived from one parent who may have gout in what we regards its typical form. And I here need not speak of the varieties of form in which tuberculosis is propagated by inheritance, or scrofula, or any of those others which we regard as constitutional diseases; and this fact, I repeat, in regard to the transmission of a disease by inheritance, is so important in respect of what we call its origin, that I think it is to be regretted if we deviate in the least from holding that the constitutional element of the origin of cancer is one of the most important and considerable things we have to study. Then, next, if we watch the effects of injury in the production of cancer, we see very notably that it follows the same rule as it does in the production of others which we call constitutional diseases. Cancer, like other diseases that we call constitutional, sometimes appears, as the expression is, of itself; there is apparently so little provocation of it, that we have nothing that we can call an exciting cause. But in a very large number of cases it follows injury, and sometimes it follows so quickly in the course of a week, or three weeks, or a month, after the injury, that it is impossible to disconnect it from the changes which the injury has produced. Now we know very well, as well as we know anything in pathology, what is the limit of changes of structure which can be produced by injury in any person of sound constitution. The ordinary processes of repair, and the ordinary changes into which they may deviate without any constitutional condition being present, are as well known as are the ordinary changes of nutrition; either a complete clearing up without a change of texture at all, or some inflammatory formation, some thickening, some hardening, some overgrowth, of some texture like to the natural textures of the body, or, at the most, the production of some tumour which increases and grows on the place of injury, but holds the character of the texture in which it is seated. And when after injury there is a deviation from these ordinary changes, we seldom or never entertain the question, but that the deviation is due to some constitutional defect in the person in whom it occurs. We see a wrenched knee-joint which does not recover after the ordinary fashion, which swells and remains hot, with thickening of the synovial membranes, perhaps with the formation of abscess. We are as sure as of anything in pathology that that is because the person is scrofulous. We see an injury of a bone, and it becomes the seat of tuberculous deposit. We do not understand that that is because the person to whom the injury has happened is one with a constitutional tuberculosis. We see an injury done to the foot, and it becomes the seat of a gouty inflammation; of another done to the joint or bone, and it becomes the seat of syphilitic disease. In all of these cases our pathology is as sure as any piece of pathology we have: it may be erroneous, but it is at least as certain as any other knowledge that we have, that deviation from the ordinary method of change after injury is because of some constitutional peculiarity in the person upon whom the injury has been inflicted. Now, it is only a reading of the same facts with altered terms which enables us to say that, when a cancer comes after an injury inflicted upon a part, it is because there was constitutional predisposition in the patient to cancer. I cannot conceive that we should have any other method of reading the fact, than by assuming that here the cancerous person follows the same law as we find in so large a number of instances in other constitutional diseases; and that the ordinary consequences of the effects of injury are deviated from because of a constitutional peculiarity in the person on whom the injury has fallen. And this case is made very strong in some of those cases where injury has fallen upon persons in whom we know of cancerous inheritance. How otherwise can we read the fact, which is by no means rare, that a cancerous mother has a son whose lip is incessantly irritated, and the lip becomes cancerous? There is there no transmission of a local peculiarity, but transmission of something constitutional which is brought out by a local injury. Therefore I would hold as a second reason for maintaining, in its fullest force, the power of the constitutional element in cancer, that the production of cancer by injury is according to exactly the same rules as those by which we hold that when the ordinary effects of injury are in any degree deviated from, it is because of some constitutional peculiarity of the person on whom the injury has been inflicted. And then, next, I would hold that the constitutional element in the origin of cancer is strongly marked in the constancy and in the method of its recurrence after operations, recurrence after complete excision. Mr. De Morgan speaks of the "almost constant"; well, I do not know what percentage "almost" means; but I will venture to say, speaking of ordinary typical cancer of the breast, or any other part which is its most frequent seat, that the number of cases in which it does not recur is not more than one in five hundred; and that exception of one in five hundred may very well exist without any imputation on a general doctrine of a constitutional origin of cancer; for in one person in five hundred it may very well be that there is only one piece of the body which can possibly become the seat of a constitutional disease, and, the piece being cut out, no more remains; or it may be that in one person in five hundred a constitutional predisposition to the disease is, as we may say, exhausted by the production of a single growth or a single set of germs of growth. We do not think that a disease has been less scrofulous because, after the amputation of the scrofulous limb, the person may have shown no more very marked signs of scrofula, or because, after the occurrence of a syphilitic sore, the appearance of syphilitic constitution may cease. However, the point is not so much here in the fact of an almost constancy, say one in five hundred, in which cancer is not reproduced after operation, but in the contrast between cancer and other tumours. For, if the cases in which cancer is not reproduced in some form are not more than one in five hundred, then I would add that the ordinary non-cancerous tumours do not reappear in more than one case in five hundred. The case, on the one side, is as strong in opposition as the case on the other: one in five hundred may fail in reproduction; but not more than one in five hundred succeeds, if I may say so, in reproduction after removal. And here, I must venture to say, our own *Transactions* are liable to lead to fallacies. We get all the records of strange things, all records in which fatty tumours are reproduced, but none of the hundreds of cases in which they are not reproduced. Now, suppose that these were, as in one sense they are, vivisections. Suppose a man had performed five hundred vivisections to determine such a point as this, whether a certain mass within the body is altogether local, or for the most part constitutional, and he found that, after five hundred vivisections, he got but one single exception to the rule, that it repairs somewhere else after removal from the one part. He would be a bold man, if he repeated his vivisections; he could be surely content with that, especially if he took in contrast five hundred cases more of different growths, and found that they did not reappear, and he would be content to put aside the apparent exceptions for further consideration. He would not use those exceptions to overthrow the doctrine which he had founded upon the rule—a doctrine of constitutional disease, which would be as safe for that as it would be for gout, or tuberculosis, or syphilis, or any other that we are content to call constitutional. But not only is this so in regard to the mere fact of reproduction, but to the method of it. The contrast here is very striking. There are certain instances in which tumours, that we must call cancerous, do reappear in distant parts. These are exceedingly few. The very large majority of the so-called recurrent tumours—tumours which seem to stand in the mid-distance between the cancerous and the non-cancerous—reappear again time after time; they cannot be extirpated except by the complete removal, not merely of the tissue, but of the particular part, of the whole part, in which they grow. Now, this contrast is really a striking one. I once removed, from a healthy full-blooded young woman, one in whom cancer would have had its most florid course, the eighteenth tumour to which she had been subjected within the course of six or seven years. The tumours grew in the intermuscular space of the thigh, and we removed the eighteenth; and if she had not died of pyæmia, it seemed as if there might be the thirty-eighth, or the fifty-eighth; there seemed absolutely no limit to the number of times in which the recurrent tumour might be produced in the same part. If the limb had been amputated, I think very likely she would have had no return at all; but, whether it be so or not, I venture to say there is not, in the whole history of the surgery of cancers, a case parallel to this—not a single case in which a large cancerous mass was removed from the same part eighteen, I would venture to say eight times, without the production of similar disease in the lymphatics, and in the other organs. In another case, I removed a tumour for the seventh time, and then its return was destructive. A third and fourth times are frequent. Now, these things have not their likenesses at all in the cases of cancer. You may cut out a little cancerous tubercle here and there from some old person, three, four, five, or six times over, but that is a different disease. You cannot find an instance of rapidly growing soft texture, vascular, of any form, which can be removed three, four, six, eight, ten, or twenty times, without recurrence, not in the place of growth alone, but in the distant organs; and I believe it is vain to attempt to explain this difference of the recurrence in distant and dissimilar parts, which we find in recurrent tumours, or occasionally in the more ordinary kinds, upon any facts of difference of physical condition. I observe it is referred to the mobility of cells, to their readiness to travel, that, now and then, these tumours pass from one part to the other. Now, really, there are cancers that multiply themselves, in distant and dissimilar parts, whose physical condition looks as unfit for travelling as any that could be named. If I could name any kind of cancer which propagates itself more widely and readily than another, it would be the osteoid—a mass as hard as any mass of fibrous tissue you ever found in the uterus. I know no fibrous tumour which is so hard as the fibrous mass, to say nothing of the bony structure of an osteoid cancer, yet it propagates itself speedily and everywhere. Ordinary scirrhous cancer of the breast is, at least, as hard as an ordinary fibrous tumour; but the one does what the other does not—propagates itself. These recurrent fibroid or recurrent cartilaginous growths are just as soft, and composed of cells and free nuclei, as little held together as in any of the softest forms of cancer. They do not, except in rare cases, propagate themselves. Cancers do not fail, except in rare cases, to propagate themselves; so that I must maintain that, whichever way we look at them, the facts of the method of propagation, to distant and dissimilar parts, are so strong on the side of cancers, that we must assume an essential difference between them and any other tumours that we might name. These are the chief grounds, which impress me very strongly with the belief that we are committing a great error if we depreciate, in the least degree, the constitutional element in the production of cancer. I only fear lest, in thus maintaining the importance of the constitutional element, I should seem to have endeavoured to depreciate the local. My anxiety would rather be to hold that, in different cases, the one or the other is predominant. If I must hold that which I suppose to be the more important of the two, I should believe that the constitutional is the more important, inasmuch as it is that which seems to predominate most in the largest portion of cancers—in those, therefore, which we may best take as indicating the type of the disease. On these grounds, then, I should hold, not unwillingly, not grudgingly, not as if I would depreciate it, the very great importance of the constitutional element in the production of cancer. But, then, it is said, it may be constitutional, but it is not a blood disease; and I have no right, if I assume it to be constitutional, therefore to assume that there must be a morbid material present in the blood, which incorporates itself, in any form, in the structure of a cancer. Well, I am quite ready to admit that this is a very much less important matter than the other. The question of first importance is, whether cancer do owe its origin to a constitutional as well as to a local condition; whether that constitutional condition be a morbid material in the blood or not, is an altogether different question, and does not much affect the main one. Nevertheless, I am prepared to hold that, by all the analogies of other constitutional diseases, we do well if we hold that cancer also has a special material in the blood to which it owes a part, not the whole, of its origin. For, if we are to hold constitutional diseases to be as Mr. De Morgan says, and as I would say, all-pervading, what is it in which all-pervades? There are not many things which do all-pervade the body. We have the nerves; we can hardly ascribe the constitutional origin of cancer to any morbid condition of the nervous system. That seems, to say the least, very improbable. We have the minute blood-vessels; we have, we might almost say, the organic muscular fibre, we have the connective tissue, we have the blood; and, having named these things, we are at a loss to name anything else in which the all-pervading condition can exist. We cannot talk of conditions separate from the materials in which the conditions exist. We may doubt whether it be a fluid or a germ of any degree of minuteness; but, at least, it must be something material; and, if it be so, where is the material? in which of these all-pervading substances? Well, I can conceive that it might be in all the pervading connective tissue; but it seems to me more probable, and a safer thing to hold, that it is in all the pervading blood, because, at any rate, we can then hold our study by some sort of analogy with things that we recognise as being blood-diseases. We have some blood-diseases that we are sure of. So far as I know, we have no all-pervading connective tissue diseases of which we have any knowledge at all; so that, if we hold that the constitutional condition of cancer is not in the blood, we drift away into the land of the unknowable, an excellent land to drift to, for all the most inquiring spirits would immediately proceed to find out what there is in that unknowable. But at least we have a set of diseases of which we know something as being blood-diseases, and it is with them that the likenesses of cancer are found. For example, I presume it may be held that senile diabetes is, if not originally, yet in great part, a blood-disease—there is a morbid state of the blood in that disease. Except in that it effects a permanent growth instead of a temporary change of texture, the production of a cancer from supposed morbid blood is hardly more strange than production of a carbuncle out of diabetic blood. The occurrence of boils and carbuncles and other local necroses is as singular an indication of the disturbed blood of diabetes, as is a cancer of any supposed disturbance of the blood that we may speak of. Uræmia, with all the local diseases it may produce; scurvy, with the various diatheses which are marked by morbid conditions of the urine; these we all know to be blood-diseases, with appropriate local illustrations. But it is said that, if it be a blood-disease, there are certain conditions observed in cancers which cannot be understood; and Mr. De Morgan names many of these. I have looked carefully through them, and it seems to me that the objections which are taken to the assuming that cancer is a blood-disease on account of these conditions would apply with just as much force to any other blood disease that could be named. It is said, for example, that we can hardly conceive how cancer should be produced if it be in the first instance in the blood, and yet the whole condition of the cancerous person should be one of perfect health. Why, this is surely exactly the same condition as that of a man on the very eve of an outbreak of gout. Few men feel themselves fitter for either work or play than the men whose blood is near to an explosion of gout, that would appear within a few days. In the long intervals which exist between one attack of tertiary syphilis and another, there can be no reasonable imputation on the health of the person; all else in him seems sound, yet there is something at work which will again appear in syphilis. In the intervals of scrofula, there is not much to be said against the health of the person; so that the fact of the general health being co-existent with cancerous manifestation in a single part, is really no more an argument against a belief in a cancerous condition of blood than it is in the case of syphilis, tuberculosis, scrofula, or gout. Then, again, it is said that you observe in cancerous persons that injuries are inflicted upon them and no cancerous change ensues. Here, again, the same thing may be held. Study the same fact in the light of other constitutional diseases, and the same strangeness appears. I have seen several cases in which a day after operation the patient had an outburst of gout. I never saw a case in which the wound was hindered from healing, except in so far as it might be hindered a day or two by the feverish condition which attended the gout; but the existence of gouty blood is quite consistent with perfection of repair, whether of wounds or of any other injury. Again, it is said, how can we explain the long intervals of health which exist between the removal of a cancer and the re-appearance of another, if we are to assume that there is a morbid condition of the blood. Again, I repeat, the same thing exactly, strange as it may seem, prevails in all other constitutional diseases. How can we explain possibly the long intervals between the successive occurrence of secondary and tertiary syphilis? How can we explain the long intervals between the outbreaks of gout or tuberculosis, or, as I would venture to say, of anything else that we call constitutional disease? And another objection is that it is inexplicable, that if there be a morbid condition of the blood, cancer could not affect secondarily the parts which are its most ordinary seats primarily. Again, the same thing presents itself. Secondary syphilis does not attack the prepuce or glans penis more often than any other part. Tertiary syphilis may attack the skin, but it is more likely to attack a bone or joint. Hence, I repeat, the whole of these objections which are raised—and I venture to assume that, with Mr. De Morgan's learning and ingenuity, he has raised all that can be raised—may be applied just as well as objections to the belief in any blood-disease as to the belief that cancer may in some sense, however vaguely, be called a blood-disease. And the last objection I note is, how is it that, if there be the morbid blood in cancer, it should be more frequent in the female than in the male? Well, this is easily answered. Cancer is, as I have already said, eminently a disease of degenerated tissues. We are wholly misled if we suppose that cancer is a disease of healthy persons, whether by local degeneracy or general, and it is essentially a disease of degeneracy. As I have already said, it increases in frequency in proportion to the number of persons living as age goes on. And the apparent exception to this rule, is the very exception that proves the rule; for there are in women, without any correspondences in men, two organs which enter into degeneracy closely corresponding with the senile at a comparatively early period of life, the breast and the uterus; and it is the predominance of cancer in the breast and uterus that alone makes the greater frequency of cancer in the female than in the male. If we separate the cases of cancer of the breast and the uterus, then cancer is more frequent in the male than in the female; but, because these two organs cease to be capable of function and enter, say at forty or fifty or thereabouts, into a condition similar to senile degeneracy, therefore there is a rapid increase in the frequency of cancer at that particular age. But the breast and uterus of women at fifty should be compared, not with any organs of men at fifty, but with organs of men at seventy, eighty, or ninety. These organs in the women are already in a condition which one may closely compare with senile degeneracy, therefore they are more frequently the seats of disease. It is solely this local degeneracy in women that makes them constitutionally disposed to cancer long before it would be likely to happen to men. I must maintain, therefore, that all the grounds against holding that cancer is a constitutional disease, and as also depending on a morbid condition of blood, will hold as strongly, I do not say they are altogether fallacies, but they will hold as strongly against any belief in any disease whatever being a blood-disease. I am ashamed, sir, to have occupied the Society so long; but, if you will allow me, there is one more point on which I will speak. Pathology, I think, of all studies, would be most repulsive, if it were not for some hope of utility coming out of it; and I noticed in the discussion last time it was said our best hope of the remedy of cancer is in holding that it is a local disease. Now I venture to hold the very opposite of that. We have failed in hundreds and thousands of cases, thousands upon thousands—for years and centuries past we have failed to cure cancer as a local disease. Every excision of. cancer followed by return is a failure—even the largest and the roughest attempt to cure it as a local disease. If we have any hope at all of curing cancer, it must be in the study of it as a constitutional disease; for, as far as therapeutics yet have proceeded, nearly the whole power of therapeutics is that of constitutional remedies against constitutional diseases. If I look—and I do look—for a hope of recovery from cancer, it is in such a fact as this, that we have a clear remedy for syphilis—a remedy as distant in all conceivable relations from the disease of syphilis as any one fact in the world is from another; and, moreover, that the remedy is of avail not merely for the existing disease of syphilis in the person first inoculated, but in the offspring. What can we conceive as passing from a male parent to a child to produce in him syphilis? Well, what passes is entirely inconceivable—some material; but, whatever that material may be, it is alterable—in our plain sense, curable—by the same remedy as would have cured it in the parent. Therefore, I repeat, if there be a hope, it is in the earnest constant study of the constitutional characters of cancer, that some say there may come to us a remedy as little expected as mercury must have been before it was introduced for syphilis. But not less sure than mercury may be the cure even of inherited disease; for mercury clearly cures inherited disease of syphilis to a first and even to a second generation. Therefore, with many apologies for having so long occupied the Society on this occasion, I venture to hope that I may have proved that the constitutional element of cancer is so important a study, that we should be exceedingly anxious in no sort to depreciate it—important not merely for the learning of the whole pathology of the disease, but even, if we may so hope, for its internal remedy.

Mr. ARNOTT: I am afraid, sir, that the eloquence of Sir James Paget has, for the present, deprived us of the pleasure of hearing many of the speakers whom we expected to hear to-night upon this important subject; therefore, I, as one of the junior officers of the Society, feel that it is incumbent upon either myself or the medical secretary to fill the gap while other medical men, far more fitted to speak upon the subject, from their greater experience and their greater learning, are gaining time to consider what they shall say in reply (as I almost venture to trust) to Sir James Paget, or it may be in confirmation of what he has laid before us. But it has seemed to me, sir, in listening to the wonderfully lucid speech of Sir James Paget this evening, as also in reading the no less, as it seemed to me, able address of Mr. De Morgan in the papers of last week (for it was my misfortune not to hear that address), that the subject is so very vast, and the many points which have been brought before us by these eminent speakers have, some of them at all events, been so embarrassing, from the almost necessary confusion between observation and hypothesis, that it is almost impossible for us to hope to gain very much more by such a debate as this than to come to some tolerably clear agreement, if that be possible, upon some one point that has been raised. And what has struck me very much this evening has been the fact which Sir James Paget pointed out, but which, I confess, had not struck me in reading Mr. De Morgan's paper—that those who hold apparently the local origin of cancer as distinct from its constitutional origin and nature, really, at the same time, admit to so large an extent the part played by the constitution, that Sir James Paget was able to quote, in opening his speech this evening, some sentences of Mr. De Morgan's address, and to say that he entirely agreed with those observations; and he then proceeded, in his own eloquent and quite unique manner, to enunciate with still greater clearness how his observations, which had, I confess, seemed to me to be opposed to Mr. De Morgan's, really coincided in the main with what he had laid down. I fancy, therefore, that one must admit, in starting, some great part played by the constitution in the production of cancer; but I confess that I have not been convinced (although I have been much shaken by what Sir James Paget has put before us) by all his arguments. We must all be grateful to him for informing us of the very much higher ratio of cases than we formerly believed, in which the hereditary transmission of cancer is an undoubted fact. Hitherto, of course, I have only been able to observe hospital patients; I have, therefore, suffered from the drawback which Sir James Paget suffered from in his younger days, of not being able to get very clear evidences of the former family history of patients suffering from cancer; and I confess I had come to the conclusion that many of my seniors (I confess it, of course, with appropriate shame) had rather overstated this fact—that they had made rather more of the inherited nature of cancer than the facts warranted us in accepting. But, granting all that Sir James Paget has told us of the clear inheritance of cancer, it does seem to me that that does not throw very much light on the question. He himself admitted that local diseases were inherited as well as constitutional; that fatty tumours, cartilaginous tumours, and especially cutaneous cysts, were as often clearly transmitted from parent to offspring through several generations as the most virulent cancers; but he drew a very important distinction; he pointed out that it was in the manner rather than in the fact of the inheritance that the constitutional nature of cancer was especially striking. In following closely what Sir James Paget was saying upon the subject, it seemed to me that, if one had time, even five minutes, to consider it, and to think of the cases one had seen and the observations one had read in the works of others, one might meet some of the remarks of Sir James Paget on this point. I think, for instance, that one explanation of the alteration in the manner of inheritance between cancer and other tumours consists is this, that the other tumours (in which group, I suppose, Sir James Paget would include almost only fatty, bony, and cartilaginous tumours and some cysts which are now generally spoken of as tumours in the sense of new cell-growths) are, for the most part, hypertrophies of a single tisssue. They are not heterologous formations; their structure is very different. For instance, the mother of a number of children has a cancer in her breast; that cancer might appear on any other part of her body; it might appear, for aught we know—although certain investigations proceeding in Germany may correct us on this point—in muscle, in bone, or in any other part of the body. Accordingly, if the mother transmit this tumour taint, this taint of scirrhus, to her offspring, it might show itself in some other part of the body. But, if the mother had a fatty tumour, if she had an ordinary lipoma, she could, so far as our knowledge of pathology goes in these matters, only transmit that tumour to her offspring in such sort that the child should have lipoma in the same tissue. I do not say in the same part. I observed that Sir James Paget did not insist upon the same part being affected, although it may possibly be so in a certain number of cases. But it would be in the the same tissue. So with a bone tumour, and so with a cartilaginous tumour. In another very striking part of Sir James Paget's speech, he asked us pointedly why we do not find a local recurrence in cancer, as we did in those tumours which he first, in England, pointed out to us as recurrent tumours—tumours which we, of the younger school, are beginning now to call sarcoma. Here, I think, the histologists might come to our rescue, and help us with a ready answer. Sir James Paget said it is not anything in the physical attributes of the tumour; for what propagates itself so widely as osteoid cancer, which is one of the hardest lumps we meet with in the body, in the way of new growth? What propagates itself so constantly and diffusely as scirrhus of the breast, one of the hardest tumours in the body? But it seems to me that that is hardly the point. It is not the gross hardness or softness of a tumour, although I believe that has a large share in the diffusibility of a tumour throughout the body, but it is the distribution of the elements of the tumour. In saying this, I feel great diffidence, and I wish I had had time to consider what I am about to say more fully, because I am reminded at this moment that, in making this observation, I am also at issue with Mr. Simon, for he seemed to me to somewhat underrate the value and importance of the mobility of the elements of a tumour. If I remember rightly the report of his speech, he called it the accidental mobility of the elements of new growth. I may, perhaps, be permitted to illustrate what I mean by some rough sketches that I have made with reference to the point raised by Mr. Simon. When we find, as I think we do for the most part, that the mobility of the elements of tumour stands in direct ratio to its malignancy, other conditions being the same (setting aside for a moment the fact of constitutional disposition), I think the observation is one of the greatest importance, and we should not lightly pass it by. In this diagram, which roughly represents a section of a scirrhous carcinoma of the breast (correctly described by Sir James Paget as one of the hardest met with in the body), it will be seen that, in the alveolated fibrous stroma, the cells are lying perfectly loosely and detached from one another, floating in clear fluid, therefore liable at any moment to be hurried off by a lymph-stream or blood-stream, or through connective tissue, to other parts of the body; whereas, in the other tumour, a chronic mammary tumour, in which a somewhat similar arrangement of elements is seen, viz., a fibrous stroma with included spaces filled in with cells, the cells are not epitheloid, but epithelial; they are, therefore, in close contact with one another, not easily detached and hurried away. In the cancer of infants, that cancer which is only met with in young children, glioma of the eyeball, the small round-celled sarcoma, the cells are found to be united by only a very diffluent creamy fluid; they are, therefore, liable to be detached and hurried to distant parts, to grow widely, and insinuate themselves into the interstices surrounding the tissues; and accordingly we find that, according to one of the best monographs upon glioma recently issued from the German press, glioma is, of all tumours, one of the most malignant, there being only four or five cases in the whole history of gliomata that have escaped death. In spindle-cell sarcoma, the recurrent tumour, or something like it, of Sir James Paget, the cells are bound together—it is true not very firmly—by a sort of grumous intercellular material; therefore, we do not find the spindle-cell sarcoma nearly so malignant as cancer; never affecting the lymphatic glands, affecting distant parts of the body. So with other tumours. In epithelioma, for instance, which is nearly as malignant in some cases as cancer, for the most part is not so malignant, here also, for the most part, we find that the elements are not capable of being hurried away; they are epithelial elements, and one of their chief attributes is, that they stick closely together, as the large epithelial elements of healthy skin. But, with regard to rodent ulcer, until the speech of Sir James Paget to-night, I have been led to regard it as a form of epithelioma, but I must now reconsider that point. In some dissections that I had made, it seemed to me that rodent ulcer was a form of epithelioma; for one sees, deep down, an appearance like the cells of the rete mucosum, and occasionally the bird's nest bodies; the cells are more closely coherent than in epithelioma, because they resemble more the cells of the rete mucosum, not the epidermis cells; therefore, they have a still lower malignancy than any ordinary epithelioma. But in simple tumour, fatty tumour, fibrous tumour, there is nothing in the mobility of the cells which would tend to their reproduction in other parts, or their diffusion throughout the body. Therefore, it seems to me that, although histologists may, as Mr. Jonathan Hutchinson seemed to indicate, have taken too prominent a part lately in the discussion of the theories of cancer, we have much yet to learn in the pathology of cancer by having regard to the minute structure of tumours rather than their gross characters. And, if I may be permitted to refer for a moment to one other point, it would be this: the position of tumours affects, to a large extent, their malignancy. Where one cannot explain malignancy by referring to the anatomical characters, I think one may explain a great number of cases by having regard to their position. I have dwelt upon this point elsewhere, and I do not wish to be tedious by a recapitulation to-night; but I will briefly say that such observations as I have been able to make upon this point have shown me, I think with tolerable clearness, that, other things being the same, much of the malignancy of certain tumours may be explained by their position, and that, in proportion as that position is subjected to the conditions of warmth, of moisture, of great vascular supply, of free lymphatic connections, and of occasional exalted functional activity, do we find that the tumour is likely to be malignant. In other words, epithelioma may attack the forehead, the bridge of the nose, or the cheek, and remain there a quiet, indolent, passive sore, ulcerating its way, still making very little progress, not affecting distant parts for a period of years; but let the same disease, almost histologically the same, the same in its grosser characters, attack such a position as the frænum of the tongue or the floor of the mouth, a part which is warm and moist, and has free vascular and lymphatic connections and occasional great functional activity—let it attack a part of the sort, and we have speedily, almost within a year, the death of the patient, and with, too, an affection of the lymphatic glands under the chin, and possibly deposits of the same epithelium in distant parts of the body. I think, if we can come out of this discussion with one fact only well settled, we shall have done something. Admitting, to the full, that there is a constitutional something undergoing the local appearances of cancers, we must admit, at the same time, for Sir James Paget himself permits us to do so, that there is a similar, or a somewhat analogous constitutional something underlying the simplest tumour; and if, by bearing this fact in mind, and taking into consideration with it the anatomical peculiarities of tumours, we are able to say that such an one should be malignant because of its anatomical peculiarities, or of its position, and to another will be innocent, because of its anatomical peculiarities and position, then, I think, we need not be driven to search for any hypothesis of a blood-disease in the sense of syphilis or gout.

Sir W. GULL: I only wish, sir, that I had Sir James Paget's power of exposition, because, if I had, I think I should be able largely to demolish the charming structure which he has set before us of the constitutional origin of cancer. If you consider for a moment, and analyse the word "constitution", you will find that it has too different meanings—a meaning with which, I think, we all agree, and a meaning with which we disagree. I take it that, when Sir James Paget contends for the constitutional origin of syphilis from its hereditary tendency, he must refer to some condition of the ovum or spermatic fluid, or the two together, which, whether conceivable or inconceivable, exists. If we carry our minds to the very beginning of the impregnated ovum, and say that the mother or the father is to convey to this ovum a cancerous tendency, that must lie outside the blood anyhow, for there is no blood then or there; therefore, the constitutional question must have relation to the constituents of the ovum at that time. Now, if we consider how this ovum develops, how (to use the technical expression, which really has no sort of meaning) it "differentiates" into the various organs of the body—that is, that they form somehow or other—then, I take it, we must at least trace this constitutional condition to a local seat. The ovum has differentiated into the various textures of the body, and has been exhausted, if I may so say, in the formation of the organs. I think we are bound to admit that, where the parents, on one side or the other, have had cancer, it is apt to appear in the offspring; yet we are bound, by the laws of all scientific inquiry, to believe in localisation somewhere. As the lawyers say, *latet dolus in generalibus*. Here, I think, is the mistake. We have got hold of a general expression in the word "constitution", which was true enough in the ovum, but ceases to be true in the adult, because there we can realise the conditions of localisation, and there we find that the ovum is differentiated into the various tissues of the body. And, if there be one physical fact in the history of cancer more distinct than another, it is this, that certain of the organs are much more liable to it than others, whether it be the female breast or the os uteri. Admitting all that can be said about the constitutional origin, there are undoubtedly local seats of cancer. I challenge the constitutional theorists to tell me why it should not appear in any particular part of the intestinal tract, and why there should be certain portions of the intestinal tract, which it especially and particularly affects. There are certain points which we know it will affect—the end of the œsophagus, the pyloric end of the stomach, the duodenum; then we get over twenty feet of intestine which it does not affect, except secondarily, though it is equally vascular. There are very few primary cancerous ulcers of the jejunum; they now and then occur, but so rarely, that Sir James Paget puts them at one in five hundred, and, perhaps, they are rather more rare than that. I can only remember one case of cancer of the jejunum, and that was from contact with a cancerous part. Then we come to the lower end of the ileum, then to the cæcum, then to the sigmoid flexure. Sir Benjamin Brodie said that, when you had cancerous disease of the colon, it was never higher than the sigmoid flexure. I suppose he meant, escaping the cæcum. The great fact still remains, that cancer does show a predisposition to appear in special parts of the body. Therefore, while I fully admit the constitutional predisposition, I can only admit it when I have to do with an undifferentiated ovum. So soon as that ovum is differentiated into tissue, then I say that what is called a constitutional condition becomes a local one. I cannot but think that, if we could investigate the first beginning of cancerous change, and could take away the part, we should for the time rid our patients of the cancerous tendency in that particular part or place. My own belief is that, when you talk of blood-disease, you are lost in conjecture; when you begin to explain blood-disease by reference to such a disease as gout, you are still more lost in conjecture. For there is no proof whatever, as far as I know, that gout is a blood-disease, nor, indeed, that typhoid fever is a blood-disease. The blood may be a channel of disease whereby certain poisons may affect that texture; but (as I used to say when I lectured on medicine), assuming, if it were possible, a man to be all blood, he would not have typhoid fever, and he would not have gout. It is the textures which lie outside his blood that are the seat of those conditions which we call gout and typhoid fever. The blood is a very indifferent fluid; it has elements which are not indifferent, viz., the red and white cells; but quasi-blood is a singularly indifferent fluid; it has to be differentiated into certain conditions of tissue before it can assume and present the morbid phenomena of disease. Therefore, although I am not in the least able to supply all the steps of the reasoning, or adduce all the facts by which, perhaps, my mind would be influenced, I cannot but think that the question of constitution requires reconsideration; and that even syphilis, as a constitutional disease, may very much be reconsidered. Take the case of hydrophobia. I only once saw a man (and the practice of medicine supplies us with many such instances) who was bitten by a mad dog, and it was thirteen years before he died of hydrophia. Where did that poison lie? Not in his constitution, I take it, if you mean by constitution floating about anywhere and everywhere. I think it lay in the tissue that was bitten—that the poison lay there latent, producing but little effect till a certain time, when some changes (this is hypothetical) came over the tissue and infected the man, and he died of the disease within thirty-six hours. I can hardly conceive it possible for that thing to have been floating about thirteen years, and then to have infected him so suddenly as to carry him off in thirty-six hours. I think it must have been lying in his tissues. Therefore I think, in dealing with malignant disease, as I have dealt with it practically, you may regard it as a local condition of the tissues then and there, however much that local development of it may have had to do with some inherited predisposition which you may properly term constitutional. I do not, then, quite partake of those feelings of hope expressed by Sir James Paget, that we may succeed in finding some remedy which shall just have the same effect on cancer as that which has been produced on syphilis. It may be so, or it may not. With regard to the change that takes place, we have been told that it is a cell-change. Well, perhaps it is not a cell-change. Perhaps it is the fluid outside the cells. Who knows? A cell is an organism of enormous extent; it is only our eyes being so feeble that makes us look upon it as a small, indifferent thing. It may be infinitely more delicate than those great things which we see under the microscope, even though it be the fiftieth of an inch in diameter. I was therefore a little surprised at my friend Sir James Paget, when he referred to osteoid and scirrhous tumours, thinking that their hardness might be a kind of obstacle to their infecting the body so readily. Oh! those fluids, those queer things, those endosmoses and exosmoses, may act in places and parts that we know nothing about. Besides this, it is not unimportant, as Mr. Arnott has said, that it depends very much upon the place in which the tumours are situated. There are many accidental positions. It is notorious that affections of the bone where the veins are so large, and where there is a peculiar condition of the veins, are very prone to spread. We know that abscess in bones is constantly attended by secondary abscess over the body. So that hardness alone would not do; we must regard the accidental conditions of the situation of the part. If a man come to us with a great lump in his side, we are obliged to tell him that we believe it is malignant disease. Of course he can only come when he gets it of sufficient magnitude for it to be palpable, or for some suffering. We can make no diagnosis before, and, if we could, we could not touch it. Therefore the practical treatment of cancer by local operation must only refer to parts outside. In the Clinical Society, I once said that if I were to become the victim of cancer, I hoped it would be in my retina; and I have the same feeling still (though the case I spoke of was, as my friend Dr. Murchison has shown, one of spindle-form sarcoma), because I should soon observe the defective vision; the eye would be quickly extracted, and I think I should have a long immunity from the disease. Certainly clinical medicine shows that cases of operation on the eye have a longer immunity from secondary cancer than cases of operation elsewhere. I think that is a highly suggestive fact.

Mr. SQUIRE: I think the arguments of Sir William Gull against cancer being a general disease, are just those that tend in the opposite direction. He has referred to hydrophobia as an illustration drawn from general disease. Now I should say that the characteristic of general disease is that it affects particular organs. We know that scarlet fever will affect the kidney and the mucous membranes, generally missing the lung. Measles affect the lung, missing the kidney. With regard to the question of blood-disease and local disease, it has often occurred to me that we forget that one half of the blood is outside the vessels, and that the fluid in the tissues is probably equal in bulk to the fluid of the blood, an interchange going on constantly between them. That consideration merges much of the differences which arise. No doubt in the case of hydrophobia the poison must have lain in the tissue for that length of time. That difference in the incubation period points not to any difference in the mode in which the poison acts when once it infects the circulation, but the length of time that interposes before it has got there. It was remarked by Dr. Livingstone that the bite of an animal affected him years afterwards. In another case, there was a lump after the bite of an animal; and when certain suspicious, but well marked, symptoms came on, this lump disappeared.

Dr. PAYNE: I should not have risen at this late hour were it not that I should wish to suggest, after the able exposition we have heard of the two different sides of this important question, that the discussion could hardly be carried much further without a somewhat clearer understanding as to the meaning of the terms which are employed. I do not think that the various speakers, Sir James Paget, Sir Wm. Gull, and others, have used the terms "constitutional" and "local" precisely in the same sense. Nor do I think that the term "cancer" is one which is perfectly clearly understood. I should be sorry to go, at this hour, into any lengthened discussion of the meaning of either of these words. But I presume one great element in the meaning of the word "constitutional" is this—an injury or change in which the general disposition of the body has a very large share, and the amount of external cause, injury, irritation, and so on, has a comparatively small share; but between those cases in which the internal causes appear to account for everything, and those common diseases, such as cold, pneumonia, inflammation of all kinds, in which the external causes appear to account for everything, there are infinite gradations. That is one sense in which certainly the term might be used, and that covers both those constitutional diseases which are acquired, and those which are inherited or congenital. That is to say, if a person have received into his body the poison of syphilis from any source, any injuries or irritations to which he is exposed will produce a different result from that which would be produced in the case of a healthy person. And the same, if he have inherited any predispositions. Therefore that, I suppose, will cover the point which was suggested at the last meeting by Mr. Simon, and which is, doubtless, extremely important, viz., that cancer has, whether it be in the blood or not, great affinities with diseases such as tubercle and syphilis. He spoke, I imagine, rather of the general affinities, and in respect of the course and duration of diseases; but I would venture to suggest that there are other respects, more distinctly anatomical, in which these diseases may be compared, and which, I think, are of very great importance in their general result. But, before doing this, it is absolutely necessary to consider, for a moment, what we do mean by cancer. I imagine that by cancer has often been meant something extremely destructive, but which really could not be named until it had proved, by its actual effects, its destructive properties. Well, when it was found that things which had these destructive properties, could sometimes be recognised at a period earlier than these destructive properties became visible, then, of course, it was necessary that the object should be defined by the qualities or properties which were common to it throughout the whole of its existence, and not those which became developed after a certain time. Therefore arose the necessity for an anatomical definition; and such an anatomical definition and classification of cancers, and things allied to cancers, I cannot but think will always be necessary. This is really not by any means a novelty (although the opposite view may have been the first), because it is precisely what was attempted, at the very beginning of the century, by Abernethy, who said he would classify tumours according to their structure. If people objected that that was not enough, because they could not find out what their structure was till they were removed, and also because their properties constituted a very important difference, still he said, "All you can do is to classify things as you see them, by their structure or general qualities, and then make notes of the properties and dispositions which are attached to those structures." And that is really all that we can do now. Then, I think, we must have an anatomical definition of cancer. But it is fortunate, to some extent, that with that anatomical definition is associated a certain feature of growth. I suppose that all persons are agreed, up to the present time, in describing a growth as cancer when, whatever its minute character might be, it had already begun to infect or infiltrate a neighbouring part, and that this is the definition which is given or accepted by Dr. Walshe in his book. Then, of course, it would be always clear that it could not be possible to exclude from the class things that had not already done that, because you might find, and do often find, things otherwise agreeing with cancer which have not yet arrived at that stage, but which, for the most part, might do so, and with most external tumours that is the case. Now, what does infection or infiltration mean? I think it has a distinct anatomical meaning, and it leads us to what is, if anything is at all, an anatomical definition of cancer. It is very clearly seen, or suggested at all events, by the diagram which Mr. Arnott has placed on the board; and it is really this, that a change, or growth, or something which began in one tissue has passed over from that part in which it originally began to another which is adjacent to it, and not of the same kind. For instance, the cells which Mr. Arnott represented, enclosing the alveoli of scirrhus, are, of course, as we may say, far more like epithelial gland-cells, more like cells of the gland near which they arose, than are the bodies normally found in connective tissue, whether they are precisely like gland-cells or not. And so much is that recognised, that almost everyone, in describing cancers of that kind, agrees that they have something of a glandular character, that is, the parts which were not originally like glands, nevertheless, have become, to a certain extent, like them; that is to say, that quality, or mode of growth, or something which originally belonged to one tissue, has passed over to another, and I imagine that anatomically one can give no better definition of cancer than that—that there is a kind of duality in its structure, that one part of that structure is of one kind, and another part is, at all events, different, whether actually of another kind or not—another kind essentially. At all events, it is different in some respects. Now, let us consider, what this simple fact, as Mr. Arnott pointed out, means. It means this, that when any disease or change has once bridged over that very narrow but very important interval which separates tissues of one kind from tissues of another kind, it is almost as good as if it had already spread all over the body, because there is no longer in the whole course of its transmission through the body any barrier nearly so complete and incapable of being crossed as that which it has already passed. That explains the old characters which are so much relied upon by surgeons, of adhesion of the skin, and fifty things more of that kind. It means that something which did not begin in the skin had gone to the skin; and, having gone to the skin, it might go anywhere else. Therefore, I think this original property of infection, which includes essentially the dispersion all over the body, is, in one sense, an anatomical fact. Of this anatomical fact, this passing over, this morbid change from one part of the tissue to another adjacent tissue, there are many explanations. It has been explained as a matter of simple growth. It is explained in the case epithelioma, I confess with a great deal of reasonableness, as a matter of growth; that the skin leaves its proper site and grows inward. What makes it to do so we do not know. The same explanation is extended to other forms of growth. There, perhaps, we lose ground. At all events, we may say that it is at present less clearly established that this transference of growth does take place in the case of other tumours. Then there is another explanation, namely, that the growth in one kind of tissue infects, or causes a different kind of growth in the adjacent tissue, and that what I suppose is to some extent regarded as the opinion of Virchow, who talks so much of epithelial infection, is essentially the same as was suggested at the last meeting by Mr. Simon, who said he thought the virus, or poison, or material whatever it was that stirred up cancerous growth, had something in it analogous to spermatic elements, and acted not as a simple stimulus, but as a physiological stimulus; only, he imagined, that this did not necessarily reside in, or was not always atttached to, cells, although it might originate in them, but might be distributed throughout the body independently of those. Allied to that is another opinion which is exceedingly plausible, but has very little solid foundation at present, that is that there is a conjugation also comparable to genesis. Now, in all these views, my question might imply something much more delicate than cell-life, something coming out of a cell, but infinitely smaller and more refined. Then, however, it becomes a very important question, whether any positive evidence of very minute anatomy of growths, and so forth, bears out any of these views. If we could really detect microscopically or chemically something material, and call it cancer, and put it in a test-tube, and get it under a microscope, it would be a comparatively easy task. That has not been done yet, but it has been pretty nearly done in respect of tubercle. In a great number of cases, it is clear, whatever the material is that stirs up the new growth, that it is transmitted through the body in attachment to cells. If this be the case, we have here a constitutional theory of cancer which deserves that name at least as much as tubercle, and as much as syphilis, in which something is introduced from without. At the same time, it is something which is so far material that it is always attached to local growth, and therefore is, we will say, essentially local. It seems to me that, in this sense, it might bear both terms, constitutional and local. Whether this material could ever exist in a body in any diffuse form, of course, is at present to us unknown. I do think that, to some extent, there may be a combination of the two views. With regard to the hereditary condition, we owe a great deal to Sir James Paget for having separated the common argument drawn from inheritance, and given it a far more definite form. Commonly, it is urged that cancer must be constitutional, because it is hereditary; whereas, he has shown us that it must be constitutional, if constitutional at all because it is hereditary, only because it is hereditary in a particular way. Then what is inherited must surely be not anything absolutely separable from a body, and therefore in the nature of a poison, but something with some property of tissue. I do not wish to add anything to what has been said upon that point, but I would suggest that the argument which Sir James Paget used about the disease of the uterus and mamma, namely, that these are organs which, in the female sex, are subject to degeneration at a comparatively early period, of the same kind as that which the whole body undergoes, in the male, at a somewhat later period, is surely in favour of the predisposing cause of cancer being a condition and property of tissue rather than anything else in the whole body—either a property of the body as a whole, or a property of the blood, or anything else, because it is tissue that is changed. I venture to request, on behalf of those concerned in histological inquiries, a little more indulgence than we have received from some speakers in regard to the inquiry whether we cannot define objects by the properties they present at all periods of their career. And, if these characters are extremely minute, that surely is rather the misfortune of histologists than their fault; but, until we have a precise enumeration of all the minute characters of tumour, it will not be possible to construct text-books and works of reference in such a way as that we shall know precisely to what we are referring.

The discussion was then adjourned.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

FEBRUARY 5TH, 1874.

RUTHERFORD HALDANE, M.D., President in the Chair.

Enlarged Prostate and Calculus in Ureter.—Dr. JAMES RITCHIE showed a good example of enlarged third lobe of the prostate, which had caused complete retention; also a calculus from the ureter of the same patient, the presence of which seemed to explain severe pain lasting at intervals for four years, and which seemed to have caused a large abscess in the vicinity of the kidney.

Intracranial Tumour.—The secretary, Dr. MUIRHEAD, read a paper by Dr. LAWRENCE of Montrose, on a case of intracranial tumour, with remarks. The case was chiefly interesting from its long duration, the careful way in which it had been watched and treated, and the absence of many of the more usual indications of tumours of the base of the brain. Vision had been completely lost, but few other nervous symptoms had been noticed, and only on three occasions was there any epileptiform seizure. Death took place somewhat suddenly. The examination showed considerable pressure on the hemispheres, from a very large collection of fluid (twelve ounces) in the lateral ventricles; the tumour itself was pulpy, and its connections and relations had been apparently ill defined.—The PRESIDENT explained the absence of mental symptoms, by the probable slow formation of the fluid in the ventricles, or as a passive dropsy, and the consequent adaptation of the brain to its circumstances.—Dr. MATTHEWS DUNCAN ascribed the great variations in the symptoms of brain-cases, rather to our imperfect means of observing them, than to any real impossibility of classifying them in a scientific manner.—Dr. BATTY TUKE referred to the discrepancy between the symptoms in cases like this and those that Dr. Ferrier's experiments on the brain would lead us to expect, and bore emphatic testimony to the carefulness and accuracy of Dr. Ferrier's experiments, in opposition to the adverse opinions lately enunciated by Dupuy.—Dr. G. W. BALFOUR did not see the connection between a case of diseased human brain and experiments on animals, and alluded to the manner in which Dr. McKendrick's experiments on the brains of birds produced quite different results from what was found in the diseased brains of men.

Relation of the Cranial Contents to the Pressure of the Atmosphere.—Dr. CAPPIE read an elaborate paper on this subject. In it he discussed the views and experiments of Dr. Kelkie of Leith, examining the various factors acting on the vascularity of the brain. Among these were "the greater or less activity of certain dynamic forces within the skull itself, and, as a cofactor, the peculiar arrangements of the bloodvessels of the brain." The subject, confessedly a very difficult one, was enforced by copious argument and apt illustration, but was quite destitute of any original experiments.—A short discussion followed, in which the President, Dr. Batty Tuke, Dr. Matthews Duncan, and the author took part.

Use of the Aspirator in certain Cases of Urgent Retention of Urine.—Mr. JOSEPH BELL described a case in which he used the instrument (so far as he knew for the first time in Scotland with this object) last June, to relieve retention of three days' standing in a feeble old man. The patient, besides having a weak heart, severe bronchitis, and emphysema, was dropsical, suffering from uræmic poisoning, being almost comatose and slightly delirious; his scrotum was infiltrated, red, and brawny. His urine, after it was drawn off, deposited copious albumen. A No. 2 needle was introduced in the middle line above the pubes, and at once withdrawn. No inconvenience followed its use; and an instrument was passed next day, and the stricture was rapidly dilated. The patient recovered. Mr. Bell did not think that many cases admitted or required such treatment, but, in similar urgent ones, where age and feebleness contraindicated perineal section, and an enlarged prostate prevented tapping by the rectum, he believed this simple, safe, and effectual operation was advisable. It was, in his opinion, easier and better than tapping from the rectum.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH.

AN ordinary meeting of this Branch will be held at the rooms of the Medical Society of London, on Wednesday, March 25th, at 8 P.M., when Dr. Anstie will read a paper on "The Prognosis and Treatment of Chorea".

A. P. STEWART, M.D.,
ALEXANDER HENRY, M.D., } *Hon. Secs.*

London, March 12th, 1874.

LANCASHIRE AND CHESHIRE BRANCH.

A SPECIAL general meeting of the above Branch will be held in the Medical Institution, Liverpool, on Wednesday, March 25th, at 4 P.M., to consider the Report of the Subcommittee of the Parliamentary Bills Committee on the Instruction and Registration of Midwives.

Dinner at the Alexandra Hotel, Dale Street, at 6 P.M. Tickets 7s. 6d. each, exclusive of wine.

Gentlemen intending to dine are requested to notify to the Honorary Secretary as early as possible; in any case, not later than Monday, the 23rd instant.

A. B. STEELE, *Honorary Secretary.*

Liverpool, February 28th, 1874.

WEST SOMERSET BRANCH.

THE spring meeting of this Branch will be held at the Royal Clarence Hotel, Bridgwater, on Thursday, April 2nd, at 5.15 P.M. The following question has been settled by the Council as the one on which each member should be asked to express his opinion at the said meeting:—"What is your opinion as to the relative value of chloral hydrate and opium in allaying pain and inducing sleep?"

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, March 2nd, 1874.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE next meeting of the above Branch will be held at Newport, Monmouthshire, on Friday, April 10th, 1874.

Gentlemen intending to bring forward communications are requested to send the headings to the Secretary by the 24th instant.

ALFRED SHEEN, M.D., *Hon. Sec.*

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE fourth ordinary meeting of this Branch was held at the College Green Hotel, on Thursday, March 5th, at seven o'clock. EDWARD LONG FOX, M.D., President, in the chair. There were present fifty members and five visitors.

Papers.—1. Dr. J. G. SWAYNE read a paper on the Induction of Premature Labour, and gave statistics of a number of cases illustrating the subject.

2. Dr. SHINGLETON SMITH read a case of Leuco-sarcoma, which was treated in the British Royal Infirmary, and showed an interesting series of microscopic specimens of the tumour. Dr. Martyn, Mr. Tibbits, Mr. W. M. Clarke, and Dr. Goodridge, joined in a discussion which followed.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH; GENERAL MEETING.

A MEETING of this Branch was held in the Board Room of Addenbrooke's Hospital, Cambridge, on Tuesday, March 10th; D. B. BALDING, Esq., the President, in the Chair.

Combined Meeting.—Professor HUMPHRY proposed, and Mr STEAR seconded, a resolution that the combined meeting of the South Midland, East Anglian, and Cambridgeshire and Huntingdonshire Branches, which it was agreed to hold in Cambridge in 1874, should be postponed till 1875. This was carried unanimously.

Meeting in 1874.—Upon the proposition of Dr. BRADBURY, seconded by Mr. WILSON, it was decided that a Branch meeting should be held this year at St. Ives, on Wednesday, May 27th, under the Presidency of Dr. GROVE.

New Members.—Dr. W. Armistead and Dr. Bacon were elected members of the Branch; and E. M. Beckett and G. Wherry, Esqs., members of the Association and of the Branch.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 21ST, 1874.

HOSPITAL OUT-PATIENT REFORM.

THE meeting of the Hospital Out-patient Reform Association, which was held on Wednesday evening last, marks the completion of one important stage in the process of agitation for reform. Considering the benefits which our metropolitan hospitals have undoubtedly conferred, and are still conferring, upon suffering humanity, and the amount of time and trouble gratuitously bestowed upon their management by their respective committees, it would have been unwise, we think, to have neglected an appeal to those committees in the first instance, asking them to do what, perhaps, at the same time, it was felt they were not all likely to do, viz., voluntarily reform the abuses of their institutions from within.

This, as we learn from the report of the committee for 1873, was the principal work in which the executive of the Association was engaged last year; and the results of that appeal are not very encouraging to those who think that the present managers of hospitals may be safely left to remedy any defects in the working of their institutions. Out of forty-eight hospitals appealed to, we find that only eleven were able to state that unqualified students were not permitted to prescribe for out-patients, and but nine stated that any attempt was being made to check the admission of persons who were able to pay. Even at places where such an attempt is being made, as the Moorfields Ophthalmic Hospital for example, there is still, it would appear, plenty of room for improvement; for we were recently informed by one of the surgeons to that institution, that a patient, who had come up to town, prepared to pay fifty guineas to one of his colleagues for an operation, had, on being asked a larger sum, been admitted to the hospital, and operated on by our informant for nothing! Curiously enough, too, we find that the only hospital which appears to have defended the employment of unqualified students is the Lock Hospital, which, receiving £800 a year from its out-patients in shillings and sixpences, takes probably three times that amount out of the pockets of private practitioners, without even the poor pretence of affording superior advice.

All hope of reform from within (unless in exceptional instances, such as the Westminster Hospital) being thus taken away, there are two courses open to those who desire to remedy the evil state of things which at present exists in the out-patient departments. First, they may seek, as this Association is doing, to unite the profession in an endeavour to get rid of the more glaring abuses of the system; or secondly, they may lay before the public, whose pecuniary support is necessary to hospitals, the facts which are known and acknowledged inside the profession, and with which the articles in the *Westminster Review* and the *Pall Mall Gazette* have already done something to familiarise the more intelligent portion of the public.

The former course is the one which seems to us the more desirable; and we cannot help regretting, with one of the speakers on Wednesday night, that there was not a larger gathering of general practitioners on that occasion. The question, as Dr. Rogers showed very convincingly, is one that especially concerns them; and, unless they show some greater interest in it than they have done, they must expect to see their private patients slipping off, as Dr. Rogers says they do in Soho, to the various institutions in their neighbourhood.

We cordially endorse the opinion expressed by Mr. Fairlie Clarke, that the Association is in advance of public opinion on this subject, and we trust that it will continue its agitation until, as he predicts will be the case, the much-needed reforms shall have come to pass, as they surely will.

THE RETURN OF THE TROOPS FROM THE ASHANTEE EXPEDITION.

BEFORE this is placed in our readers' hands, a portion, at least, of our gallant troops will have arrived at Portsmouth. The 42nd, who seem to have borne much of the heat and burden of the day, will not reach England for some days later; and we are glad to learn that Major Macpherson is recovering very satisfactorily from the effects of his severe wound. Although the bullet passed fairly through his leg, it fortunately struck the fleshy part of the calf, and will, therefore, leave no permanently disabling effects behind. The men, we believe, will be found to have suffered little from their hard work or exposure, and this may be attributed not only to the excellent sanitary regulations enforced, but also to the tonic and stimulant influence of victory, and the foresight of Sir Garnet Wolseley in not permitting them to disembark from their transports until actually required for service. Although the sick list has been very heavy, the mortality among the rank and file has been singularly small, and we believe we are within the mark in stating that, out of the five hundred or more cases which have passed through the *Victor Emmanuel* since the commencement of the war, only two or three deaths have taken place. This is due not only to the unusually efficient arrangements which have made this hospital ship the most perfect ever launched, but, in addition, to the very prompt manner in which every case of sickness was at once diagnosed and removed from the coast. The malarious poison, being thus encountered at an early stage, was duly neutralised by remedies, and prevented from exercising that disorganising influence on the viscera, which too often happens, when it is permitted to gain a firmer hold. We, therefore, hope that our invalids, after a short period of observation and treatment at Netley, may be enabled, at least in a large proportion, to return to active duty little, if at all, the worse for their experiences in the bush.

We do not anticipate that much real inconvenience will be felt from the want of special sick transport. Any ship can be pressed into the service on such an emergency, and the bad cases will, of course, be specially selected to partake of the comforts, and even luxuries, which we are told await their arrival on board the *Victor Emmanuel*. The return of this vessel may be somewhat delayed by the necessity of calling at Gibraltar on her way home. It is well known that the authorities at that station display an almost morbid horror of infectious disease, and that this frequently leads to the quarantine regulations being enforced with an unreasoning and very vexatious severity. Should the full period of fourteen days be required from the *Victor Emmanuel*, we can well conceive how unsatisfactory this will be to sick and weary soldiers pining for a sight of their native shores; and we hope that, if required at all, this sanitary test may be somewhat relaxed on the present occasion.

It only remains for us to express our satisfaction at the liberal way in which we hear the Government is disposed to act towards the medical chiefs of the late expedition. It is acknowledged on all hands that the arrangements were, in every respect, perfect and thoroughly complete; and that Surgeon-Major Mackinnon has carried out Deputy Surgeon-General Home's original plans with skill and courage. The first named officer, then, has well earned a step of special promotion, and we hope to be able to congratulate him on an honour which now falls to him for the second time in his professional career. Dr. Home, whose ill fortune prevented his seeing the final triumph of an expedition, to whose success he has so largely contributed, in addition to his extra rank, will obtain a good service pension and probably a K.C.B.; and we are sure that these distinctions are only his due for the untiring energy and devotion which established the medical organisation of the Ashantee campaign as one of the most brilliant and successful of modern times.

Nor, let us hope, will others be forgotten who have done good work in various ways; and we trust that the names of Surgeons Gore, Woolfreyes, and others, will shortly appear as the recipients of rewards suited to the substantial services which they have rendered to their country.

HYDRATE OF CHLORAL.

DR. OSCAR LIEBREICH has recently published a paper in the *Berliner Klinische Wochenschrift*, in which he calls attention to the important subject of the purity of chloral hydrate, and the effect which its deterioration may produce on the patients to whom it is administered, and on its reputation as a remedy. The case, he says, is different from that of such a substance as quinine, the adulteration of which will only reduce, but will not pervert, the proper action of the drug. With chloral and other substances prepared by analogous chemical processes, the result of the manufacture may be the formation of compounds which, if administered, produce an altogether different result from that intended. The process of manufacture is one which requires great care; and it seems that it is at least difficult to ensure the purity of chloral, if made in large quantities. Liebeg himself, who discovered it, never attempted to make more than a few grammes at once; and Dr. Liebreich was so convinced, when he brought it into notice as a medicinal agent, that purity was necessary for success, that the first supplies were made under his immediate superintendence. At present, it is manufactured in various places; and the result is that, in some parts of the continent, notably in Saxony and Switzerland, it has fallen into disrepute. Dr. Liebreich has made a collection of specimens of the drug used in cases where it has failed to produce its proper action, and possesses, he says, some horrible chemical compounds which he would not venture to give to a human being. He prefers the crystallised form of chloral hydrate as the most stable. It may contain hydrochloric acid; this is no disadvantage if the proportion remain the same; but, if it increase, it indicates that the formation of dangerous compounds may be going on. Sometimes the hypnotic action is increased; this he attributes to the production of chlorine compounds, which are more readily changed into chloroform than chloral itself is. An acid reaction, arising from the formation of trichloracetic acid, does not show that the chloral is unfit for use, though it weakens its action. In pure chloral, this action is limited; while impure chloral is liable to the constantly increasing production of acid compounds—not trichloracetic acid—of a deleterious nature. Dr. Liebreich remarks that the German *Pharmacopœia* is in error in fixing the boiling point of chloral hydrate at 95 cent. (203 Fahr.). This, he says, is correct for anhydrous chloral; but the boiling point of chloral hydrate is not constant.

THE WEEK'S DEBATES.

THE debates at the Clinical and Pathological Societies have been continued during the week, and have risen to the height of the great subjects dealt with. Those who had the good fortune to hear Sir James Paget's splendid address will feel that the dry skeleton of printed words, however accurately reported, does but feebly represent what was one of the finest efforts of consummate oratory and finished argumentation which could be heard in any assembly. It was an address long to be remembered, and sealed Sir James Paget's claim to be considered one of the greatest orators as well as one of the most able thinkers of the country. It was one such as could hardly be excelled by the greatest living masters at the bar or in the senate.

SMALLPOX caused thirty-six deaths in Vienna in the week ending February 21st, and twenty-one in the week ending February 28th.

DR. J. M. CUNINGHAM, the chief of the Sanitary Department of our Indian Government, will, at the meeting of the Royal Medical and Chirurgical Society on Tuesday next, communicate his views on "Cholera in India".

THE report from Munich on March 10th is, that the number of cases of cholera is decreasing rapidly. Since the commencement of the epidemic, there have been, up to the above-mentioned date, 2,931 cases, with 1,389 deaths.

DR. MORELL MACKENZIE has retired from the post of physician to the London Hospital, after a comparatively short term of service. To the vacant office of Assistant-Physician at the Hospital, Dr. Stephen Mackenzie has been elected.

DR. KELLY, an accomplished and able assistant-physician at King's College Hospital, has been appointed health-officer of the conjoint sanitary authorities of Suffolk. This appointment necessitates his resignation of the assistant-physiciancy at King's College Hospital. Dr. Kelly has long performed the duties of that office, and those of the office of pathologist and curator of the museum, with remarkable ability and assiduity, and his distinguished services will not be lost without great regret, and will no doubt receive some special acknowledgment.

FOR the vacancy caused by the resignation of Dr. Kelly, there can be no lack of highly able aspirants. King's College Hospital has suffered of late years from the loss of its ablest men by want of judgment in filling the permanent posts. It has now among *attachés* of the school, unplaced in the hospital, men no less distinguished than Dr. Rutherford, Dr. Ferrier, Dr. Curnow, and Dr. Baxter. It will be interesting to see what steps in the future will be taken to maintain the *prestige* of the hospital staff, from which it is said to be probable that Sir William Fergusson will, at no distant date, retire.

ANOTHER Vienna professor is to be honoured with a public festival. Only a short time ago, there was a public demonstration in honour of Rokitansky: on Monday last, Hyrtl was to receive, on his retirement, an expression of esteem from his colleagues and pupils; and now preparations are being made for celebrating the completion of Brücke's twenty-fifth year of professorship.

THE Berlin magistrates have chosen Dr. Riess as directing medical officer of the in-patient department of the new town hospital, and have appointed Dr. Trendelenburg to a similar office in the extern department. Both these gentlemen are well known to be skilled in hospital duties. Both are *privat-docents* in the University. Dr. Riess was some years assistant in Dr. Frerichs's clinic, and Dr. Trendelenburg in that of Dr. von Langenbeck.

WE beg to direct the attention of the members of the Metropolitan Counties Branch to the announcement that, at the next ordinary meeting of the Branch, on Wednesday, March 25th, Dr. Anstie will read a paper on "The Prognosis and Treatment of Chorea". We trust that a more numerous attendance will be given than at the last meeting, when a most masterly and valuable paper, by Mr. W. H. Michael, on Public Health Legislation, which we shall shortly have the pleasure of publishing, failed to attract nearly so large an audience as it deserved and called for.

SMALL-POX IN FINLAND.

SMALL-POX has for some time been prevalent in Finland, and the epidemic has lately increased. In Helsingfors, there were in November 18 cases, in December 44, and in January 60 or 70. In 1873, of 272 small-pox cases, 60 died. The German Consul at Helsingfors strongly urges all persons coming from Germany to be re-vaccinated before setting out on their journey.

A NEW GERMAN CENTRALBLATT.

TO the several excellent weekly periodicals published in Germany for the purpose of giving abstracts of current medical literature, another is about to be added, the *Centralblatt für Chirurgie*. It is to be published at Leipzig, under the editorship of Drs. Lesser, Schede, and Tillmanns; and the first number will appear on April 1. It will give an epitome of surgical literature at home and abroad, and will also, like its analogues, contain short original articles.

CONTAMINATION OF WATER IN KITCHEN-BOILERS.

An eminent physician writes to draw the attention of our readers to a source of contamination of the water used in our dwellings, which may be new to them as it is to himself. He says:

> "For some time past my family have, on principle, drunk toast-water made with water drawn from the kitchen-boiler, on the assumption that thus we should be protected from all danger arising from impure water. Yesterday, it was found that this water had an offensive smell, which was particularly marked in the cistern that supplies the boiler. On sending for our builder, who has recently replaced the old brick-drains in my house with a complete set of glazed pipe-drains, he at once discovered that the waste-pipe of this cistern was imperfectly trapped, and that therefore the foul air of the drains was sucked up into the cistern. Of course, a good trap will remedy this evil; but the fact suggests, again, the propriety of reconsidering the whole question of our house arrangements, and appears to render it desirable that no direct communication of any kind should be allowed to exist between the drains and the interior of our houses beyond what is unavoidable for sinks and water-closets. I, for one, do not believe in the absolute security of any variety of trap; and it surely would be better, instead of having to trust to a mechanical contrivance of this kind, to allow waste-pipes to open on the surface, that their contents may run away into the nearest gully-hole. The source of contamination in the case alluded to is sufficiently intelligible when once pointed out, but it is a danger which I should not have suspected; and, as others may be in the same state of ignorance, the warning contained in this note may not be thrown away."

THE NEW DIRECTOR-GENERAL OF THE ARMY MEDICAL DEPARTMENT.

We are authorised to state that Sir William Muir has been offered, and has accepted, the office of Director-General of the Army Medical Department. We make this announcement with the greatest possible pleasure, not only because it finally disposes of several unsatisfactory rumours which have recently been in circulation, but also on account of the exceptional fitness of Sir William Muir for the post. Although his long and varied services are too well known to require special enumeration, we may draw attention to the fact that he has not only been pre-eminently successful on every occasion, but has acquired great popularity with the Army Medical Department by upholding the dignity of his profession in every way. During his period of duty as principal medical officer in India, and at Netley, his tact and firmness were no less remarkable than his powers of organisation on other occasions in the field; and we feel assured that, under his sway, content will soon be restored to our military medical brethren. Whilst congratulating him, therefore, on his well merited promotion, we no less congratulate the Army Medical Department on a chief who so effectively combines personal popularity with independence of thought and decision of action.

RESIGNATION OF MR. TOMES, F.R.S.

After having been attached to the Middlesex Hospital, as dental surgeon, for more than thirty years, Mr. Tomes has finally resigned his appointment. We say finally, because Mr. Tomes has several times sent in his resignation, but, on each occasion, has been urged by the managing committee to retain his office. He will, in all probability be succeeded by Mr. J. S. Turner, who has held the post of assistant dental surgeon to the hospital for the last ten years.

LONDON DENTAL HOSPITAL.

On Thursday, March 12, the opening of the new dental hospital was celebrated by a dinner at Willis's Rooms. One hundred and seventy-six gentlemen sat down to dinner, under the presidency of Mr. Campbell De Morgan. Amongst the visitors were Mr. Curling, Sir William Fergusson, Sir Ranald Martin, Sir James Macgregor, Mr. Hyde Hills, Mr. Christopher Heath, etc. The usual loyal and complimentary toasts having been duly proposed and responded to, Mr. De Morgan gave the toast of the evening, "Prosperity to the Dental Hospital", coupled with the name of Mr. Edwin Saunders. It is scarcely necessary to say that such a toast was received with acclamation. The visitors, medical officers, and dinner committee were duly honoured, by having their healths drank; and Mr. Tomes proposed the toast of "The Chairman". The chief novelty of the evening was the proposal of the health of an anonymous donor of £120 to the building fund. This was brought forward in due form, and drank with becoming solemnity. The meeting altogether was interesting, as being an occasion which had brought together a very large number of dental surgeons, many of them from distant parts of the country.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

At the meeting this evening (March 21st), at 7.30 P.M., Dr. T. O. Dudfield will read a paper, entitled "The Private Slaughter-houses considered with reference to the Report of the Select Committee of the House of Commons (Noxious Businesses), 1873."

THE REST, PORTHCAWL.

We see with great pleasure that the small but useful Convalescent Home at Porthcawl, Glamorganshire, carried on for some time by Dr. Lewis of Maesteg, with the assistance of friends, is likely to expand into an important institution, under extensive and influential county patronage. Undoubtedly, such seaside Homes are of very great value to the sick poor, and to others who, by moderate payments, can assist to make such institutions all the more useful and worthy of support, because they are partly self-supporting.

MR. EBBAGE OF LEAMINGTON.

We learn from the *Birmingham Morning News* that a very painful sensation was created in Leamington last Sunday by the sudden death of Mr. Thomas Ebbage, surgeon. Mr. Ebbage had attended to his professional duties the previous day, and had visited a patient at Compton Wynyates. When he returned home, he complained of being weary and exhausted, and spent a somewhat restless night. In the morning, he remained in bed, but did not complain of feeling ill. Suddenly, however, about midday, after momentarily closing his eyes, he asked if he had not been asleep, and then fell back upon his pillow and instantly expired. Mr. Fenn Clarke and Dr. Thursfield, who resided only a few doors from his house, were immediately summoned; but before they arrived death had taken place. Mr. Ebbage, with the exception of Mr. R. Jones, was the oldest medical practitioner in the town, having commenced practice in Leamington in 1838. He was held in high esteem in the profession, and was generally respected by his fellow townsmen. About two years ago, he was elected President of the Birmingham and Midland Counties Branch of the British Medical Association. Mr. Ebbage was about sixty years of age, and his death is attributed to heart-disease. We shall give a further notice of his life next week.

BILLROTH'S CASE OF EXTIRPATION OF THE LARYNX: ARTIFICIAL VOCAL APPARATUS.

In the JOURNAL of January 31st was given an account of a case in which Professor Billroth of Vienna extirpated the larynx on account of malignant disease. The man on whom the operation was performed was exhibited at a meeting of the Vienna Medical Society on February 27th, when Dr. Gussenbauer, in the unavoidable absence of Dr. Billroth, described the apparatus which had been devised to supply the place of the larynx. The object to be carried out, to enable the man to speak, was to establish a communication between the trachea and the cavity of the mouth. An apparatus was made, from instructions given by Dr. Gussenbauer, by Herr Leiter, the instrument-maker; and the patient had been able, with the aid of this, to speak distinctly when exhibited to the clinical class in the hospital. The apparatus, however, did not perform its functions perfectly; and an improved one had been constructed by Messrs. Leiter and Thürriegl, which was demonstrated to the Society. It consists essentially of two curved cannulæ—a tracheal cannula and a voice-cannula; and, for vocal purposes, there is a tongue of silver plate, capable of producing a deep note. This has been proved by numerous experiments preferable to one with a high note, as it allows more space for breathing; and the air can pass more quickly, and more readily produce vibrations in the metallic tongue. By means of this apparatus, the patient is able to speak well, with a clear sonorous voice; but, before he can speak, he is obliged to expectorate, to remove the secretion accumulated in the apparatus. Dr. Gussenbauer has also made some experiments with the view of forming an apparatus of elastic membrane, the tone produced by which resembles the human voice more closely than that of metal; but he has found that the apparatus of elastic membrane is much less capable of being cleaned than the metallic one; and there is the further objection, that the elasticity becomes impaired by continued use. The patient at first wore a respirator for protection against the cold air. As a large portion of the epiglottis was removed, it was thought at first that the patient would not be able to swallow—and, in fact, fluids passed out through the opening that had been made. He learned, however, to push the dorsum of the tongue back when he swallowed, so as to close the opening of the air-passage; and a special apparatus has been devised by Dr. Gussenbauer, which still more completely acts as an artificial epiglottis. After Dr. Gussenbauer had described the apparatus, the patient applied it, and read some lines aloud. Articulation was evidently attended with some difficulty; but, in spite of the monotony of the voice, the words could readily be distinguished.

CREMATION.

SIR HENRY THOMPSON's proposal that cremation should be substituted for burial has met (a correspondent of the *Pall Mall Gazette* writes) with a most favourable, it may be said enthusiastic, reception in Switzerland. A meeting held last week at Zurich, for the discussion of the scheme, was crowded, and numbers had to be sent away from the doors because there was no more room. The principal speaker was Professor Kinkel. In order not to disappoint the rejected applicants altogether, the speeches are to be printed.

THE VICTORIA DISPENSARY, NORTHAMPTON.

WE have received the Report of the Northampton Provident Dispensary for 1873. This Dispensary has for some time led the van of medical provident institutions, and it may be interesting to our readers to hear how it progresses. Last year, there was a falling off in the number of ordinary members. This is accounted for in two ways—by the remarkable healthiness of the town, and by its freedom from epidemic diseases during the year. The need of the Dispensary has been less felt, and fewer persons have joined it. But the chief cause of the diminished roll of members is the formation of a "medical institute" in connection with the Friendly Societies of the town. The first annual report of this "medical institute" has been forwarded to us; and we fear it is not likely to be so advantageous, in the long run, either to the members or to the profession, as the Provident Dispensary. Still, notwithstanding these drawbacks, the Victoria Dispensary must be considered a very successful and prosperous institution of its kind. Last year, the payments of the members amounted to £1943 : 10 : 4; and of this sum £1502 : 14 : 5 was divided among the three medical officers.

HOSPITAL SATURDAY.

AT a meeting of the Committee of the Hospital Saturday Fund, held on Saturday last at St. John's Hospital, Leicester Square—Captain C. Mercier in the chair—it was arranged to hold several public meetings in support of the movement. It was reported that the large hall of the Quebec Institute had been placed gratuitously at the disposal of the Committee for a public meeting in Marylebone, and it was decided that that meeting should be held on April 17th. Public meetings at the Chelsea and Kensington Vestry Halls were also arranged for. The Committee had been invited to hold a public meeting at Hammersmith, and the use of the public hall of that district was placed at their disposal. The offer was accepted with thanks. A letter was read from Mr. A. J. Mundella, M.P., expressing his very cordial sympathy with the movement, and accepting the position of Treasurer, in conjunction with Mr. Hodgson Pratt and Mr. Hamilton Hoare. Mr. T. Brassey, M.P., wrote to say that he would do all in his power to help forward the movement; and Mr. J. Burt, M.P., the working men's representative, sent a letter wishing the Committee every success. A comprehensive scheme for the organisation of the movement was laid before the Committee by Mr. J. F. Wilson, based upon his experience of the practical working of many working men's movements; and it was ordered to be printed for general circulation, and to be considered at the next meeting of the Committee.

DEATH OF DR. JOULIN.

OUR Paris correspondent writes under date March 18th:—It is with sincere regret I have to announce the death of Dr. Joulin, which has just taken place at his residence in Paris, from congestion of the brain. He was one of the leading accoucheurs of Paris, an *Agrégé* of the Faculty of Medicine, and founder of an obstetrical journal that bore his name. This branch of medicine is indebted to the deceased for several important contributions, which obtained for him a prize at the Academy of Medicine; and, in recognition of his services by the Imperial Government of France, he was nominated Chevalier of the Legion of Honour. Dr. Joulin was a man of great attainments, professional and otherwise, and a ready writer; and his death will be deeply felt, not only by the profession, but by the lay press, to which he used to contribute professional articles in the form of popular letters.

MEMORIAL HOSPITAL.

A COTTAGE hospital, erected at Shaftesbury, in Dorset, in memory of the late Marquis of Westminster, has been formally opened this week. The structure, which cost upwards of £2,000, occupies a commanding site near the park, the site being given by the Dowager Marchioness of Westminster. The opening ceremony was attended by the Bishop of Salisbury (the Right Rev. Dr. Moberly), Sir Richard G. Glyn, Mr. V. Benet-Stanford, M.P., and others. The Bishop, in addressing the assembly, said he could not go far into the neighbourhood of Shaftesbury without finding on every side indications of the princely beneficence of the deceased nobleman. Since the death of the late Marquis, Lady Westminster had continued to pursue the course that was followed by her honoured husband. His lordship pointed out that the establishment of hospitals was a work of modern Christianity, there being no word in the Greek and Latin languages specifying hospital.

THE WESTERN DISPENSARY.

AT a general meeting of the Western Dispensary, Broadway, Westminster, held on the 11th instant, it was determined to place the institution on the provident footing, and the Committee were authorised to make the necessary arrangements. This is, we believe, the sixth Dispensary in London which has during the last two or three years been converted from the free to the provident principle. In this instance, the change is the more important, because it has been made simultaneously with the reforms which we lately reported in the outdoor department of the Westminster Hospital. We have no doubt that the two institutions will work cordially together, each supplementing the other, and each offering to the sick poor, with a discriminating hand, the precise form of medical relief which is best suited to their maladies and to thei social condition. We should much like to see a similar step taken at the Western General Dispensary in Marylebone.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND ITS PROVINCIAL FELLOWS.

A MEETING of the Fellows of the Royal College of Surgeons residing in Birmingham and the neighbourhood was held at the Midland Institute, Birmingham, on March 12th. The chair was occupied by Mr. Furneaux Jordan; and there were present Mr. Ebbage (Leamington), Mr. Manby (Wolverhampton), Dr. Roden (Kidderminster), Mr. A. Baker, Mr. Bartleet, Mr. Postgate, Mr. Savage, Mr. Lawson Tait, Mr. Thomas, and Mr. Welch. Several letters, expressing regret for inability to attend, were read. It was resolved—"That it is expedient that the provincial Fellows be more largely represented upon the Council of the College of Surgeons than at present." It was also resolved—"That, in the opinion of this meeting, Alfred Baker, Esq., F.R.C.S., Senior

Surgeon to the General Hospital, is, from his position and attainments, eminently qualified to represent the provincial Fellows in the Council of the College; and that Mr. Bartleet, Mr. Tait, and Mr. Manby, with power to add to their number, do form a Committee to promote Mr. Baker's election."

THE GERMAN SURGICAL SOCIETY.

THE third annual meeting of the German Surgical Society will be held in Berlin from April 8th to 11th. The following subjects are proposed for discussion. 1. The Treatment of Wounds, with reference to Lister's method. 2. Communications on the Frequency of Recurrence of Cancer after Extirpation. If sufficient material cannot be obtained in the short time, this subject will be deferred to the next congress. A wish has been expressed, that the congress should be utilised more than formerly for the demonstration of preparations and the exhibition of new instruments, bandages and other apparatus, drawings, photographs, and casts.

SCOTLAND.

EDINBURGH.

OUR Edinburgh correspondent writes: In the *Scotsman* of Thursday, March 12th, are two remarkable letters from members of the medical profession. Dr. Bell Pettigrew, in the first place, in defending himself from the severe criticisms which his book on *Animal Locomotion* has met with, allows that his views of the action of birds' wings lead to "a result totally opposed to all known physics". After this extraordinary admission, what more need Dr. Pettigrew say? In the second place, Dr. Charles Bell sends a letter containing a series of charges against the management of the Royal Maternity Hospital of this city, which is either of the most justifiable or the most unjustifiable nature. After scolding the directors for insisting on his resigning his physicianship in that hospital, Dr. Bell goes on to show how much the institution has suffered in consequence. This is followed up by charges of general mismanagement, and individual instances are given. The conduct of the matron and nurses is impugned, patients having been placed by them in filthy and vermin-covered beds, or on a recently washed floor. The habit of drinking is stated *to have caused the death of at least one child*. It is alleged that the children of several women were taken from them against their will, and sent away they knew not where, every information being refused them. Dr. Bell says that he objected to the bodies of children being allowed "to lie in the wards for days, then either buried in the waste ground of the hospital, or *burned*, producing such an offensive smell that the nurses were obliged to go out into the open air to escape from it." He also animadverts on the inordinate expense of the hospital, while the patients are scantily supplied with proper food. If Dr. C. Bell be not prepared to substantiate thoroughly these very grave charges, he has committed a great wrong, for a falling off of public support is sure to ensue. On the other hand, if he do substantiate them, the thanks of the public are his due. In the *Scotsman* of March 14th, there is a letter from the Secretary, which contains a categorical denial of the truth of all the statements. But this is not enough: the public and the profession require more thorough refutation of the charges.—Professor Sanders has been confined to bed for several weeks from severe illness, which at one time caused great anxiety. He is now slowly recovering.—We are at present rather overdone with lecturing. Professor Tait is giving us a private course on Physics. Dr. McKendrick on the 5th and 12th of this month gave, at the College of Physicians, two admirable demonstrations of the terminal apparatus of the organs of special sense. The lectures were delivered in a most lucid manner, Dr. McKendrick's peculiar power of communicating knowledge being well brought out. Dr. Batty Tuke next week commences the series of six Morisonian Lectures on Insanity.—We fear nothing can prevent the trial at an early date, in the High Court of Judiciary, of a member of our profession, on a very serious charge of malapraxis.—An effort is being made to obtain funds for a hospital for incurables, and the movement seems to be very popular. There are some, however, who doubt the propriety or necessity of the step; and their grounds of objection are worthy of consideration.

IRELAND.

THE IRISH COLLEGE OF SURGEONS AND THE CONJOINT EXAMINATION SCHEME FOR IRELAND.

IN accordance with a requisition, signed by a number of the Fellows of the Royal College of Surgeons in Ireland, a meeting of the College was held on March 12th, "To take into consideration the proposed conjoint scheme of examination". A resolution condemning the scheme was adopted.

PUBLIC ANALYSTS IN IRELAND.

THE following appears in a Dublin morning paper:—"The Grand Jury (Tipperary) Secretary read a communication from Charles A. Cameron, Esq., M.D., calling the attention of the Grand Jury to the necessity of appointing a public analyst for the county, and offering to discharge the duties of that office at a salary of £25 a year. It was moved and seconded, 'That Dr. Cameron be appointed analyst at the salary mentioned'; and the foreman was about to put the resolution, when Mr. Spaight, J.P., moved the adjournment of the discussion. The suggestion of Mr. Spaight was acted on, and the matter adjourned." We are surprised to see that a respectable analytical chemist like Dr. Charles Cameron would undertake the above duties for such a miserable salary. This, of course, is Dr. Cameron's own affair. Does the Grand Jury of Tipperary think that the serious services and adequate labours of a good analytical chemist can be had for £25 *per annum?* We do not think that Dr. Cameron's offer is calculated to raise the status of public health-officers in the eyes of the public. If the county rates in Ireland cannot afford to pay decent salaries to public analysts, by all means let the counties do without analysts, or pay for each analysis as it is required.

ROYAL IRISH ACADEMY.

AT a meeting of the members of this Society, held last Monday, Dr. Stokes, of the Meath Hospital, was unanimously elected President, in the room of Professor Jellett; whilst Dr. Edward P. Wright was appointed Secretary, and Dr. Robert McDonnell Secretary for Foreign Correspondence to the Academy.

ROYAL COLLEGE OF SURGEONS OF IRELAND.

WE have been given to understand that the late scheme of examination for the diploma in surgery of this College, whereby the candidate for this qualification was to be examined at three different periods, has been virtually abolished, it having been found, at the eleventh hour, that the College could not confer a license in surgery by the recent regulations, as it would be illegal and contrary to the bye-laws of the said institution. It must, however, be stated that no official intimation has, up to the present, been given that the examinations under the new system will not be held next month.

SMALL-POX.

WE last week referred to the fact that several cases of small-pox had occurred at Lurgan, and since then we find that the disease also exists in Belfast; for, in the week ending March 7th, we learn that there had been admitted eight cases of this disease into the Union Hospital in that town.

UNIVERSITY OF DUBLIN.

THE new Attorney-General, Dr. Ball, was on Monday re-elected to represent this University. No opposition to his return was shown; but, at the nomination, the Rev. Dr. Haughton, the Medical Registrar of the School of Physic, made a humorous speech, in which he said that, although not objecting to the present members who represent the University, yet, should either Dr. Ball or Mr. Plunket resign, he would do all in his power to prevent any member of the legal profession from being returned as their representative, as he considered that they only used their position as a stepping-stone for advancement, and cared in no way to promote the interests of the College. He suggested that Dr. Traill would be a fitting representative; and that gentleman promised that, on the next vacancy, he would contest the seat.

THE CONJOINT EXAMINING SCHEME FOR ENGLAND.

THE report of the Committee of Reference for an Examining Board in England has been passed by the Royal College of Physicians and by the Royal College of Surgeons of England, practically unaltered. The only alteration made by the Royal College of Physicians, at its recent meeting, was to define clearly that the external "clinical instructions", which have been the subject of recent comment in our columns by the representatives of provincial schools, shall be more clearly defined to be "such as shall be approved by the Committee of Reference"; while the Royal College of Surgeons has provided for the recognition of separate teaching of public medicine, as part of the curriculum, where such teaching exists. We heartily congratulate the Committee of Reference and its able Chairman, Sir James Paget, on the successful issue of their long, laborious, and most valuable labours.

We believe that the Apothecaries' Society of London will lose no time in putting before Parliament a short Bill to enable the Society to cooperate in this scheme.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND THE COLLEGE ELECTIONS.

THE Council of the Irish College of Surgeons have taken our hint, and issued the following notice to the Fellows:

"That, as it has been recently stated in a leading medical journal that free railway and steam-packet tickets were given to Fellows of this College by candidates for a seat on its Council—Resolved, That this Council consider that such proceedings are to be deprecated as inconsistent with the dignity and independence of the office of Councillor. (Signed) J. Stannus Hughes, Secretary to Council."

The profession will be glad to find the Council taking a decided step in this matter, and properly asserting its dignity.

HOSPITAL OUT-PATIENT REFORM ASSOCIATION.

THE annual meeting of this Association was held in the rooms of the Medical Society of London on Wednesday, March 18th. Among those present were—Dr. Meadows (in the Chair), Dr. Anstie, Dr. Rogers, Dr. Edis, Mr. Brudenell Carter, Mr. Christopher Heath, Mr. Fairlie Clarke, etc.; and the Secretary mentioned that letters of apology had been received from Dr. Richardson, Dr. Hawksley, and Mr. John Gay.

In opening the proceedings, Dr. MEADOWS adverted to the difficulties which beset such a movement as that undertaken by the Association in such a very conservative country as England, where, even though the evils complained of in hospital administration were well known to exist, it was almost impossible to get the governors of hospitals to do anything to remedy them. He wished to say, with reference to a resolution which he understood was to be brought forward about a hospital with which he was himself connected, that he had felt it impossible for him, as President of the Association, to use his office either for or against that resolution.

The HONORARY SECRETARY (Mr. Nelson Hardy) read the following report.

Your Committee have to report that, in pursuance of the resolutions passed at the general meeting of the Association in March last, they transmitted the recommendations for a reform of the out-patient system to forty-eight hospitals (fifteen general, thirty-three special), accompanied by a letter addressed to the Secretaries of those institutions, asking them to bring the proposed reforms under the notice of their respective governing bodies, and to favour the Committee with their reply. From thirty hospitals replies were received; and of the thirty, seventeen replied in general terms, while thirteen replied specifically to the three recommendations of your Committee. Six of those who did not reply specifically, including St. Bartholomew's, King's College, St. George's, Metropolitan Free, the Hospital for Skin-Diseases (Blackfriars), and Royal Orthopædic Hospitals, simply acknowledged the receipt of the communication. Four (University College, London, Royal Free, and East London Hospital for Children) stated that the matter had been referred to a Committee for consideration. Five (Guy's, Charing Cross, Royal Infirmary for Women and Children, and two Ophthalmic Hospitals) stated that they did not consider any of the proposals of the Association applicable to their case. One (the Great Northern Hospital) stated that proceedings were in progress, which would, it was believed, harmonise with the objects of your Association; and one (the Westminster Hospital) informed your Committee that the authorities there were quite willing to act, provided others did the same.

With regard to the thirteen who replied specifically as to the first recommendation, viz., "that each out-patient should be seen personally by one of the medical or surgical staff, and that no unqualified student be permitted to prescribe for out-patients," the following eleven said that this rule was already in force, viz.: Middlesex; St. Mary's; Royal London Ophthalmic; Samaritan Free; Hospital for Consumption, Brompton; City Road Hospital for Diseases of Chest; St. Peter's Hospital for Stone; Hospital for Sick Children, Great Ormond Street; Hospital for Women and Children, Vincent Square; National Hospital, Newman Street; and Victoria Hospital for Children. One (the Lock Hospital), while concurring generally in the resolution, thought that in exceptional instances students might be permitted to carry on the treatment begun by qualified men. One (Hospital for Women, Soho Square) made no remark on this resolution.

In regard to the second recommendation, "that a lay officer be instructed to see that the charity is not abused by persons coming who are able to pay," nine replied that this was distinctly in force at their hospitals, viz., St. Mary's, Hospital for Consumption at Brompton, Royal London Ophthalmic, Samaritan Free, St. Peter's, Great Ormond Street, Vincent Square, Newman Street, and Lock Hospitals.

As to the third recommendation, having reference to not giving medicine gratuitously, eight absolutely rejected the proposal as a thing not to be entertained, while five (St. Peter's, Soho Square, Newman Street, Victoria, and Lock Hospitals) stated that medicine was paid for by the patients.

Your Committee, having been empowered by the resolutions of the general meeting already referred to, to take such further action as they might think proper, considered that the meeting of the British Medical Association in London in August last was a very fitting opportunity for bringing the subject before the profession. Accordingly, it was arranged that your President, Dr. Alfred Meadows, should read a paper on the Work of the Association in the Public Medicine Section, and information of his intention to do so was forwarded by post-card to every member of this Association.

Dr. Meadows' address and the discussion that followed it are reported in full in the BRITISH MEDICAL JOURNAL of September 6th, 1873. The subject excited much interest; and, in summing up the debate, the Chairman, Mr. G. W. Hastings, said "it was a most important subject, and he was only sorry that, coming on so late in the day, he was obliged to close the discussion, perhaps, before everyone had been able to express his opinion. But he believed there was one general and unanimous expression of opinion that the system of out-patient relief, as practised in the London hospitals, was subject to much abuse."

Your Committee are glad to observe that movements of a similar kind to that undertaken by the Association have been commenced in some of the principal commercial towns in the kingdom, and notably in Manchester and Birmingham.

Later in the year, your Committee had under their consideration the case of Dr. John Chapman, whose dismissal from the post of assistant-physician to the Metropolitan Free Hospital for writing articles in the *Pall Mall Gazette* on the out-patient system, appears to your Committee to have been an act of gross oppression on the part of the authorities of that hospital. A resolution will be proposed for your adoption which will give an opportunity for the Association to express its opinion on the subject; and your Committee recommend that Dr. Chapman be chosen a member of the Committee for the ensuing year.

In contrast to the Metropolitan Free, your Committee are happy to be able to point to the Moorfields and Westminster Hospitals, as places where earnest efforts are being made to remedy the acknowledged evils of the present out-patient system, in which efforts your Committee wish the authorities of those hospitals all success; also to the Great Northern Hospital, whose intention to close their out-patient department, with the exception of obstetric and ophthalmic cases, is a source of great gratification to your Committee.

During the year, our Association has been deprived by death of two of its members, each in his way a type of the two sections of the profession, by whose joint action our Association has been formed. Mr. William Harvey of Islington was a much respected general practitioner, who was present and spoke with great energy at the meeting held in the London Tavern last year, when the Association was first constituted.

In Dr. John Murray we had a consultant who, like many that we still happily number amongst us, could look beyond the supposed interests of his own class, and was ready to help us whenever he could. By his all too early death, our Association has been deprived of a member whom it could ill spare from its ranks.

(Signed) ALFRED MEADOWS, *Chairman.*
H. NELSON HARDY, *Hon. Secretary.*

Dr. ANSTIE moved the adoption of the report. He said that, though they had not, perhaps, had such an enthusiastic success as some of the more ardent members of the Association might have hoped for, he thought there was much reason for congratulation in the report now read. The present out-patient system was bad in two ways: first, in relieving those who did not require charitable relief; and, secondly, in attempting to relieve too many. He learned from the report that something was being done at Moorfields to check the number of applicants; and he could state from his personal knowledge that at Westminster Hospital the staff was better able to do justice to the patients in consequence of the number of new cases being limited. Dr. Chapman's dismissal from the Metropolitan Free Hospital was an act of gross injustice, and he thought there could not be two opinions about the scandalous nature of that act.

Dr. LESLIE seconded the motion. He regretted that more general practitioners were not present, and spoke of the evils of special hospitals. As a general practitioner, he found the hospitals seriously interfere with his practice.

The resolution was carried unanimously.

Dr. ROGERS moved the following: "That in the opinion of this meeting, the manner in which the out-patient departments of the Metropolitan Free Hospital and the Soho Square Hospital for Women are at present carried on, is highly prejudicial to the interests of the sick poor and of the medical practitioners in the neighbourhood of those hospitals." He hoped he should not offend any one's susceptibilities by speaking plainly, as he meant to do, on this question. When he first stated, two years ago, the enormous numbers of patients supposed to be relieved at hospitals, they were represented to be *individuals;* but now, in consequence of the agitation of this question, the hospitals had to confess that the numbers only represented *attendances,* so that a gross fraud had been perpetrated on the public. The present system robbed medical practitioners, and thereby inflicted a grievous wrong on many well-educated gentlemen. A few years ago, there were only two medical institutions in the neighbourhood of Soho; but now they had the Hospital for Diseases of the Heart, the Dental Hospital, the Throat Hospital, the Lock Hospital, the Hospital for Women, St. Peter's Hospital for Stone, and several dispensaries, so that, in fact, patients with affections of the heart, the teeth, the throat, the bladder, and women were attended to, without inquiry as to their circumstances, in Soho; and one consequence of this had been, that it had brought a whole host of paupers into the district. In the out-patient department of the Soho Square Hospital for Women, he had seen, times without number, well dressed women, and hardly ever a poor one. Some of his own patients had been treated there.

Mr. NELSON HARDY having seconded the motion, Dr. CHAPMAN moved as an amendment—"That the manner in which the out-patient departments of most of the London hospitals are at present conducted is highly prejudicial to the interests of the sick poor, and to the practitioners in the neighbourhood of those hospitals." He thought that, where the abuse was so general, it was hardly fair to direct special attention to one or two hospitals. The work of reform was not only required in the out-patient department. The medical staff should, he thought, form a part of the managing committee.

Dr. HEYWOOD SMITH seconded the amendment. None could be more sensible than the staff at the Soho Square Hospital for Women were of the abuses existing there, as well as elsewhere in London. The system of payments by the patients had, in fact, been instituted there in order to prevent those able to pay from leaving their own medical attendant.

After some further discussion, the original motion was withdrawn in favour of the amendment, which was then carried unanimously.

Dr. EDIS, for Dr. FORD ANDERSON, who had been obliged to leave, moved the third resolution as follows:—"That the following gentlemen be elected as the officers and committee for the ensuing year; and that, in view of the still existing abuses connected with the out-patient system at hospitals, this meeting hopes that they will vigorously press on the work of the Association during their year of office. *President:* Dr. Alfred Meadows; *Treasurer:* Dr. Walter Smith; *Honorary Secretaries:* Dr. Alexander Grant and Mr. H. Nelson Hardy; *Committee:* Dr. J. Ford Anderson, Dr. Anstie, Mr. Benson Baker, Dr. Chapman. Dr. James Davison, Dr. Drysdale, Mr. John Gay, Dr. Tilbury Fox, Dr. Leslie, Mr. F. J. Reilly, Dr. Jos. Rogers, Dr. Staines."

Mr. FAIRLIE CLARKE, in seconding the motion, expressed his hearty sympathy with the cause of out-patient reform and earnest hope for the success of the Association. Their meeting that night was small; but it reminded him of what Archbishop Whately used to say, that government should be by minorities, for minorities were always in the right. That Association was in advance of public opinion; and, by its agitation of the subject, would prepare the way for changes which must surely come.

A vote of thanks to the Chairman brought the meeting to a close.

MILITARY AND NAVAL MEDICAL SERVICES.

ENGAGEMENTS ON THE ADVANCE TO COOMASSIE.

A NUMERICAL return of the officers, non-commissioned officers, and men, of the army, killed and wounded during the advance to Coomassie, prepared from the official despatches of Major-General Sir Garnet Wolseley to the Secretary of State for War, was published at page 366 of last week's BRITISH MEDICAL JOURNAL. We now publish a corresponding return of the officers and men of the Royal Naval Brigade killed and wounded during the advance. This abstract has been prepared from the nominal lists of casualties forwarded to the Secretary of the Admiralty by Commodore W. N. Hewett, V.C., senior naval officer on the Gold Coast. The numbers of casualties in the Naval Brigade appear, at first sight, to have been small when compared with those shown in the army returns; but it must not be forgotten that the fighting strength of the two arms of the service was very different. The strength of the troops (native troops included) has not been published. The entire strength of the Naval Brigade, before the battle of Amoaful, according to a despatch from Captain Hunt Grubbe, the officer commanding the Brigade, was 200 officers and men, so that during the advance upon Coomassie almost a fourth of the whole party was hit. It will also be observed that a marked difference exists in the proportionate gravity of the wounds shown in the two numerical returns. While in the return published last week there were only 21 wounds returned as "dangerous" or "very severe" out of a total of 269 wounds, there are no fewer than 22 wounds returned as "dangerous" or "very severe" in the following return out of a total of 45 wounds. In the army return, out of the total 269 casualties, 163, or considerably more than half, were shown as slightly wounded; in the naval return, of the total 45 casualties, only 12, or about one-fourth, appear as slightly wounded. It is difficult to account for such different proportions, unless we may suppose that some of the slighter injuries among the sailors were not entered in the naval returns of casualties; and, in fact, while such injuries as "slight contusions" are shown in the army descriptive returns, no mention of a "contusion" appears among the casualties in the corresponding naval returns.

Numerical Return of the Officers, Petty Officers, Seamen, and Marines, of the Royal Naval Brigade, Killed and Wounded in the several Actions during the advance to Coomassie between the 29th Jan. and the 4th Feb., 1874, inclusive.

Action.	Royal Naval Brigade.	Killed.	Wounded dangerously.	Wounded very severely.	Wounded severely.	Wounded slightly.	Total killed and wounded.
Borborassie, 29th Jan.	Officers	0	0	0	0	0	0
	Petty officers, seamen, and marines	0	0	2	0	2	4
Amoaful, 31st Jan.	Officers	0	1	1	1	3	6
	Petty officers, seamen, and marines	0	6	8	7	5	26
Becquah, 1st Feb.	Officers	0	0	0	0	0	0
	Petty officers, seamen, and marines	1	0	1	1	1	4
At River Dah, 4th Feb.	Officers	0	0	0	0	1	1
	Petty officers, seamen, and marines	1	0	3	0	0	4
All actions included.	Officers, petty officers, seamen, and marines..	2	7	15	9	12	45

On adding the figures in the above return to those in the return published last week, the total number of casualties among our soldiers and sailors in the advance upon Coomassie, between the 29th January and the 4th February, is shown to be as follows: Officers and men killed, 10; wounded dangerously, 19; very severely, 24; severely, 86; slightly, 175; or a general total of officers and men killed and wounded, 314.

MEDICAL OFFICERS AT THE FALL OF COOMASSIE.

'HE following list, which we received from a correspondent at the Prah, ives the names of the medical officers of the Ashantee Expedition who 'ere present with Sir Garnct Wolseley at the taking of Coomassie, and f the corps to which they were attached.

1.	Surgeon-Major Mackinnon, C.B., Principal Medical Officer.	
2.	Surgeon-Major Waters, Secretary to the Principal Medical Officer.	
3.	Surgeon-Major Jaekson	First Field Hospital.
4.	Surgeon Kynsey	
5.	Surgeon-Major Clutterbuek...	42nd Highlanders.
6.	Surgeon Troup.................	
7.	Surgeon-Major Fox	23rd Royal Welsh Fusiliers.
8.	Surgeon-Major Wiles	The Rifle Brigade.
9.	Surgeon Maerobin	
10.	Surgeon-Major Mosse	Wood's Regiment.
11.	Surgeon Atkins	Russell's Regiment.
12.	Surgeon Conyers	Royal Engineers.
13.	Surgeon-Major Woolfrcyes, Unattached.	
14.	Surgeon-Major Turton, Sanitary Officer.	
15.	Surgeon McNalty, in charge of the Staff.	

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, March 12th, 1874.

Clay, James Hemingway, Matlock Bath
French, Aleuander Martin, Chatham
Klein, Leopold Martial, Lower Norwood

The following gentlemen also on the same day passed their primary rofessional examination.

Hope, James William, St. Bartholomew's Hospital
Murrell, William, University College Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

NDOVER RURAL SANITARY DISTRICT—Medical Officer of Health: £10 for one year, and 21s. for each visit required. Applications, 26th instant, to Thomas Lamb, Clerk.

IRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN—Resident Medical Officer: £60 per annum, rooms, board, etc. Applications, 23rd instant, to the Medical Committee.

RIDGWATER UNION—Medical Officer and Public Vaccinator for No. 6 District: £34 per annum, and fees. Applications, 24th inst., to Paul Reed, Clerk.

RISTOL GENERAL HOSPITAL—Assistant House-Surgeon and Physician's Assistant: £50 per annum each, with board, lodging, and washing in the house.

ANTERBURY URBAN SANITARY DISTRICT—Medical Officer of Health: £60 per annum for three years.

ASTLEBLAYNEY UNION, co. Monaghan—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ballybay Dispensary District: £100 per annum, and fees. Applications, 24th instant, to Benjamin Browne, Hon. Sec.

HIPPENHAM URBAN SANITARY DISTRICT—Medical Officer of Health: £10 for six months.

ITY OF LONDON UNION—Medical Officer to the Casual Wards.

EAL and WALMER DISPENSARY—Surgeon.

AST SUFFOLK HOSPITAL—House-Surgeon: £100 per annum, furnished apartments, board, etc.

DINBURGH ROYAL HOSPITAL FOR SICK CHILDREN—Extra Physician. Applications, 24th instant.

ENERAL HOSPITAL, Birmingham—Physician. Applications, 28th instant, to W. T. Grant, House-Governor.

OSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Resident Clinical Assistants. Applications, 6th April, to the Sec.

ILBURN DISPENSARY—Two Resident Medical Officers: £120 and £80 per annum, apartments, etc., respectively. Applications, 6th April, to the Hon. Sec., 32, Boundary Road, N.W.

ILMACTHOMAS UNION, co. Waterford—Medical Officer for the Kilmacthomas Dispensary District: £120 per annum, and fees. Applications, 14th April, to David Power, Hon. Sec., Newtown, Kilmacthomas.

IRKDEN, Forfarshire—Parochial Medical Officer.

IRKMICHAEL, Dumfriesshire—Parochial Medical Officer.

IVERPOOL DISPENSARIES—Two Honorary Medical Officers to the North Dispensary. Also Assistant-House-Surgeon: £108 per annum, furnished apartments, coals, gas, and attendance. Applications, 25th instant, to W. Lister, Secretary.

UNESDALE UNION, Lancashire—Medical Officer for the Hornby District: £60 per annum.

UTON UNION, Bedfordshire—Medical Officer for the Markyate Street District: £50 per annum.

ACHAR (Old), Aberdeenshire—Medical Officer for part of the Southern Division, and the Poor House. Applications, 10th April, to Thomas Skcene, Inspector of Poor, Aberdeen.

ARTLEY RURAL SANITARY DISTRICT—Medical Officer of Health: £100 per annum. Applications, 27th inst., to A. W. Knott, Clerk, Worcester.

METROPOLITAN ASYLUM DISTRICT ASYLUM FOR IMBECILES, Hampstead—Medical Superintendent: £400 per annum, unfurnished house, coals, and gas. Applications, 21st March, to W. F. Jebb, Clerk, 37, Norfolk Street. Strand.

MIDDLESEX HOSPITAL—Assistant Physician; Assistant Obstetric Physician; Dental Surgeon. Applications, 31st instant, to the Weekly Board.

NARBERTH UNION—Medical Officer for District No. 1, and the Workhouse: £35 and £20 per annum, and fees. Applications, 21st instant, to John Thomas, Clerk.

NORTH LONDON CONSUMPTION HOSPITAL—Physician. Applications, 15th April, to W. Hornibrook, Sec.

NOTTINGHAM COUNTY AND BOROUGH LUNATIC ASYLUM, Sneinton—Assistant Medical Officer: £100 per annum, board, lodging, etc. Applications, 26th instant, to the Chairman of the Committee of Visitors.

ONGAR UNION, Essex—Medical Officer and Public Vaccinator for No. 1 District: £105 per annum, and fees. Applications, 24th instant, to Charles Mott, Clerk, Chipping Ongar.

QUEEN'S COLLEGE, Birmingham—Joint Professor of Forensic Medicine. Applications, 26th instant, to the Secretary.

QUEEN'S HOSPITAL, BIRMINGHAM—House-Physician and House-Surgeon: £50 per annum each, board, lodging, etc. Applications, 21st instant, to Walter Young, Secretary and General Superintendent.

ST. GEORGE and St. JAMES DISPENSARY, King Street, Regent Street—Assistant Dispenser: £2:10 per month. Applications, 26th instant, to J. H. York, Sec.

ST. THOMAS'S HOSPITAL—Dispenser: £100 per annum.

TORBAY INFIRMARY, Torquay—Dispenser: £50 per ann., board and lodging.

TRURO UNION, Cornwall—Medical Officer and Public Vaccinator for the St. Agnes District: £35 per annum, and fees. Applications, 24th instant, to R. Marrack, Clerk.

UNIVERSITY OF LONDON—Examiners, viz.: two in Medicine, two in Surgery, two in Anatomy, two in Physiology, etc., two in Obstetric Medicine, two in Materia Medica, etc., and two in Forensic Medicine: £150, £150, £100, £150, £75, £75, and £50 each, respectively. Applications, 31st instant, to Dr. Wm. B. Carpenter, Registrar.

WARWICK and LEAMINGTON FEMALE PENITENTIARY—Medical Officer.

WESTMINSTER HOSPITAL—Surgical Registrar: £40 per annum. Applications, 31st instant, to the House Committee.

WILTS COUNTY LUNATIC ASYLUM, Devizes—Assistant Medical Officer: £100 per annum, board, residence, etc. Applications, 25th instant, to the Clerk to the Committee of Visitors.

WOODBRIDGE UNION, Suffolk—Medical Officer for the Walton District: £62:10 per annum.

The announcement of a vacancy for Medical Officer of the Leicester Union Workhouse, in the JOURNAL of March 7th, was an error.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*BAILEV, James Johnson, M.D., appointed Assistant House-Surgeon to the Sheffield General Infirmary.

*BANKS, W. Mitchell, F.R.C.S., Lecturer on Anatomy in the Liverpool Royal Infirmary School of Medicine, appointed Assistant-Surgeon to the Royal Infirmary, *vice* *Reginald Harrison, Esq., appointed Surgeon.

DREW, Charles Wallace, M.R.C.S.Eng., appointed House-Surgeon to the North Devon Infirmary.

JONES, Thomas, M.B., appointed Operating Surgeon to the Children's Hospital, Manchester.

LEONARD, John, M.R.C.S., appointed Resident Surgeon to the Royal Infirmary for Children and Women, Waterloo Bridge Road.

*STOWERS, J. H., M.R.C.S., appointed Administrator of Chloroform, etc., to St. Bartholomew's Hospital, *vice* A. Cumberbatch, F.R.C.S., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

PENNINGTON—BRAITHWAITE.—On March 17th, at St. Silas's Church, Liverpool, by the Rev. Dr. Harrison, Thomas Pennington, M.R.C.S. & L.S.A., of that town, son of the late Rev. John Pennington, Rector of Lowton, to Jane, daughter of the late Edward Braithwaite, Esq., of Ulverston.

DEATH.

WOODMAN.—On March 11th, at 2, Chichester Place, Exeter, Caroline, the beloved wife of John Woodman, F.R.C.S. (Honorary Secretary of the South Western Branch of the British Medical Association).

VACCINATION AWARD.—The Local Government Board have awarded the sum of £11 9s. to Mr. Croeker, Surgeon, of Bingley, for efficient vaccination.

BOOKS, ETC., RECEIVED.

Principles of Mental Physiology. By W. B. Carpenter, M.D., LL.D., F.R.S. London: H. S. King and Co. 1874.

Transactions of the Obstetrical Society of London. Vol. xv. For the year 1873. London: Longmans and Co. 1874.

Sanitary Report of the Province of Oudh.

The Ninth Annual Report of the Sanitary Commissioner with the Government of India. 1872.

The Puerperal Diseases: Clinical Lectures delivered at Bellevue Hospital. By Fordyce Barker, M.D. New York: 1873.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Mr. Thomas Bryant, F.R.C.S., "Foreign Body discharged through Abdominal Parietes": Dr. Cockle, F.R.C.P., "A Case of Labial Carbuncle followed by Pyæmia" (by Dr. Cockle and Mr. J. Blackstone); Dr. Tuchman, "On a New Instrument to Aid in Diagnosing Disease of the Bladder and Kidneys" (will be read by Mr. Woodhouse Braine, Honorary Secretary).

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. J. M. Cuningham (Sanitary Commissioner with the Government of India), "Recent Experience of Cholera in India"; Mr. R. Brudenell Carter, "On an Improved Method of Abscission of the Anterior Portion of the Eyeball".

THURSDAY.—Hunterian Society, 8 P.M. Open Meeting.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Cayley, "A Case of Hæmoptysis"; Mr. Warrington Haward, "A Case of Blood-Cyst of Hand"; Dr. Packard of Philadelphia, "Bracketed Splint for Excision of the Knee, or for Compound Fractures" (communicated by Mr. Callender).—Quekett Microscopical Club (University College), 8 P.M. Mr. E. T. Newton, "On the Preparation of Microscopic Sections of Soft Tissues".

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

Authors desiring reprints of their articles published in the Journal, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

We cannot undertake to return Manuscripts not used.

Communications respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

A Senior Fellow of the Obstetrical Society.—The writers of the abstracts act under the knowledge that there is very great pressure on our columns to report the proceedings of the numerous medical societies of England, Scotland, and Ireland; and we can but feel grateful to them for care in condensation.

The Proposed Admission of Women to the Obstetrical Society

Sir,- In a letter from Mrs. E. G. Anderson, it is stated " one of the speakers. is reported to have said that my name was smuggled on the *Medical Registar*". In your report, which is a particularly accurate one, no such passage occurs. What is reported is perfectly correct—" Mrs. Anderson did not attend lectures" (public lectures), " but somehow or other she was smuggled through Apothecaries' Hall". Now, if any one procure the licence from the Apothecaries' Hall, or any other licensing body, they have only to present such licence to the Registrar, pay the usual fee, when, as a matter of course, the name is duly registered. The question to be considered is, Was Mrs. Anderson (at that time Miss Garrett) admitted to examination on the usual terms, and would any male student have been admitted to examination on the same terms? I do not hesitate to say, certainly not. To prevent such irregularity from becoming a precedent, the following rule has been added to the published regulations issued by the Society of Apothecaries. " No certificates of lectures or of anatomical instructions delivered in private to particular students, apart from the ordinary classes of recognised public medical schools, can be received by the Court of Examiners." What is sauce for the goose should be sauce for the gander. I am, etc., The Offender.

Notice to Advertisers.—Advertisements for insertion in the British Medical Journal, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. Fowke, not later than *Thursday*, twelve o'clock.

Dr. Schliep (Berlin) shall receive a private letter.

Dr. Veale omits to state what sum was awarded.

Relative Provision.

The following may interest parents who are undecided whether to bring up their sons to Law or Medicine. The Court of Common Council has pensioned the widow of their clerk (a solicitor) with £300 a year. The widow of Dr. Gwynne Harries has had a pension of £50 conferred on her. Comment is superfluous.

March 1874. I am, etc., The Present Writer.

Erratum.—In the report of the proceedings at the Obstetrical Society, page 320, column 2, lines 11 and 17, for " candidate", read " medical practitioner".

Alleged Insanity.

Sir,—A patient of mine has a son aged 16. This lad has an exceedingly bad temper; gets into passions of temper if he be not allowed his own way. His father placed him in the workhouse, and paid for him to be there a week, so that it might frighten him into being a better lad. On being taken to the workhouse, he told the nurse that " if she did not let him out he would break the window to get out and go home". For such conduct he is sent to the lunatic asylum at Lancaster, the usual form being signed by some medical men, to the effect that the lad is insane. The father of the lad was never acquainted with any facts until the officer came to demand ten shillings as the fees for his week's maintenance at the asylum. My patient is only a working man, earning about twenty-six shillings per week, with a family of five to keep, and ten shillings per week off for this lad is more than he can afford. The lad is as sane now as ever he was, and wants to come home. I have directed his father to stop payment. What would you advise to be done in the case? I am, etc., W. H. J.

March 5th, 1874.

*** Communicate in the first instance with the medical officer of the asylum, who, if the lad be not insane, would certainly discharge him at once.

Practice on the Continent.

Sir,—You will much oblige me if you can inform me whether a duly and legally qualified medical practitioner (M.D.Edin., M.R.C.S.E., etc.) can practise as a physician among English residents and visitors at Brussels, Ostend, or any other Belgian town; also, whether his English qualifications would be sufficient to enable him to practise at any of the French watering-places, as Dieppe, Havre, or Boulogne; or at Hyères, Nice, Mentone, or any other place of resort in the Riviera. If not, can you inform me what other qualifications it would be necessary to obtain, or what legal forms may be requisite in order to acquire authority or permission to practise in either of the places named?

I am, etc., Quisquis.

*** To practise in France, an English physician must obtain either a French diploma by examination or special leave from the Minister of the Interior, for which he must apply through the English Ambassador. We are not sure how this is in Belgium, but Quisquis could learn on inquiry at the Foreign Office.

We are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Carlisle Patriot, March 13th; The Ayr Advertiser, March 5th; The West County Lantern, March 7th; The Scotsman, March 12th; The Brighton Examiner, March 3rd; The Leicester Advertiser, March 7th; The Blackburn Standard, Feb. 25th; The Hull Evening News, March 6th; The Sunderland Times, March 6th; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Sir W. Fergusson, London; Dr. Stephen Mackenzie, London; Mr. T. W. Williams, Birmingham; Mr. Oakley Coles, London; Mr. Nelson Hardy, London: Dr. J. B. Bradbury, Cambridge; Dr. J. F. Payne, London; Dr. C. Handfield Jones, London; Mr. C. W. Drew, London; Mr. J. C. Clarke, Morley; Dr. George Johnson, London; Dr. Woodcock, Manchester; Dr. Trollope, St. Leonard's-on-Sea; Dr. Joseph Rogers, London; Mr. Stent, Guildford: Mr. Trestrail, Aldershot; Mr. Harper, Highgate; Mr. F. B. Lee, Heckmondwike; The Secretary of the Harveian Society; Mr. Hyde, Leominster; Mr. Long, Thornbury; Our Dublin Correspondent; Mr. Lawson Tait, Birmingham; Dr. W. Whitehead, Manchester; Mr. Eastes, London; Mr. Eassie, Hendon; The Secretary of the Pathological Society; Mr. T. Holmes, London; Dr. Edis, London; Our Paris Correspondent; Dr. Farquharson, London; Dr. A. Sheen, Cardiff; Mr. Fairlie Clarke, London; Mr. F. G. Brown, London; Mr. H. Morris, London; Mr. C. G. Wheelhouse, Leeds; Mr. J. H. Stowers, London; Dr. James J. Bailey, Sheffield; Mr. C. M, Thompson, Sevenoaks; Dr. W. M. Kelly, Taunton; Our Edinburgh Correspondent; Dr. S. Lewis, Liverpool; Dr. W. H. Spencer, Clifton; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. J. H. Bale, Alphington; Dr. J. T. Walker, Flegg Burgh; Dr. J. N. Vinen, London; Mr. J. R. James, Carnarvon; Dr. Mouat, London: Dr. Veale, Ripley; Mr. Bartleet, Birmingham; Dr. Willis, Monmouth; Dr. Mackie, Cupar Fife; Dr. R. Barnes, London; Dr. Carroll, New York; Mr. J. T. Clarke, Leicester; Mr. Woodman, Exeter; Mr. Noble Smith, Paddockhurst; Dr. Squire, London; Dr. Lewtas, Paris; Dr. Hyslop, Church Stretton; Mr. J. Todd, Arbroath; Dr. J. G. Swayne, Bristol; Mrs. Roche, London; Dr. Althaus, London; Mr. Crocker, Bingley; Mr. L. Leonard, London; Mr. De la Motte, Ipswich; Dr. Lewis, Maesteg; Dr. Schliep, Berlin; Dr. Rumsey, Cheltenham; Dr. Aveling, London; Dr. Arlidge, Newcastle-under-Lyne; Mr. Ingpen, London; Mr. H. Lee, London; Dr. Wynn Williams, London; Dr. Cole, Bath; Mr. E. Bellamy, London; Mr. T. S. Jones, Manchester; Mr. Hitchcock, Lewisham; Dr. Tilbury Fox, London; Dr. H. H. Phillips, Reading; Dr. E. L. Jacob, London; Mr. R. W. Martin, Martock; Dr. Griffiths, Sheffield; Dr. J. C. Reid, Newbiggin-by-Sea; etc.

OBSERVATIONS
ON
HARE-LIP AND CLEFT PALATE.

By SIR WILLIAM FERGUSSON, Bart., F.R.S.,
Surgeon to King's College Hospital.

It may seem recurring to an oft-told story, to refer to hare-lip as giving opportunity of saying anything new or good on such a familiar subject. I fancy that, in my time, I have seen considerable changes for the better in regard to the treatment of such cases, and even now, after the experience of many hundred examples, I think that I can make some observations worthy of consideration. The operation for this malformation was one of the first I ever performed on the living body. It was done some forty-five years ago, and ever since I have taken interest in it, both in my own practice and that of others. I have repeatedly, in public hospital practice, operated on two and three cases in a single day, and I have read most that has been written on the subject throughout my professional life. It may, perhaps, be claiming more than I am entitled to, to say that, prior to the publication of my first edition of *Practical Surgery*, there had been little written regarding the anatomical condition of this malformation. There were few men, if any, alive who could state positively, or could show by specimens, what was the nature of the substance of the intermediate hard material in the midst of the two gaps in the upper alveolar ridge, in a case of double hare-lip. It was not known positively whether it was single or double. So far as I know, it was never even conjectured how it was held in its place; its relations with the vomer were unknown. The number of teeth likely to be developed in it, or their future quality, were little thought of, and the mass itself was found, in most instances, to be specially in the way in any contemplated operation. Until within these few years, there was not a skeleton of such a part in any museum in this country, and, in as far as I know, the specimens presented by myself to the Royal College of Surgeons are still the chief, if not the only, examples of the kind in our anatomical museums. Our knowledge on most such matters is now so precise, that the intermaxillary bones are now spoken of as familiarly as those in lower animals, whereas the actual condition in the human subject had rarely, if ever, been either described or demonstrated. The difference of connection or attachment, in the cases of single and double fissure in the alveolar ridge, seems to have been entirely overlooked; for there was no description which told how, in the double fissure, the intervening mass was held in its place solely by being suspended from the point of the vomer and the rest of the columna of the nose.

The development of the teeth in these cases has also, in my opinion, attracted less attention than in the normal condition of the upper jaw; but it is less my intention to refer to such anatomical and physiological matters than to some points in surgery, which I think specially worthy of notice as part of the result of my long experience in such cases.

First, as to the date or age when operations for hare-lip are most eligible, there is no doubt in my mind that an early period is now mostly preferred. The custom of delaying until after the completion of first dentition has now almost passed into abeyance, and the once prevalent idea that infants were specially liable to fatal convulsions after such operations may be said to have faded away. Experience has shown that they may be performed with safety at any period from a few hours after birth. Even at that dreaded period, first teething, harm is no more likely to happen than at any other time, provided always that the child be in good health. My own favourite date is from three weeks to three months after birth. Healthy-looking children at birth often pine and languish within the first few weeks, especially hare-lip cases, and particularly if the palate be implicated. I think it best to wait, in such instances, to see that health flourishes. A few weeks will give the requisite proof, and then, for many good reasons, I am of opinion that an operation should not be further delayed. I have a strong impression, from my experience, that the older a patient is, the more is the effect of the operation perceptible on the constitution, bodily and mentally; and I am equally convinced that, if it be performed at an age when there can be no subsequent recollection of the circumstances, so much the better for all parties. The parents and others interested in the infant are almost invariably in an unhappy state of mind until the operation is satisfactorily over. Maintaining, as I do, that the younger the patient is after the first three weeks, the safer and better is the operation, I consider it disloyalty to surgery to delay such a decidedly advantageous proceeding on doctrines which will not bear the smallest scrutiny. I have learnt facts regarding such matters that may appear more akin to romance than reality. I have been asked to see an infant, a few weeks old, with a simple single fissure in the lip, and, on my advice, the operation has been performed shortly afterwards, with the best results. Then it appeared that there was an older child in the family in a similar condition, which had been secluded in the nursery attics for several years. Happily, the experience of this younger family event was the means of freeing the poor child from seclusion; for those who had advised against the operation took heart of grace, and put the senior on a par with the junior, as far as the operation went. I have known an instance of a child being kept in the recesses of the nursery for eight or ten years for a severe deformity of the kind. It was never allowed to play with other children beyond the family; it was never allowed to leave the house without the face being muffled in thick folds of veil; and, for long, the neighbouring nursery maids had the idea that this poor girl, whose face otherwise was unusually handsome, was an example similar to the lady, famous in nursery story, with the pig's face. The opinion previously given, in regard to this case, had been based upon great ignorance of what was going on in surgery during the life-time of the poor sufferer.

But, to come more closely to the purpose of this paper, being of opinion that the intermaxillary portion or portions is or are very frequently the cause of much annoyance to the surgeon, often, indeed, being almost the direct cause of failure in operations, I am desirous of recording my experience on this subject.

In the case of double hare-lip, with double cleft in the alveolar ridge, there may be great projection, or little or none. In the latter case, particularly if the columna and lateral portions of the lip be of good size, there may be no need for meddling with the intermaxillary mass. If, however, the projection be considerable, or what may be called great, and if the columna and side portions of lip be scanty, there ought then, in my opinion, to be no hesitation about taking away the projection at its junction with the vomer. The attempt to push this part back by gradual pressure is troublesome, or well-nigh impossible, in most instances, even if, as has been proposed, its narrow neck be broken. In either instance, it has never been told from experience in what condition, in what direction, the teeth come in the part thus displaced. In either or both instances, I have no doubt in my own mind that the teeth, if they came at all, would so slope backwards as to be of no value either for show or for use. There is, however, indubitable proof that, without thus meddling with the part, there are only two incisors of respectable size, after all, and these are of such indifferent quality, that they had better have been dispensed with at the earliest date. I, therefore, never hesitate to remove the intermaxillary mass when it seems the least in the way of a satisfactory operation. The advantages of doing so seem to me greatly to preponderate, and, if there be cleft hard palate at the same time, there is far greater chance, in after years, of the gap becoming narrower, whilst, in adult life, there will be greater facility for the assistance of the dentist. But, I imagine, there is less hesitation or difficulty in the surgeon's mind in the case of capacious double gap, than when there is only a single one with considerable projection of the intermaxillary margin. It is to such cases that the chief object of these observations is directed. If it be difficult to apply compression on the intermaxillary portion in double cleft, it is still more so when only one side projects; for its base is broader and firmer. The instances where there is no special projection are common, and require no comment, as there is then, as regards this matter, no obstacle to a satisfactory and successful operation; but, when there is a projection, if considerable, it is a more serious obstacle to these results than those inexperienced may imagine. I believe that this condition is a frequent cause of failure in the ordinary operation, particularly if it be done without the truss-compressor on each cheek to push the lateral portions of the lip towards the mesial line. In such a case, the surgeon is naturally anxious to leave the alveolar ridge untouched, and, in accordance with a common practice, when it is desirable to secure union by first intention, when the stitches or needles are withdrawn, strips of plaster are carried from cheek to cheek to hold the union firm. Scarcely a greater mistake can be made, for, the line of union in the lip being generally, under such circumstances, exactly over, or opposite to, the sharp angle of the projection of bone, the young cicatrix is pressed against it, and gradually thins away, until it is fairly split open, when the operation proves a failure. This, I have a strong impression, is an explanation of the failure of many cases that do not seem, in any special way, complicated. I do not mean that straps always conduce to this effect, and that, therefore, they should never be used. On the contrary, I have very frequently seen them of much service. But, if the single projection alluded to be conspicuous—in which case, there will always be a somewhat sharp, angular margin—it is, in my opinion, best to get rid of it at the time of the operation. In my own practice, I was at one time in the habit of cutting the projection away with sharp small bone-forceps, dividing gum and bone at the same time, and aiming chiefly at getting rid of the projection. This usually involved all the intermaxillary bone on that side, and implied, perhaps, little heed of what damage might be inflicted on the sound side, although, latterly, I always passed the blades into the mesial line between the intermaxillary bones, so as to secure this side from material injury. In the course of my experience, I fancy that I refined on this practice. I found that it was well to detach the portion as high up towards the nostril as could conveniently be reached, and here I discovered that, in all young subjects, there was only cartilage to be divided. This could easily be done with the knife or scissors, and so, for many years, I have used only one or other of these instruments. Usually, I have passed the scalpel through the mucous membrane, under the frænum, up between the bones, and divided the cartilage, periosteum, and gum, to sever the part; and thus the use of cutting bone-forceps has been dispensed with, for, to say the least, such an instrument is coarse-like and clumsy in an operation for hare-lip on an infant only a few weeks old.

Whilst I can offer little objection to this proceeding, I fancy that I have recently fallen on one equally efficacious and void of certain objections which, I think, might be urged against it. Instead of this sweeping wholesale abstraction, I content myself with making an incision, vertical, sloping, or horizontal, with a scalpel through the mucous membrane and periosteum, over the projecting piece of bone; with a few touches of the knife, or a little squeeze with finger and thumb, I so separate these tissues as to permit the entrance of a gouge of a quarter or three-eighths of an inch in breadth, with which I scoop out the body of the milk incisor-tooth in as far as it is formed, taking no heed of the cyst or of that of the permanent one, and even cut out such wall of bone as may be there; usually, at four or eight weeks, only small plates of bone. In this way, the hard projection is removed, and the tissues that remain offer no obstruction to the union of the junction of the lip in front, whilst the operation, as it appears to me, is less destructive, therefore more conservative, in character. There is thus left only the mucous membrane, with possibly some periosteum, which form a soft cushion behind the wound in the lip, and so the remaining intermaxillary bone is not divested of covering so thoroughly as when cutting instruments are passed in the mesial line to take all away on the offending side.

I have now adopted this plan in several cases, and have been much pleased with the effect and result. In one instance, I used a silk stitch to hold the edges of the wound in the mucous membrane together, but I doubt if it be needful, and I have not seen any spurt of blood from the deep part of the wound, such as that which I have often found, in other instances, has required the application of a pointed heated cautery. The wound has healed without attracting special notice. In the case where the stitch was used, the thread came away spontaneously, and, in the end, the gum appeared as if there had been no projection, and, therefore, no such operation.

[*To be continued.*]

CLINICAL MEMORANDA.

FRACTURE OF THE INDEX FINGER FROM MUSCULAR ACTION.

A SINGULAR accident occurred in the out-patient practice of Charing Cross Hospital to-day (March 16th), namely, fracture of the proximal extremity of the index finger of the left hand, as a result, presumably, of muscular action. A man, 55 years of age, in making a back-handed blow at his retreating son, as far as I can understand, just missed striking him, thereby expending the extreme radial extension of his wrist without meeting with the expected amount of resistance. He immediately experienced great pain and loss of power over the hand, and, on his coming for advice, it was evident what had occurred; the fragment, which was freely movable beneath the skin, was drawn upwards by the extensor carpi radialis major, and powerfully abducted by the lower fibres of the first dorsal interosseous muscle; and, when these muscles were put in action, the deformity was singularly apparent. The line of fracture being considerably beyond the reflection of the synovial membrane, it is not probable that further complication will follow. When one takes into consideration the mode of development of the bone, the accident appears the more remarkable. The treatment was sufficiently obvious. EDWARD BELLAMY, F.R.C.S.,

Senior Assistant-Surgeon, Charing Cross Hospital.

THE CROONIAN LECTURES
ON
FUNCTIONAL DERANGEMENTS OF THE LIVER.

Delivered at the Royal College of Physicians.

BY CHARLES MURCHISON, M.D., LL.D., F.R.S.,
Physician and Lecturer on Medicine, St. Thomas's Hospital.

LECTURE I.

Notice of Dr. Croone.—Present Notions as to Functional Derangements of Liver unsatisfactory.—A. FUNCTIONS OF THE LIVER IN HEALTH. *Historical Sketch; Galen's Views; Obsequies of Liver by Bartholin; Modern Views; Functions of Liver threefold.* I. *Sanguification and Nutrition.* II. *Disintegration of Albuminous Matter.* III. *Secretion of Bile; Composition, Origin, Quantity, and Uses of Bile.*—B. FUNCTIONAL DERANGEMENTS OF LIVER. *Objections to existing Classification; Proposed Classification.* I. *Abnormal Nutrition.* 1. *Corpulence;* 2. *Emaciation.* a. *Deficiency of Bile;* b. *Diabetes;* c. *Other Varieties of Emaciation.* II. *Abnormal Elimination; Symptoms of Retained Bile; Cholestearæmia.*

MR. PRESIDENT, FELLOWS OF THE COLLEGE, AND GENTLEMEN,—It may interest some of you if, by way of preface, I say a few words respecting the founder of the course of lectures which I am honoured by delivering before you. For the particulars, I am indebted to the "Roll" of the College, edited by our learned colleague Dr. Munk.

Dr. William Croone was born in London, and educated at Emanuel College, Cambridge. He became a Fellow of this College on July 29th, 1675, and was Censor in 1679. In 1659, he was elected Professor of Rhetoric at Gresham College, and shortly afterwards he was made Secretary of the Royal Society, which then held its meetings in Gresham College. He resigned his professorship in 1670, on being appointed Lecturer on Anatomy at Surgeons' Hall. He died in 1684, and was buried in the churchyard of St. Mildred's, in the Poultry. He left behind him a plan for two lectureships, which he had designed to found—one course of lectures to be read before the College of Physicians, after a sermon to be preached in the church of St. Mary-le-Bow; the other to be delivered yearly before the Royal Society, upon the nature and laws of muscular motion. His will contained no provision for the endowment of these lectures; but his widow (a daughter of Alderman Lorimer, who subsequently married Sir Edwin Sadleir, Bart.) carried out his intention by devising in her will the King's Head Tavern, on Lambeth Hill, Knight Rider Street, in trust to her executors, to settle four parts out of five upon the College of Physicians, for the purpose of founding the annual lectures, now known as the Croonian Lectures, and the fifth part to found the Croonian Lecture of the Royal Society. A fine portrait of Dr. Croone was presented to the College in 1738 by Dr. Woodford, Regius Professor of Physic at Oxford, and is now suspended in the Censors' room.

The founder of these lectures made no restriction as to their subject, as he did with regard to the lecture before the Royal Society; and it has been customary for each lecturer to select some subject in practical medicine, which his experience has been most calculated to elucidate. The subject which I have chosen is one which it appears to me is well worthy of the attention of this College, and of medical men in general, viz., The Functional Derangements of the Liver. Professional opinion as to what constitutes functional disorder of the liver is vague and unsatisfactory. There is no expression more common among both patients and their doctors than that the "liver is out of order", or that certain symptoms are due to "biliousness", and yet few medical writers have undertaken to define with accuracy what symptoms are referable to a disordered liver. It is to be feared that symptoms are sometimes referred to the liver, with which it has little or no concern; while, on the other hand, there are grounds for suspecting that many symptoms, at first sight apparently referable to other organs, and even grave degenerations of tissue and organic disease, not only of the liver itself, but throughout the body, may be traced back to functional derangements of the liver, although some of these may as yet be imperfectly understood. It is remarkable how systematic writers on Medicine and on Diseases of the Liver in particular entirely ignore the subject of functional disorders of the liver. The remarks which follow must be regarded as a feeble attempt to sketch with the light of recent investigation those symptoms and morbid conditions, which may fairly be put down to a disordered liver.

They do not pretend to place the subject upon a firm and lasting basis; but, by calling attention to its importance and provoking discussion, it is hoped that they will prove a stepping stone to a more certain knowledge of it, and in the meantime that they will help to supply what appears to be a deficiency in medical literature.

A.—FUNCTIONS OF THE LIVER IN HEALTH.

Before proceeding to discuss the results of derangement of the liver, it will be necessary for me to refer at some length to the functions of the organ in its healthy state. As in the case of the pathology of pyrexia and of inflammation, so with regard to the healthy functions of the liver, it is not a little remarkable that modern investigations have tended to reproduce in a scientific form certain crude opinions entertained by the earliest writers on Medicine. From its large size and from the extensive system of blood-vessels connected with it, the liver was believed to be the seat of many most important functions, and to be, in fact, the central organ of vegetative life. Galen, for example, taught that the liver was the centre of animal heat, that it was the seat of sanguification, and that it was the starting point of the venous system. He assigned to the veins distributed over the intestines the function of imbibing the fluid nutriment and of conveying it by the vena portæ to the liver, where he supposed that the processes of sanguification and of the generation of animal heat took place. He then traced the passage of the blood through the hepatic veins to the heart, and hence he regarded the liver as the starting point of the venous system. For upwards of sixteen centuries, these views of Galen—more or less modified—were generally accepted by physiologists and physicians, and as late as the seventeenth century they were in the main upheld by our own Harvey. But the discovery in the first half of the seventeenth century of the lacteals and thoracic duct showed that chyle was conveyed to the blood independently of the portal vein and of the liver. The result was that this organ at once fell from its high estate, and ceased to be regarded as serving any purpose in sanguification. Thomas Bartholin, in his *Defence of the Lacteals and Lymphatics against Riolanus*, wrote for the liver an epitaph, in which the end of its dominion was announced, and its function was declared to be henceforth limited to the secretion of bile.

"Vivit, floretque pro bile separandâ, sed, si sanguinem conficiendum spectemus, funeratum creditur. Ivimus illi exsequias, nunquam redituro. Nam . . . .

> . . . . 'Facilis descensus Averni,
> Sed revocare gradum, superasque evadere ad auras,
> Hoc opus, hic labor.'"*

Although it was *à priori* improbable that the largest gland in the body, deriving large supplies of blood from different sources, as well as holding peculiar relations to the blood returning from the placenta in the fœtus and from the stomach and intestines in the adult, should have as its sole function the secretion of a fluid, which is apparently of less importance in digestion than the gastric or pancreatic juice, yet for nearly two centuries the only object of the liver was believed to be the secretion of bile; and down to the present day its functional derangements are constantly spoken of as restricted to the secretion of bile abnormal in quantity or in quality. For example, our late learned colleague Dr. Copland, one of the few modern medical authors who has discussed the functional disorders of the liver, describes them as coming under three heads, viz.: 1. Diminished secretion of bile; 2. Increased secretion of bile; and 3. Secretion of morbid or altered bile;† and this classification probably represents with tolerable accuracy the views of the great majority of modern practitioners of medicine. It is the belief that the sole function of the liver is the secretion of bile, which has given rise to the expression in common use by professional men as well as laymen, that the "liver will not act", when all that is implied is a constipated state of the bowels. But the physiological investigations made within the last quarter of a century have in a great measure restored the liver to its former place of importance in the animal economy; they have shown that the secretion and excretion of bile are far from being the most, if they be not the least, important of its functions; and they have consequently added to the number of its functional derangements.

1. In the first place, it is now known that the liver is one of the organs mainly concerned in the process of sanguification. So long ago as 1820, it was shown by Magendie and Tiedemann that the absorption of nutritive matters from the bowel was not limited to the lacteals, but that part was taken up into the blood through the portal vein;‡ and the researches of subsequent physiologists have clearly established that the liver exercises most important functions in assimilation and nutrition. The most valuable contributions towards our knowledge of this matter have been the researches of Claude Bernard and other observers, who have shown that the liver has the power of making and storing up for a time within its cells glycogen ($C^6 H^{10} O^5$), a substance resembling dextrin ($C^6 H^{10} O^5$) in its chemical composition and reactions, and like it capable of conversion into sugar by the action of albuminoid ferments. This substance always exists in the liver in larger amount during digestion than during fasting, attaining its maximum usually about four or five hours after a meal. It does not yet seem certain what the materials are from which it is mainly formed, but there can be no doubt that its amount is increased by the use of starchy or saccharine food. The starch ($C^6 H^{10} O^5$) of the food is believed to be converted into grape-sugar or glucose ($C^6 H^{12} O^6$) by the saliva and pancreatic secretion, while the cane-sugar ($C^{12} H^{22} O^{11}$) is transformed by the intestinal secretion into grape-sugar and another form of sugar called lævulose ($C^6 H^{12} O^6$). The glucose and lævulose are absorbed by the intestinal veins and carried by the portal vein to the liver, where they are converted partly perhaps into fat, but mainly into glycogen, which is stored up in the hepatic cells, and distributed for the nutrition of the tissues during the intervals of fasting. The circumstance, however, of glycogen being formed in considerable quantity in the livers of animals who have been fed for a month or more on flesh alone, and the fact that its quantity in the liver of a dog is always increased after a meal of flesh, show that it can also be produced from albuminous matter. The albumen of the food is converted by the gastric juice into peptone, which is also absorbed by the intestinal veins and carried to the liver, where it is believed to be decomposed into glycogen and nitrogenous products such as leucin ($C^6 H^{13} NO^2$) and tyrosin ($C^9 H^{11} NO^3$), which are ultimately resolved into urea ($CH^4 N^2 O$).* The glycogen derived from these two sources does not remain long in the liver, for the large quantity formed after a meal is quickly diminished on fasting. It is not got rid of by the bile-ducts, for bile contains neither glycogen nor sugar. But either as glycogen, or more probably as sugar,† into which it is believed by Bernard and most other physiologists to be reconverted through the action of an albuminoid ferment in the liver or in the blood, or transformed in some other way, it enters the blood by the hepatic veins.

One object of the glycogenic function of the liver is supposed to be that of continuously supplying an easily oxidisable material, such as sugar, which in the presence of oxygen and albuminous matter is readily converted in the lungs into carbonic acid and water, and thus contributes to the maintenance of animal heat. But although there is still some difference of opinion among those most competent to judge, the bulk of evidence goes to show that a portion only of the glycogen formed in the liver is transformed into sugar to be burnt in the lungs, and that the maintenance of animal heat is far from being its chief use. There are good grounds for believing that it assists in cell-growth; for, just as in plants the presence of sugar seems to be necessary for the most rapid development of cells, so in animals glycogen can be found wherever cell-growth is actively going on. Bernard and Rouget have found it in abundance in the cells of the placenta and amnion; and Rouget in many fœtal tissues, such as cartilage, muscle, and the epithelial cells of the skin;‡ and it is also present in the inflammatory products of pneumonia, and in new growths whenever cell-formation is active. Hoppe Seyler has also shown that it is an ingredient of colourless blood-corpuscles, so long as they are active, but that when they lose their power of motion the glycogen disappears and is replaced by sugar.§ In connection with these observations, it is important to note that the blood, on emerging from the liver, is much denser, and contains a far larger proportion of solid constituents (although less fibrin), and is also far richer in white blood-corpuscles, than the blood before it enters the liver. Bernard, Lehmann, and McDonnell ascertained that in blood drawn from the hepatic vein the colourless corpuscles are from five to ten times more numerous than in blood taken from the portal vein;[*] while Hirt of Zittau estimated that the proportion of the colourless to the red corpuscles was in the portal venous blood as 1 to 524, but in the hepatic as 1 to 136.[†] The red corpuscles also from the hepatic vein are said to have a sharper outline and less tendency to aggregate into rolls, and to dissolve less readily in water than those from the portal vein. Again, we have the remarkable observations of Weber, confirmed by Kölliker, respecting the extensive generation of blood-corpuscles in the liver of the embryo. In the early stages of fœtal life, the blood-cells multiply throughout the entire mass of the blood; but when the liver begins to be formed this process ceases, and a very active formation of colourless blood-cells is set up in the liver, these colourless cells undergoing a gradual change by the development of colouring matter in their interior into red corpuscles. According to Kölliker, this new formation of blood-corpuscles in the liver continues during the whole of the fœtal life of mammalia.[‡] The observations quoted above make it probable that the liver in the adult continues to perform the functions which pertain to many different tissues of the fœtus; the glycogen secreted in its cells combining with nitrogen, and forming an azotised protoplasm, which maintains the nutrition of the blood and tissues. Dr. R. McDowell has suggested that part of the glycogen of the liver combines with nitrogen furnished by the fibrin of the blood, which is disintegrated in its passage through the liver, and that the result is a new protein substance which enters the circulation.[§] Our colleague Dr. Pavy is also of opinion that glycogen is capable of transformation into fat. As he contends, it is beyond dispute that starch and sugar introduced with the food lead in the animal system to the production of fat, while his experiments have shown that the ingestion of these principles is followed by a marked increase in the amount of glycogen in the liver.[‖] The production of glycogen, then, may be regarded as the first step in the assimilation of the starchy and saccharine elements of our food; and, as these elements are known to proceed on to fat, glycogen would seem to occupy a position intermediate between the two. The process of assimilation may go on to the production of fat in the liver, or it may stop short at the formation of another principle, which escapes from the liver and is elsewhere transformed into fat. Lastly, there are good grounds for thinking that both glycogen and sugar serve some purpose in muscular action; at all events, it has been found that the quantity of sugar in blood becomes greatly diminished in passing through the vessels of contracting muscles.[¶] According to Bernard, this destruction of sugar in muscle is due to lactic fermentation.[**]

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* *Defensio vasorum lacteorum et lymphaticorum adversus J. Riolanum.* Hafniæ, 1655, p. 8.

† *Medical Dictionary*, ii, 723.

‡ *Versuche über die Wege auf welchen Substanzen aus dem Magen und Darm Canal im Blut gelangen.* Heidelberg, 1820.

* See Fick in *Pflüger's Archiv*, vol. iv, p. 40; also Schultzen and Nencki, *Zeitschrift für Biologie*, vol. viii, p. 124.

† In reference to the difference of opinion still existing on this matter, Dr. Brunton writes as follows, in Sanderson's *Handbook for the Physiological Laboratory*, 1873, p. 508: "While Bernard considers that the formation of sugar goes on in the liver constantly during life, this has been denied by Pavy, Ritter, Meissner, and Schiff, who hold that it only occurs after death, or under pathological conditions, such as disturbance of the respiration or circulation during life. They base their opinions on the observations that the liver contains little or no sugar when examined immediately after death, and that the blood of the hepatic vein does not contain more sugar than that of the portal or jugular veins. It is quite true that sugar is found in very small amount in fresh livers; but the smallness of the quantity is in all probability due to the constant circulation through the liver during life washing the sugar out of it as soon as it is formed (Flint). The statement, that the blood of the portal contains as much sugar as that of the hepatic vein, rests on experiments vitiated by the omission to place a ligature on the former while removing the liver, so that, the hepatic vein having no valves, the blood from it flowed back into the portal system. When this fallacy is avoided, sugar is found in much larger proportion in the hepatic than in the portal vein. To meet the objection that sugar thus found has been formed after death, blood has been taken from the right side of the heart, or vena cava, and the quantity of sugar it contained compared with a similar specimen of blood from the jugular vein. Every precaution was taken to avoid disturbance of the circulation, yet the sugar in the former was found to exceed that in the latter considerably (Lusk)."

‡ *Journal de Physiologie*, 1859, tome ii.

§ *Med. Chem. Untersuch.*, 1871, p. 486.

There may be other ways in which the liver contributes to assimilation and the nutrition of the body; but enough has been said to justify us, notwithstanding the prediction of Bartholin, in restoring to the organ the important function claimed for it by Galen and his successors, viz., that of sanguification.

II. But, in the second place, modern research has made it probable that the liver is endowed with a function not suspected by Galen, and which, from a pathological point of view, is even more important than that which we have been considering. Many observations, pathological as well as physiological, point to the conclusion, that the liver is not only a blood-forming, but a blood-destroying or purifying, organ, and that it contributes in a great degree to the destruction of albuminous matter derived from the food and textures, and the formation of urea and lithic acid, which are subsequently eliminated by the kidneys. First, there seems to be little doubt that the albumen and fibrin of the blood become largely disintegrated in the liver. Lehmann and Bernard have shown that, while portal blood contains much fibrin, blood from the hepatic vein contains little or none.[††] Brown-Séquard has calculated that no less a quantity than 2,690 *grammes*, or about 86½ ounces, of fibrin is daily lost to the blood in its passage through the digestive organs and the liver.[‡‡] If this be so, we can readily understand that, when anything occurs to interfere with this fibrin-destroying function, there should be a rapid increase of fibrin in the blood, as we know to occur in acute rheumatism and in other diseased states. Moreover, there are grounds for believing that, while white blood-corpuscles take their origin in the liver, the red corpuscles are destroyed there, and that the nitrogenous colouring matters of the urine are partly the result of this destructive process. Gréhaut has ascertained that there is a positive destruction of hæmoglobin in the passage of blood through the liver.[*] Red blood-corpuscles are known to be at once destroyed when brought in contact with a solution of bile-acids of a certain strength (12 per cent., Legg)[†], while the researches of our late colleague Dr. Bence Jones make it very probable that the various shades of yellow, brown, and pink presented by the sediments of the urine are due to different degrees of oxydation of the pigment of the bile.[‡] But, secondly, there is evidence that the liver is largely concerned in the formation of the nitrogenous matters which are eliminated by the kidneys. 1. First, there is the well known fact, to which I shall have occasion to refer again in more detail, that, among the most constant signs of functional derangement of the liver, is an imperfect formation of urea, evidenced by the deposit of lithic acid or lithates, and of a dark colouring matter closely allied to lithic acid, in the urine. 2. Secondly, when a great part of the liver has been destroyed by disease, the urea discharged in the urine becomes greatly lessened, or it entirely disappears. For example, when a great part of the liver has been destroyed by cancer, there has been found to be a remarkable diminution of urea.[§] Thirty years ago, our colleague Dr. Parkes examined the urine in a number of cases of hepatitis and hepatic abscess in India, and found that in some instances there was abundance of urea, and in others scarcely any, while in some it was altogether wanting. The cause of the difference appeared to be the amount of suppuration. When this was excessive, so that the secreting substance of the liver was almost entirely destroyed, the amount of urea was greatly lessened, and in a degree proportioned to the extent to which the glandular tissue was destroyed by the abscess; and, on the contrary, when the liver was not suppurating, but was actively congested and enlarged, so that there was an increased activity of the secreting cells, the amount both of urea and lithic acid was increased.[‖] Again, in that singular malady, acute atrophy of the liver, when every secreting cell of the liver becomes rapidly disintegrated, all trace of urea may disappear from the urine, its place being taken by albuminoid substances less oxydised, such as leucin and tyrosin, which are also found in large quantity in the hepatic tissue, as if they marked the arrest or modification of the transformation of albumen.[¶] Lastly, there are grounds, to be referred to presently, for believing that, when cerebral symptoms supervene in any case of protracted jaundice with destruction of the liver, they are not due, as has been commonly thought, to saturation of the system with bile, but to non-elimination of urea. From these observations, it is clear, as Meissner has argued, that "withering and destruction of the liver-tissue is connected with an important diminution in the formation of urea."[**] 3. There is experimental evidence that urea exists in large quantity in the liver, and that it is formed there. Dr. Parkes, in the Croonian Lectures for 1871,[††] informed us that the experiments of Heynsius and Stokvis, followed up by those of Meissner, Bullard, Perls, and others, had placed on a certain experimental basis the fact, that urea can be largely found in the liver; while the more recent observations of Cyon seem to prove that there is an actual production of urea in the liver. Cyon ascertained, on analysing blood obtained by introducing tubes into the portal and hepatic veins of dogs, that the blood from the latter vessels always contained much more urea than that from the former. In one experiment, the blood from the portal vein contained only .08 *gramme* of urea in 100 cubic *centimètres*; but, after passing through the liver once, it contained .14 *gramme*, and, after passing through the liver four times, 0.176 *gramme*. He satisfied himself also that this increase was not due merely to washing out the liver, but that there was an actual formation of urea.[‡‡] It is important to add, that the formation of urea in the liver is always greatly increased after food. Lithic acid has also been found repeatedly in the liver of man and mammalia, but always in small quantity; whereas, in birds, in which lithic acid takes the place of urea as the great eliminator of nitrogen, it also takes the place of urea in the liver, as it probably also does in the human liver under certain pathological conditions.

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[*] See McDonnell's *Observations on the Functions of the Liver.* Dublin, 1865.

[†] Müller's *Archiv*, 1856, and Carpenter's *Principles of Human Physiology*, 7th edition, p. 228.

[‡] Todd and Bowman's *Physiology*, 1856, ii, 263; Carpenter's *Principles of Human Physiology*, 7th edition, 1869, p. 214; and Kölliker's *Manual of Human Histology*, Sydenham Society edition, 1854, vol. ii, p. 342.

[§] *Op. cit.*

[‖] F. W. Pavy, *The Nature and Treatment of Diabetes*, 2nd ed., 1869, p. 113.

[¶] Sanderson's *Handbook for the Physiological Laboratory*, 1873, p. 508.

[**] Lectures delivered at the College of France, *London Medical Record*, October and November, 1873.

[††] McDonnell, *op. cit.*, p. 29; G. Budd, *Diseases of the Liver*, 3rd ed., 1857, p. 47.

[‡‡] *Journal de Physiologie*, i, 304.

[*] Sanderson, *op. cit.*, p. 498.

[†] Kuhne, *Archiv für Path. Anat.*, 1858, Bd. xiv, p. 324; Robin, *Mémoires lus à la Société de Biologie pendant l'Année* 1857; and Dr. J. W. Legg, *St. Bartholomew's Hospital Reports*, vol. ix, 1873.

[‡] G. Budd, *op. cit.*, p. 34; Sanderson, *op. cit.*, p. 499. "The very close resemblance of urine-pigment to bilifulvin is strongly suggestive of an hepatic origin. . . An argument in favour of a liver origin may perhaps be drawn from the effect of liver-diseases on the urinary pigment." (Parkes, *On the Urine*, 1860, p. 30.)

[§] Parkes, *On the Urine*, 1860, p. 330.

[‖] *On the Dysentery and Hepatitis of India*, by E. A. Parkes, 1846.

[¶] Frerichs' *Klinik der Leberkrankheiten*, New Sydenham Society's Translation, vol. i, p. 221; Murchison, *Clinical Lectures on Diseases of the Liver*, 1868, p. 229.

[**] Henle's *Zeitsch. für rationelle Medicin*, Bd. xxxi, p. 246.

[††] *Lancet*, 1871, vol. i, p. 469.

[‡‡] *Centralblatt für die Med. Wissenschaften*, August 1870. p. 580.

All these observations point to the liver as being largely concerned in the destructive metamorphosis of albuminoid matter, the products of which are eliminated by the kidneys, although it is not improbable that other glandular organs, and even the corpuscles in the circulating blood, as believed by H. Ludwig and Fuhrer,[*] may contribute to the process.

As might have been expected, these oxydising and disintegrative processes, as well as those connected with the formation of bile, are attended by a production of heat. The average temperature of the body generally being between 98 degs. and 99 degs. Fahr., the temperature of the healthy liver reaches 104 degs., or even, according to Bernard, sometimes 106 degs.[†] Bernard has also shown that, in dogs, the temperature of the blood in the hepatic veins is considerably higher than that of the blood of the portal vein. As heat is absorbed during organisation, and given off during disintegration, the high temperature generated in the liver makes it probable that the disintegrative processes taking place in the gland are in excess of the formative. It follows, therefore, that the precise observation of modern times has confirmed the statement enunciated centuries ago by Galen, that the liver is a great centre of animal heat.

III. The third function of the liver is the secretion of bile. The composition of this substance is complex, and its uses are not yet sufficiently known. Human bile, as found after death, is usually a dark brown fluid, of tenacious consistence, from the presence of mucin, which it derives from the gall-bladder and bile-ducts; but, when fresh, as it flows from the liver, it is a thin transparent liquid, of a golden yellow colour like that of yolk of egg, of a very bitter taste, of alkaline reaction, and having a specific gravity of about 1018. It has an unctuous feel, and mixes freely with oil or fat. It contains from 9 to 17 per cent. of solid matters (the proportion being always greater soon after a meal), consisting for the most part of substances peculiar to bile. Excluding the mucin, its principal ingredients are—1. Bile-pigment; 2. Biliary acids combined with soda; 3. Cholesterin and fats; 4. Mineral matter, such as phosphates of soda, potash, lime, magnesia, and iron, chloride of sodium, and traces of copper.

The following analysis of bile obtained from a man aged 22, killed by an injury, was made by Frerichs.

Water	859.2
Solid residue	140.8
Glycocholate of soda Taurocholate of soda	91.4
Fat	9.2
Cholesterin	2.6
Bile-pigment and mucus (of which, mucus about 1.4)	29.8
Salts	7.7

The yellow pigment is now designated *bilirubin* ($C^{16}H^{18}N^{2}O^{3}$). On standing, it becomes greenish from oxydation, and is converted into *biliverdin* ($C^{16}H^{20}N^{2}O^{5}$), which accounts for the dark colour usually presented by the bile in the gall-bladder after death and in the fæces. Biliverdin is also the principal colouring matter of the bile of the herbivora. Bilirubin is now known to be formed from blood-pigment or hæmoglobin by the hepatic cells, in the passage of the blood through the liver. That this was the source of the bile-pigment, was suggested at the end of last century by a distinguished Fellow of this College, Dr. W. Saunders, who observed: "Green and bitter bile, being in common to all animals with red blood, and found only in such, makes it probable that there is some relative connection between this fluid and the colouring matter of the blood, by the red particles contributing more especially to its formation."[‡] This view, revived in our own day by Virchow, is supported by the apparent identity of bile-pigment with the pigment-hæmatoidin found in old extravasations of blood, and by the fact that what appears to be bile-pigment can be produced from blood-pigment by the action of chemical reagents;[§] by the discovery of Zenker and Frerichs of crystals of hæmotoidin in inspissated bile and in the bile of jaundiced urine;[‖] by the observation of Gubler that bilirubin and hæmatin give the same play of colours with nitric acid, except that the green colour is most persistent in the former, and the violet in the latter;[¶] by the discovery of Frerichs, Kuhne, and others, that when any substance, such as bile-acids or even water, which has the property of dissolving blood-corpuscles and liberating hæmoglobin, is injected into the veins, bile-pigment (bilirubin) appears in the urine; and by the statement of Gréhaut, that there is a positive destruction of hæmoglobin in the passage of blood through the liver.[*] There are, on the other hand, grounds for believing that bile-pigment is in its turn converted into urinary pigment.[†] A substance presenting spectroscopic characters similar to those of urinary pigment can be prepared by deoxidation from bilirubin; and it is believed that, in the organism, bile-pigments are reduced by hydrogen or other reducing agents present in the intestines.[‡] It is also a well known clinical fact, that nothing influences so much the characters of the urinary pigment as functional or structural disease of the liver. The liver, then, together with that osmotic circulation constantly going on between it, the blood, and the contents of the intestines, to be referred to presently, appears to be the medium of conversion of blood-pigment into bile-pigment, and of bile-pigment into urinary pigment.

The bile-acids in human bile are two—glycocholic acid ($C^{26}H^{43}NO^{6}$) and taurocholic acid ($C^{26}H^{45}NO^{7}S$). Both acids are derivatives of albumen, and contain nitrogen; and taurocholic acid, to which the bitter taste of bile is due, contains all the sulphur of the bile. Both are in bile combined with soda, and both are what are called conjugate acids; that is to say that they are composed of cholic acid ($C^{24}H^{40}O^{5}$), which contains neither nitrogen nor sulphur, in combination with taurin ($C^{2}H^{7}NO^{3}S$), which contains both nitrogen and sulphur, and glycocin ($C^{2}H^{5}NO^{2}$), which contains nitrogen, but no sulphur.

Cholesterin ($C^{26}H^{44}O$) is a fatty substance, which crystallises in colourless rhombic plates, one corner of which is often indented. It is met with in nerve-matter, in the spleen, in blood, and in certain morbid exudations, as well as in bile. An American physician, Dr. Austin Flint, jun., has endeavoured to show that cholesterin is formed for the most part, if not entirely, from nerve-tissue, from which it is taken up by the blood; and that one of the chief functions of the liver is to eliminate this cholesterin, the accumulation of which in the blood, from the liver ceasing to act, is attended by cerebral and other symptoms of blood-poisoning.[§]

Bile thus constituted is being constantly secreted by the liver. There is still much difference of opinion as to the part played by the liver in the formation of bile. It is generally admitted that the biliary acids are formed in and by the liver; but many physiologists and physicians still maintain that the bile-pigment is preformed in the blood, and is merely separated from the blood by the liver; and they explain those cases of jaundice in which there is no obstruction of the bile-duct by saying that bile-pigment accumulates in the blood from the liver ceasing to act, or from its function being suppressed.[‖] But it has long appeared to me that there are weighty objections to this view.

1. Although bile-pigment appears to be derived from the colouring matter of the blood, it has not yet been satisfactorily shown that bile-pigment, as such, exists ready formed in the blood of persons who have not jaundice. Frerichs denies that it ever has. Lehmann, who has investigated with great care the changes which the blood undergoes in passing through the liver, has never been able to detect the colouring matter of bile in portal blood, and infers that this, as well as the bile-acids, must be formed in the liver itself.[¶] The blood of the hepatic artery has been examined with a like result. It is obvious that, if bile-pigment exist in healthy blood at all, its quantity must be very minute; and, when we consider that the quantity of bile secreted by the human liver daily is about two pints, and yet that jaundice is not a normal condition, it seems impossible that all the bile-pigment secreted by the liver can be formed in the blood; and it is not probable that part is formed in the blood and part in the liver.

2. The discovery by a few observers of a small quantity of bile-pigment in what appeared normal blood does not prove that it was formed in the blood. It is quite conceivable that it may have been formed in the liver, and been subsequently absorbed.

3. It often happens that, from various diseases, such as fatty and waxy degeneration, cancer, and cirrhosis, the secreting tissue of the liver is for the most part or entirely destroyed, bile is no longer secreted, and yet no jaundice results. Several cases of this sort are referred to by Haspel, where the gall-bladder and bile-ducts, after death, contained only a little white mucus.[**] Frerichs records a case of fatty liver, where

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[*] Parkes, *Lancet*, 1871, vol. i, p. 470.

[†] On the Heat of the Body. The Goulstonian Lectures for 1871. By Dr. S. Gee, BRITISH MEDICAL JOURNAL, 1871, vol. i, p. 330.

[‡] *Treatise on Structure and Diseases of the Liver*, 3rd edition, 1803, p. 147.

[§] Virchow's *Cellular Pathology*, English Translation, p. 144; Kuhne, *Lehrbuch der Physiol. Chemie*. Leipzig. 1866, p. 89.

[‖] *Jahresb. von der Gesellschaft für Natur- und Heil-kunde in Dresden*, 1858, p. 53.

[¶] *Gaz. Méd. de Paris*, 1859, p. 469.

[*] Sanderson, *op. cit.*, p. 498.

[†] Bence Jones, referred to by G. Budd, *op. cit.*, p. 34; Parkes, *On the Urine*, 1860, p. 30.

[‡] Sanderson, *op. cit.*, p. 499.

[§] *Recherches Expér. sur une nouvelle fonction du Foie*. Paris, 1868.

[‖] Budd, *op. cit.*; and G. Harley, *Jaundice, its Pathology and Treatment*. London, 1863.

[¶] *Physiological Chemistry*, Dr. Day's Translation, vol. ii, p. 87.

[**] *Maladies d'Algérie*, vol. i, p. 262.

the contents of the bowels were pale, the gall-bladder empty, and the biliary ducts coated with a greyish mucus, notwithstanding which the skin was of a chalky paleness, and the urine contained no bile-pigment.[*] Similar observations have been made by Budd in cases of waxy disease and cancer of the liver,[†] and several instances of a like nature have come under my own notice. If bile-pigment be formed in the circulating blood, it is difficult to account for what becomes of it in these cases.

4. If the constituents of bile be formed in the blood, intense jaundice ought at once to follow the extirpation of the liver in any of the lower animals, in like manner as urea accumulates in the blood after removal of the kidneys. But, so far from this being the case, Müller, Kunde, Lehmann, and Moleschott have repeatedly extirpated the liver of frogs, and have invariably failed to find a trace of the biliary acids, or of the colouring matter of the bile, in the blood, the urine, or the muscular tissue.[‡]

The supposition that bile-pigment is formed in the blood appears to me for these reasons to be untenable.

[*To be continued.*]

ICHTHYOSIS LINGUÆ (SO-CALLED) FOLLOWED BY EPITHELIOMA.

By W. FAIRLIE CLARKE, M.A., F.R.C.S.,
Assistant-Surgeon to Charing Cross Hospital.

I AM sorry that Mr. Henry Morris had not an opportunity of speaking upon my paper, at the Royal Medical and Chirurgical Society, upon the so-called ichthyosis linguæ, for there were not many present who are better entitled to express an opinion upon the subject than he is. I will now endeavour briefly to reply to his comments.

1. Mr. Morris says truly, that I consider "the essential nature of ichthyosis linguæ to be a chronic inflammation, accompanied by an overgrowth of the papillæ"; but subsequently, when the disease has reached the stage of epithelioma, the rete mucosum, I add, "increases enormously at the expense of the papillæ, reducing them in many places to mere threads, and dipping down between them in the form of large club-shaped processes". In these statements he finds a contradiction and a *reductio ad absurdum*. "It would thus seem," he writes, "that, as the ichthyosis advances, the hypertrophied papillæ, which are its leading feature according to Mr. Clarke, must necessarily pass back to their normal life as they gradually dwindle down into a state of atrophy. The inference, then, is that there is a stage in the progress of the disease when part of its essential nature—viz., an overgrowth of the papillæ—no longer exists; or, in other words, that as the disease is growing worse and worse, it gradually recovers." But I do not see that there is any such inconsistency in my statements. The one refers to the ichthyosis, the other to the epithelioma. In ichthyosis linguæ, the papillæ are hypertrophied, but they retain their type; and in this condition they may remain for years. By and bye, however, the point is reached when the disease becomes epitheliomatous, and the rete developes in the manner I have described. The papillæ do not "gradually dwindle down into a state of atrophy", they do not "pass back to their normal size"; nor do I think that my language implies anything of the kind. They are actively invaded on all sides by the rete; their type is entirely lost; and they are very soon destroyed by the epithelial growth. The microscopical drawings and sections that I showed at the meeting demonstrated these points.

2. Mr. Morris criticises the features which I have said are distinctive of ichthyosis linguæ, and deprecates the name papilloma of the tongue, which I formerly suggested. I now readily admit that, though the disease often begins as a circumscribed wart, yet it has such a tendency to spread, that papilloma is not an appropriate name. As I said at the meeting, I think it would be best to adopt Dr. Ullmann's term, and to call it Tylosis Linguæ. From ichthyosis of the skin it differs, first, pathologically, because, in the former, the sweat-glands and the sebaceous follicles play an important part, while in the tongue there are no such glands or follicles; and, secondly, clinically, because ichthyosis of the skin, is (generally speaking) a congenital disease—a defect of development—and, moreover, has no proclivity to cancer; whereas the disease, which formed the subject of my paper, never occurs before puberty, and shows a strong tendency to become epitheliomatous. For these reasons, it appears to me to be undesirable to call it an ichthyosis.

3. Mr. Morris cannot agree with me in regarding the change in the mucous membrane as one which is due to chronic inflammation, excited by irritation. Whether it ought to be classed among chronic inflammations is a point which is fairly open to a question. But I think I adduced enough evidence to warrant me in the opinion that the disease (whether a chronic inflammation or not) is due to local irritation. That cases occur in which we cannot trace the irritation, is not wonderful. When we consider how subtle are the nutritive processes, and how easily their balance may be disturbed, the wonder is, not that in many cases the cause escapes our observation, but that in a few we are able to assign it with a high degree of probability. Some warts in other parts of the body spring up from a recognisable irritation; others we know not how. Some cancers arise in consequence of a recognisable irritation; others we know not how. So with the disease in question. Some warty spots on the tongue are due to a recognisable irritation; others arise we know not how, but it is reasonable to suppose that there is some subtle irritation which has excited them.

Mansfield Street, Cavendish Square, March 18th, 1874.

THE COOLING OF THE BODY AFTER DEATH.

By J. WILKIE BURMAN, M.D.,
Resident Medical Officer and Superintendent of the Wiltshire County Asylum, Devizes.

THE subject of the cooling of the body after death, as indicated by the thermometer, though it has already been investigated by such careful observers and high authorities as Drs. Wilks, Taylor, and Goodhart, has not, it appears to me, been as yet sufficiently made the object of inductive research for its proper and full elucidation. It is a subject that has for some little time past engaged my attention, seeming to me to be of considerable interest from a practical point of view. The cases in which I have so far made observation have neither been sufficiently numerous nor varied to warrant my speaking at present authoritatively on the subject; but I think I may safely venture to corroborate those who affirm that the cooling of the body after death, as indicated by the thermometer, is a much more gradual process than the experience of our unaided tactile senses has hitherto led us to suppose it to be.

It is not an uncommon occurrence for medical officers of asylums to be called up at night to see a patient found dead by the night-watch at one of his visits; and the question as to how long the patient has been dead is of considerable medico-legal importance in such cases. I think I am right in asserting that the decision on this point of the medical officer has generally been, and continues for the most part to be, based on the feeling or degree of warmth or coldness as experienced by the mere application of the living hand to the corpse—a process which, as compared with thermometric observation, I have found to be more or less fallacious and productive of uncertain results.

I was induced to make *post mortem* thermometric observations in the hope that, by carefully studying thus accurately the cooling of the body after death, as it occurs in the various forms of disease and under the usual varying conditions in which the corpse may be found, I might with greater certainty and precision be able to fix the time at which death had taken place; and I intend continuing my observations, with this object in view. I have had a special thermometer made for the purpose, which indicates the temperature as low as 50 deg. Fahr.—the average surrounding temperature; and it will no doubt be necessary, for the thorough investigation of the subject, to have another made that will register the descending temperature down as far as *zero*. My method of procedure is to take the temperature of moribund persons, and then carefully note the temperature of the body and of the room at stated intervals (shorter at first, and longer later on), until it descends as low as that of the surrounding atmosphere; the thermometer being fixed from the first, and kept fixed, in the left axilla. In this way, having ascertained, in a sufficiently numerous and varied body of cases, the actual and usual rate of cooling of the *corpus* after death, it appears to me that all we should require to do in ordinary cases, on being called to inspect a dead body and determine as to the length of time that has elapsed since death took place, would be to take the temperature of the body as indicated by the careful application of a good thermometer; and, after estimating to its proper extent—as shown by previous experimental research and observation—the influence which the form of death and condition in which the body is found may be fairly considered to have had over the rate of cooling, be thus enabled to give a tolerably precise opinion in the matter, instead of making the usual vague statement. I am simply desirous, for the present, of indicating the scope of my humble researches with regard to this subject, and of drawing attention to a field for observation which, it appears to me, may be more extensively worked, with good practical results of very considerable medico-legal importance.

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[*] *Op. cit.*, English Edition, vol. i, p. 83.

[†] *Op. cit.*, pp. 329, 411.

[‡] Carpenter's *Human Physiology*, 7th edition, p. 434.

ON A NEW FORM OF STETHOSCOPE IN ITS RELATIONS TO THE THEORY AND PRACTICE OF AUSCULTATION.

By W. H. SPENCER, M.A., M.B.Cantab.,
Physician to the Bristol Royal Infirmary.

I.

LAENNEC, in 1816, applied a well-known acoustic fact to the investigation of intrathoracic disease. He placed one end of a quire of paper, rolled very tight, against the chest of a patient, and placed his own ear against the other end; he heard, as he himself expresses it, the beating of the heart much more clearly than if he had applied his ear directly to the chest. That experiment marked the dawn of auscultation. Thence the development of the new method of physical exploration was rapid and vigorous, so that, in not much more than fifty years, a science of physical signs, abstract and applied, has grown up and reached tolerably voluminous dimensions. Laennec applied a principle by means of an instrument; and, though his apprehension of the principle was imperfect and his original mode of applying it was rude, both principle and mode remain at this day, the one only more clearly apprehended, the other, in all essential features, very much what Laennec and his contemporaries left it. The principle was conceived by Laennec as a property of matter whereby it conducts sounds; stated in the language of modern science, it is, that sonorous vibrations are transmitted through an elastic medium, under certain circumstances, with little or no loss of intensity. The original mode of applying the principle was modified by Laennec himself, then by Piorry, and, in later times, by a host of competent as well as of incompetent persons. New arrangements, entirely unlike Laennec's mode or the many modifications of his mode, have been devised and adopted with more or less success. Yet, in that form of stethoscope most universally used and relied upon at the present day, behind modifications of doubtful value, relating chiefly to shape, size, and fashion—we see the rolled quire of paper, only become a more or less shapely cylinder of wood or similarly light and rigid material, adapted at one end to fit the chest and at the other end to fit the ear.

The acoustic principle is fundamental to the whole art of auscultation; it is the condition upon which auscultation, however practised, becomes possible at all. Is, then, the mode of applying the principle adopted from Laennec, and used with little modification to this day, also fundamental? Is it a means whose singularly perfect adaptation to the purposes of auscultation the progress of science during sixty years has not been able to gainsay or improve? Or, is the form of the stethoscope really unimportant? Are a well-trained ear and a prescient understanding the conditions upon which successful auscultation depends?

Rather, I think, it must be acknowledged that, from causes it would not be difficult to set forth—chiefly a too limited encouragement of the study of physics as a part of a general education, and a too well encouraged bondage to clinical traditions—the scientific character of the stethoscope has not kept pace with the progress of physics, and, in consequence, auscultation has not attained that degree of development which it might otherwise have been expected to attain. Some may be disposed to conclude, because Laennec with his instrument brought auscultation almost to its present state, and because, with only the modern modification of Laennec's stethoscope, it has been found possible to acquire a high degree of skill in the diagnosis of chest-diseases, that, therefore, the mechanical conditions of auscultation are sufficiently fulfilled. But the state of our clinical knowledge and needs does not justify such a conclusion; the relations between physical signs and diseased processes are not so well understood (however our knowledge may satisfy the exigencies of routine) that we can afford to ignore the possibility of imperfection in our acoustic appliances. The skill of the best diagnosticians may depend very much more on natural perfection of the organs of hearing and on clinical acumen, on personal qualities, than on fitness in the stethoscope as a means to an end. This much, at least, must be admitted, that, whatever it may be, the stethoscope in any of its present forms is not a scientific instrument of precision, adapted to fulfil the conditions of its highest value as an aid to diagnosis and research. Yet, though we may be far from realisation of the ideal held out to us by science, I take it we shall not err if we make that ideal the goal of our efforts and desires. These, and many such considerations, have influenced me, and I think also justify me, in attempting to improve the construction of the stethoscope. I have now to describe what I have done, and to compare my work with what those who have preceded me have done.

I propose, first, to discuss my stethoscope from the clinical, that is the practical, point of view. Its form and mechanism shall be described in so far as these are related to the clinical uses which it is designed to serve, and some illustrations of its use shall be given. I will then discuss the instrument from the acoustic, that is, the scientific point of view; and this must be at some length, for I hold that a scientific character, if it can be rightly claimed, will constitute the highest praise.

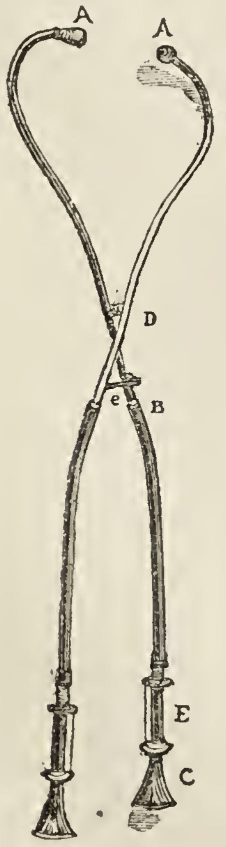
Consideration of what accurate diagnosis demands, and what clinical experience has shown to be necessary in the application of auscultation to the physical exploration of the chest, leads, I think, to the conclusion that three chief practical conditions are involved in the successful practice of auscultation by means of an instrument. The conditions are these: 1. Accurate communication between the organ of hearing and circumscribed areas of the chest, under varied circumstances of position of areas relatively to the auscultator; 2. Admission of sounds from any area to both ears of the auscultator simultaneously; 3. Rapid and complete substitution of sounds from any area for sounds engaging the ears from any other area. Examination of different forms of the stethoscope brings out the fact that each of these conditions, singly and in turn, has been recognised and its realisation attempted; yet, not one of the forms hitherto devised has succeeded in fulfilling any one of the conditions with completeness of mechanical adaptation; moreover, in every case, acoustic conditions which are cardinal to accuracy of result have been more or less infringed. It is hardly perhaps surprising, then, that no attempt has been made to construct a stethoscope that should combine them all. It might be expected that Laennec and his contemporaries would ignore, in the construction of their stethoscopes, conditions which only a fuller experience than theirs could suggest: but it is, to my mind, highly significant that the form most universally preferred in the present day, for all clinical purposes whatever, should be as completely innocent of all recognition of these conditions as are its discarded prototypes.

Let me briefly notice one or two forms of the stethoscope, in support of what I have said, as well to gain a standard wherewith to compare the practical features of my instrument. The *uniaural rigid stethoscope*, as the form most universally adopted, claims the first notice. This form does not pretend to recognise any of the conditions of which I have spoken. Its use might not inaptly be compared with that of the low powers of a microscope, or the finder of a telescope. The relations of my instrument to this form may be represented as similar to the relations of high powers to low powers in a microscope, or the relations of a telescope to its finder. Admitting that, from the acoustic stand-point, this form does answer tolerably well its purpose, regarded solely from the practical side, it has, as every one knows, certain disadvantages, which are often a source of discomfort both to patient and to auscultator, which sometimes falsify its teachings and sometimes hinder its use altogether. To remedy some of these disadvantages, and to provide for the first of our conditions, Dr. Golding Bird and others devised stethoscopes in which the rigid stem of the ordinary form is replaced by a flexible tube. Acoustically, these forms are vastly inferior to the form they are intended to supplant. Still further to obviate disadvantages, and particularly to provide for our second condition, Dr. Leared, in 1851, and, four years later, Dr. Cammann of New York, each independently designed a form generally well known as the *biaural stethoscope*. Differing only in details, the English and the American forms consist essentially of a very short tubular and rigid stethoscope, furnished with two tubes, partly flexible, which pass to the two ears respectively of the auscultator. Sounds are conducted from any one point of the chest to both ears simultaneously. The biaural feature is admirable; but in the construction of the instruments, a regard for the laws of acoustics appears to have been sacrificed to a desire to augment the loudness of sounds. These stethoscopes create sounds in themselves; and what sounds they conduct from the chest are reinforced by resonance to such a degree that differences in the character of sounds cannot, in many instances, be apprehended at all, and in other cases only with much difficulty and after much practice. The effect produced reminds one of the child's toy-resonator, a sea-shell. Dr. Scott Alison has designed a stethoscope which is particularly intended to fulfil the third of our conditions, to provide for an urgent and fundamental requirement of diagnosis. It is designed to enable the auscultator to compare sounds generated at different parts of the chest, and is, therefore, called the *differential stethoscope*. It consists of two flexible and tubular uniaural stethoscopes, connected together by a joint for adaptation to the two ears at the same time. Sounds are conveyed from any two points on the chest-wall, the one set to one ear, and the other set, separately and independently, to the other ear. The instrument is not, therefore, biaural in the sense of our second condition. The principle of action claimed for this stethoscope appears to me to rest upon a physical impossibility. If it were possible to close one ear at will, the other ear remaining open to receive sounds, the principle might, perhaps, be made available in practice: even then, the value of the stethoscope would depend on the auscultator hearing equally well with both ears, which is by no means always the case. Assuming equality in the two ears. the instrument can only reveal the fact, when it exists, that of two sounds or sets of sounds one is louder than the other.

No form of stethoscope, then, had been devised which combined in itself the means to fulfil all three conditions : no stethoscope could be easily applied to different points on the chest-wall whilst patient and auscultator retained their relative positions, or readily accommodated itself to the comparison of sounds originating at different parts, and, at the same time, transmitted sounds with accuracy to both ears simultaneously. It thus became my aim to devise a stethoscope which should fulfil all three conditions with scientific completeness, and should also be simple and handy in use.

It might be expected that the realisation of such an aim would begin in an attempt to modify and combine existing forms ; and so it was. I had in view, at first, to remedy acoustic defects that marred the biaural and differential stethoscopes, and to engraft upon one of these forms those features of the other that relate to our practical conditions ; to combine the two in one, and to make the product a faithful conductor of sounds. It was whilst engaged in considering how this should be done, that I discussed the matter with my friend Mr. P. T. Main of St. John's College, Cambridge ; and he, with characteristic acumen, made suggestions which, carried out, realised the combination of the two forms, and originated two of the most important features of the *compound biaural stethoscope*—viz., the commutators, and the feature of the two collectors each communicating with both ears. It is unnecessary to detail all the numerous and complicated steps that have, after much labour and many failures, culminated in the stethoscope now introduced to the profession. It is to be noted, however, that the real element of difficulty—which has doubtless proved to be the insurmountable difficulty hitherto—lies not so much in any inherent character of the conditions themselves, as in the necessity that exists to fulfil each condition in concert with the other two. The instrument being threefold as to its functions, must be so constructed as to permit concerted action of its parts in the combined exercise of its functions.

Concerning form and details of construction, our three practical conditions shall be the heads for description.



First, as to the mode in which accurate communication between the ears and the area to be examined has been made, and so made as to suit those contingencies of position of area and auscultator that are met with in practice. The mode adopted to compass the first condition is, in general terms, to interpose between the tympanic membrane and the chest-wall a flexible column of air. The medium of communication is air : it is enclosed in two long tubes, having a smooth interior, and throughout of the same calibre as that of the auditory canals. The air in the tubes is practically insulated from its enclosing envelope ; the walls of the tubes neither modify the sounds conveyed by the air, nor do they aid, to an appreciable extent, in the conduction of sounds. The insulated columns of air in the tubes are brought into direct continuity with the columns of air in the auditory canals by adapting the ends of the tubes (through two ivory ear-pieces, A) to fit closely against the external openings of the canals ; they are also brought into contact with the chest-walls by means of sound-collectors, of the usual shape (C), fitted to the other ends of the tubes. From the chest-wall to the external opening of the auditory canal, and thence to the tympanic membrane, extends, for each ear, a column of air of uniform diameter. But the condition requires, further, that the columns of air should be easily displaced, so that, the auscultator retaining his position and the columns retaining their continuity and calibre, the collectors may be applied to different parts of the chest The two main tubes consist each of two parts—a rigid metal part (A B) and a flexible part (B C) — the two being accurately connected by a sliding joint. The two metal tubes are connected by a joint, D, (whose construction and uses relate to the second condition), and are adjusted to the ears together as a rigid whole. The mode of connection between the ivory ear-pieces of the metal tubes and the auditory canals allows movement of the metal tubes as a whole in the direction of the length of the patient's body. The flexible tubes provide for movement of their attached collectors in any direction we please ; and by using a material of special and peculiar manufacture, the movement is effected without disturbing the continuity or calibre of the contained columns of air. It is in this way that the whole instrument is virtually made flexible. The features of the stethoscope, as described thus far, are those that provide for accurate communication between any area of the chest and the tympanic membrane of each ear singly. By the terms of our second condition, it is required to bring both ears together into communication with one and the same area. The mode in which this has been brought about comes under the second head.

Secondly, as to the means adopted to secure transmission of sounds from any area to both ears of the auscultator simultaneously. The instrument consists of two chief tubes, connected together by a joint. We are concerned, under this head, with the mode of union, for it is on this that the biaural character of the stethoscope depends. The instrument has two collectors—a feature which relates to the third condition. It should, therefore, be biaural in respect of each collector ; that is, sounds entering *either* collector should reach both ears. A cross-communication between the two tubes, somewhere in their length, would effect the purpose. But the communication must be effected without destroying the continuity of the columns of air, and, at the same time, adjustment of the ear-pieces to the ears must be taken into account. It has been found possible to provide for these contingencies by crossing the metal tubes, like the strokes of the letter X, and uniting them where they cross (near the distal ends) by a tubular joint (D). The construction of this joint is important. A very short metal tube is fixed at right angles to each crossed tube. One of these short tubes is of the same calibre exactly as the rest of the instrument ; the other is fitted accurately to receive it. When the one short tube is inserted into the other, the two can revolve air-tight about their common axis ; the two metal tubes can be opened and closed (like the blades of a pair of scissors), and therefore are easily adjusted to or removed from the ears ; whilst always, the continuity of the cylindrical columns of air is complete. When adjusted to the ears, the metal tubes are retained in position by the action of an elastic band (*e*), placed at their extreme distal ends. Thus, sounds entering either collector pass up the corresponding tube to the joint, and thence on in two directions—straight on through the same tube for one ear, across by the tubular joint and through the other tube for the other ear. We have now, in fact, gained a double instrument ; the two collectors represent two distinct biaural stethoscopes, and these are intended to be used separately. But, so far, their use must be coincident ; or, whilst one is in use, extraneous sounds must be allowed to pass through the other to mingle with the sounds it is desired to hear. It is required that sounds should reach the ears from one area only at a time, when both collectors are placed over different areas ; the sounds proceeding from one area should be stopped from reaching the ears during the time that sounds from any other area are being listened to.

Thirdly, as to the mode adopted to secure rapid and complete exchange of sounds engaging the ears from any area for sounds from any other area. To secure this, is to secure means for accurate comparison of sounds.

The flexible tubes are not immediately attached to their respective collectors ; a short length of very thin India-rubber tubing (E) intervenes, a stout wire passing outside and parallel to the tube to give sufficient rigidity to this part of the instrument. On compressing this tube between the thumb and forefinger which hold the corresponding collector in position against the chest-wall, the canal of the tube is obliterated, the continuity of the enclosed column of air is destroyed, and all sound entering the collector is completely and instantly shut off from both ears. This intervening arrangement is called the "commutator". Alternate compression of the commutators brings each component stethoscope alternately, one only at a time, into use. The degree of pressure required is material. Compression of the flexible tubes themselves would effect their occlusion, but the necessary thickness of these tubes is such that the degree of pressure required to obliterate their canals would produce adventitious sounds—sounds due to the action of the tube itself, and to the muscular susurrus of the fingers. This difficulty is obviated by the thinness of the commutator-tube, whilst the defect introduced by excessive pliability is met by the device of the rigid wire. Thus the third condition is fulfilled, and it is fulfilled by the same instrument that fulfils the other two. It was not only required to fulfil this third condition ; it was required that it should be compassed with the utmost exactness of combination with the other two conditions. For the very essence of diagnosis is comparison, and its issues, in diseases of the heart and lungs, are of the highest possible significance. Diagnosis presents, moreover, in diseases of these organs, a feature of peculiar interest ; the judgment formed by the mind frequently turns upon evidence furnished solely by the stethoscope. Whether it be to catch the first faint whispers of incipient phthisis in altered rhythm of breath-sounds at the apex of one lung, or to fix peculiarities of site and area in a cardiac *bruit*, the nature of the means by which we seek for evidence that may turn the scale is momentous in the extreme. It is strange that such issues have been left so long to hang upon the clumsy devices of our forefathers.

This description of the compound stethoscope, with regard to the prime conditions it fulfils, will not fail to suggest abundant illustrations of its advantages as an instrument for clinical use. I will conclude by a reference to one or two points, as I think, of much practical consequence. It is no small advantage that both ears are completely closed to extraneous sounds when the stethoscope is in use; the ears are engaged only by the sounds which it is desired to hear. Moreover, the attention is not diverted during the shifting of the collectors from point to point. Ease of position to the auscultator and patient are secured; it is possible to auscultate patients whose decubitus would preclude the use of the uniaural stethoscope, and the comfort of the patient who is in pain is eminently consulted. Apart from the fact that attention in hearing is liable to distraction when, at the same time, the attention is solicited in other directions through the eye, the sense of hearing is much aided and the evidence furnished to the ear is much corroborated by coincident inspection of the chest by the eye. I have frequently derived assistance, in determining the relations of a cardiac murmur to the sounds it has wholly or partially replaced, from having the cardiac impulse before the eyes. It is often essential to diagnosis that the point of maximum intensity of sounds should be accurately localised. To this end, means of making rapid exploration of the areas over which the sounds are heard, and means of marking the results of comparisons as they are successively made, are the desiderata. It is needless to point out how these are supplied by the two component stethoscopes of my instrument, either of which can be brought into use or rendered impervious instantly, and without disturbing the adjustment to the ears. Finally—and it is the student that this illustration chiefly concerns—the first recognition of a morbid sound depends on being able to compare it with its healthy correlative, and the more rapidly the one can be exchanged for the other in the ears the better will be the appreciation of the difference. Or, take the case of a sound which is morbid, not from its special character, but because it is heard in an abnormal position, a similar rapidity of exchange and comparison is required. In most patients, standard healthy sounds coexist in the same chest with sounds that are morbid both as to character and site. One collector being applied over the site of a healthy standard and the other over the site of a morbid sound, the sounds can be admitted to, or shut off from, the ears alternately, and thus compared under conditions which could hardly fail to produce accurate impressions. During an extended use of the instrument in the wards and out-patient rooms of a large hospital, its ready response to the endless and varied calls made upon it by the exigencies of clinical practice justify the expectation that it will stand the test of experience.

ON HYPEREXCITABILITY AND PARESIS.

By C. HANDFIELD JONES, M.B., F.R.C.P., F.R.S.,
Physician to St. Mary's Hospital, etc.

[*Concluded from p.* 372 *of last number.*]

THE next point on which we shall remark is *the affinity between hyperexcitability and paresis.* This has already been illustrated, to some extent, in the preceding remarks, but it deserves to be noticed more particularly.

1. Commencing with the faculty of sensation, we find, first, *that the most marked hyperæsthesia is produced by conditions which also give rise to anæsthesia.* Thus, in Dr. Waller's experiments on refrigeration of the ulnar nerve, the ultimate effect of the chilling was anæsthesia of the district supplied by the nerve; but this was preceded by hyperæsthesia. A case is recorded in the *Medico-Chirurgical Transactions*, vol. vii, p. 177, where, during the gradual recovery of the brachial plexus from injury produced by a fracture of the clavicle, the skin of the upper part of the arm possessed natural sensibility, another (probably the mid-region) was morbidly sensible, while that immediately beyond was quite insensible. Trousseau (*Clinique Médicale*, vol. ii, p. 312) states that cutaneous anæsthesia is often seen to succeed hyperæsthesia, especially in cases of herpes zoster. Secondly, inflammation of a nervous centre, as the spinal cord, giving rise to motor paralysis, will also give rise to hyperæsthesia, the two conditions existing together. In a case of alcoholic paralysis which I have recorded, complete motor palsy of the lower limbs coexisted with extreme hyperæsthesia and pain. Her powerless hands were numb, but not in nearly so much pain as the feet. Here the three phenomena were manifestly co-products of the same cause, and at the same time. Anæsthesia, however, is the more usual accompaniment of palsy. Trousseau (*Clinique Médicale*, vol. i, p. 287) mentions, speaking of a case of complete paraplegia, that the anæsthesia, which had been considerable up to a certain date, was replaced the next day by hyperæsthesia.

2. *Hyperæsthesia is often associated with pain*, as in abdominal neuralgia, the hysterical breast, and irritable testis. In Dr. Fuller's case of obstruction of the arteries of the lower limbs with fibrinous deposit, the first symptom was acute pain, associated with exquisite tenderness of the whole limb, so great that the slightest touch caused intolerable suffering. Now, pain is regarded by so good an authority as Dr. Anstie as ranking on the same level as paralysis.

3. The remedies for hyperæsthesia are mainly of a restorative and recreative kind—not quite so absolutely, indeed, as those of neuralgia, but still so much so as to indicate not obscurely the nature of the process. Those who admit the truth of the adage, "Naturam morborum remedia ostendunt," will not think lightly of this argument.

Motor hyperexcitability exhibits a relation to paralysis in the following particulars. 1. The same conditions which usually produce paralysis of a motor centre, will also produce hyperexcitability. Thus, in a case of myelitis under my care, the left leg was simply paralysed, as well as the sphincters; but the right leg started and jumped, and was affected with twitching sensations. In another case, where there was very considerable paralysis of both motor and sensory power in the lower limbs, and the power of the sphincters was impaired, strong tremors were produced by passive movements of the legs, or by attempts to move them. As improvement took place, the tremor ceased. In a third case, where there had been complete paralysis of motion and sensation, in connexion with diseased vertebræ and abscess, the left thigh, at the time when I saw the patient, was affected with considerable tremor when he attempted to use the limb. In a fourth case, where motor power, which at first was quite lost, had been very much regained, there was great tremor of the lower limbs. In all these instances, the damaged nerve-tissue was hyperexcitable. A case of lead-poisoning was once under my care, where the symptoms were not the ordinary paralytic, but were decidedly indicative of hyperexcitability. The patient's arms were agitated by clonic convulsions when he attempted to use them. He could scarcely carry a glass to his lips without spilling the liquid, or hold it so as to drink. At one time, his arm used to be fixed to his side by tonic spasm for several hours every day. If he put himself out in any way, he shook violently, "like a leaf on a tree," and his gait became unsteady and jerky. He improved very much with strychnia, cod-liver oil, and faradisation. Here the motor centres were certainly affected by the poison; but the result was hyper- instead of non-excitability. The remedies which availed were those which serve us when paralysis exists. Surely all this plainly points to a close connection between the two states just mentioned. Regarding embolism as the cause of chorea, which it probably is in some instances, it will not be forgotten that the same cause gives rise to paralysis when it obstructs the blood-flow to the corpus striatum. Dr. Lockhart Clarke has recorded a case (*British and Foreign Medico-Chirurgical Review*, July 1864) in which there was partial paralysis of one arm; and so long as the arm was enveloped and kept warm in flannel, it remained perfectly still; but whenever it was exposed to the impression of cold air, it began to move in a spasmodic and jerking manner. Here the lesions and disintegrations found in the cord bore a very striking resemblance to those occurring in tetanus. 2. When hyperexcitability exists in one part, there is often also failure of nervous power in another. In a case where the sural muscles of the left leg contracted spasmodically, so that the patient walked on the point of his toes, and there was some permanent rigidity of both the flexor and extensor muscles of the ankle, the mental faculties were impaired; he was mopy, dull, listless, and more or less drowsy. These cerebral pareses had obliged him to quit his occupation. 3. In chorea, Trousseau states it as the general rule, that the intellectual faculties are more or less weakened as long as the motor disorder continues. He also affirms that anæsthesia or other derangements of the sensory faculty are present in the majority of instances. A medical friend related to me a case of tænia under his care, where there existed paralysis of one leg and spasmodic contraction of the opposite arm. Mr. Moodeen Scherriff has recorded some instances of paralysis not depending on organic lesion, in which there was rigidity of one limb and simple immobility of the other on the same side, the same cause having given rise to both conditions, and the same treatment removing them. Dr. Wilks mentions a case (*Guy's Hospital Reports*, 1866, p. 261) where, after a mental shock, a girl aged 15 passed into a semi-maniacal condition. Her face and hands were constantly affected by choreal movements, which at times became almost tetanic. After her menstrual period passed by, she became calmer and more like an ordinary choreic. She appeared to understand what was said to her, but was perfectly anæsthetic. Dr.

Wilks tested her condition in many ways, and was convinced that sensation was altogether absent. In another of his cases, the patient was cataleptic, and had lost all sense of feeling, either from true anæsthesia or from unconsciousness. In all these instances, hyperexcitability of some motor nerve-apparatus coincides with paresis of other centres, either motor, sensory, or intellectual. The latter defect, being more easy to interpret, throws light on the nature of the former. 4. There is little doubt, I think, that motor hyperexcitability may sometimes be very beneficially treated by tonic and recreative remedies—by means, as Dr. Radcliffe states, which are calculated to exalt vital energy in general, and nervous energy in particular. He has seen two cases in which strong and general tetanic spasms relaxed very rapidly under a treatment of which the essential part was to give wine to a point just short of inebriation. He knows of four cases where attacks of laryngismus stridulus, which were frequently recurring under a treatment in which it was thought essential to regulate the secretions by grey powder and so on, were put a stop to once and for all by a tonic and restorative plan of treatment—wine, beef-tea, steel, chloric ether, etc.; and he can speak with confidence of the beneficial results of a similar plan of treatment in a considerable number of cases of hooping-cough. Though the above experience applies to a good many cases of this kind, it certainly does not to all; and this argument must, therefore, not be overstrained.

In the intellectual organs, hyperexcitability is evidently not remote from paresis in the downward descent. The two conditions, we may say, overlap one another; so that, while at one period hyperexcitability may predominate, in another it is more or less completely replaced by paresis. Delirium is sometimes of such a quality as implies the extremest activity of the cerebral nerve-cells; at others, it is a mere maundering, but little removed from complete stupor; while in both states it is to be observed that the real functional power of the organ is totally lost. The same poison—say that of typhus—at the same period of its action, may produce either active and maniacal delirium, or low and muttering. In severer grades of the disease, the muttering delirium passes into a heavy stupor, or into coma vigil. It does not seem possible to account for the objective difference in the symptoms by any demonstrable state of the brain, for Dr. Buchanan writes (Reynolds's *System of Surgery*) that the nervous system commonly shows, after death, no lesion whatever to account for even intense head-symptoms. Not only does the hyperexcitability in this disease culminate in stupor, but, as in other fevers, mental languor and dulling of the intellect actually precede the occurrence of delirium. The two phases of nerve-disorder are more or less blended, in fact, throughout. In common drunkenness, and also in chloroform and belladonna intoxication, we have the same sequence of disorder as in typhus. Noisy more or less excited inebriety precedes sopor and unconsciousness. There seems to be good reason to believe that, in these and in analogous cases, hyperexcitability is the earlier and milder effect of the toxic agent, and paresis the later and severer. If the dose of alcohol be small, no effect may ensue except a moderate amount of excitement, attended with increase rather than with diminution of power. If it be very large, coma is rapidly produced, without previous excitement. Epilepsy affords some notable evidence of the close connection between hyperexcitability and paresis. The usual sequel of the "grand mal" is coma of longer or shorter duration; but in some instances this is replaced by fierce delirium, which is hard to tame even by chloroform. There can be no question that the circulation is free in both morbid states. We can only refer the difference in result to some peculiarity in cerebral constitution. This shows how closely allied the two derangements really are. In the paroxysm itself, we cannot help noticing the coincidence of extreme hyperexcitability in the motor centres, with total paresis in the intellectual. Again, in chorea, outbreaks of maniacal delirium are not very infrequent, though the usual condition of the brain approximates much more to torpor. In a case of diphtherial poisoning I saw lately, after the false membrane had disappeared, the patient became semicomatose, with dilated pupils, and marked but incomplete ptosis of the right eye. He was well fed and stimulated, and became rational, but soon after was violently delirious in the night, and continued so next day. Subcutaneous morphia quieted him, the delirium disappeared, and for some days he seemed pretty well; then coma suddenly came on again, and proved fatal. Here the toxæmia caused two attacks of paresis, with an intervening paroxysm of hyperexcitability. Dr. Cheadle records (BRITISH MEDICAL JOURNAL, 1871, vol. ii, p. 545) a case of starvation from extreme cirrhosis of the liver. The later symptoms were great dulness of intellect, with jerking of left arm and head, succeeded by wild delirium with shrieking, and, lastly, right hemiplegia, coma, widely dilated and insensible pupils, and continued jerking of the left arm and leg. Nothing was found in the brain at the autopsy to account for the cerebral symptoms. Here signs of excitement and of paresis are evidently due to the same cause, and occur in close connection.

But, closely allied as these derangements are, it is quite certain that *they are not inseparable*. Hyperexcitability may occur in its most marked form, and not be associated with, or followed by, any paresis. Of this we have frequent instances in ordinary tetanus. Cardiac palpitation, asthma, photophobia, are others. The same may be affirmed of paresis: that it may be quite unattended with any signs of hyperexcitability. Of this, diphtherial paralysis affords a good example, as also do common instances of coma.

The *diverseness of hyperexcitability from paresis* is strongly shown in the cases where the former is successfully treated by large doses of depressants, as antimony, tobacco, aconite. In these, it is of course essential that the heart should be able to withstand the depressing influence; that it should not be paretic, nor its ganglia. If this be the case, the hyperexcitability of the brain or the cord may be very beneficially reduced by depressing agents. Of course, if the heart be feeble, they are not to be thought of. Sometimes the hyperexcitability of the nervous centres seems to confer an increase of power on the heart for the time, rendering it capable of withstanding agents which, when the nervous centres have regained their normal state, would dangerously depress it. This diverseness is also shown by the common experience that in many of the neurotic disorders, especially in females of the middle and upper classes, where there is also great debility, no drug of a tonic kind is tolerated, it aggravates the hyperexcitability so much. These facts certainly show that the morbid state conditionating hyperexcitability is very diverse from that belonging to paresis. One consists in hurried imperfect vito-chemical change; the other, in cessation of normal change.

A few remarks on sedatives may appropriately follow this discussion of hyperexcitability. These remedies differ much more from one another than the several tonics do. In fact, some of the sedatives approximate closely to the stimulants or tonics. Digitalis, which is a tonic to the heart, may be an efficient sedative to the brain, quieting delirium and promoting sleep. Opium, famous for its *vis dormitiva*, is scarcely less so for its sustaining and invigorating effect, as well as its tonic action on vasal nerves. Indian hemp, while producing sedative effects, is also stimulating and exciting. The same may be said of alcohol. That this should be so, appears no mean argument in favour of the view that most derangements of nerve-force partake very much of the nature of paralyses. I should distribute the so-called sedatives into three groups. The first, comprising opium, alcohol, camphor, and Indian hemp, might be termed that of the stimulating sedatives; the second, comprising belladonna, henbane, conium, bromide of potassium, chloral, and chloroform, might be denominated that of the simple sedatives; the third, comprising physostigma, tobacco, aconite, and antimony, that of the depressing sedatives. The second group show a manifest approximation to the third, in that they are apt to produce actual paralysis when given in large doses. It is clear that, in the choice of a sedative to combat hyperexcitability, one must be guided very much by the amount of coexisting paresis manifested either in the nerve-centres or the heart. Doseage is also to be carefully regarded, a large dose often acting as an effective sedative, when small ones prove exciting or inoperative.

Finally, it may be remarked that the existence of these two great forms of nerve-disorder, which, though closely allied, as we have seen, and often more or less blended together, yet are often met with quite distinct and separate, goes far to show that nerve-apparatuses possess two faculties, either of which may be impaired without the other suffering. One of these is the faculty of *evolving force* on the solicitation of the will or a physical excitant; the other that of *regulating the evolution of the force*, so that it shall not take place, so to speak, in an explosive manner, but in due order, according to the requirements of the function. In delirium, mania, and convulsions, the second of these faculties is lost; in dementia, coma, and paralysis, the first. Both hyperexcitability and paresis, therefore, imply failure and loss of vital power, though of a different kind. It is, therefore, quite what we should expect that both are often produced by the same causes, and that they should often exist together. On this view it is quite intelligible why "excitement without power" is of so frequent occurrence. If we apply this view to therapeutics, we foresee that there will be (1) Cases of pure paresis, mental, motor, or sensory, to which the tonic and stimulant regimen in its entirety is quite appropriate; (2) Cases of pure hyperexcitability where different remedies will be requisite, viz., the depressing sedatives; (3) A large number of mixed cases, where the treatment must also be of a mixed kind, according as the symptoms indicate one or other defect to predominate. All this has been arrived at by empiricism, but I think we see now that it is a rational procedure.

From what has been advanced, I think it may be concluded—1. That hyperexcitability and paresis do not depend principally on alterations in the amount of blood-flow; 2. That they do depend on alterations in the nerve-tissue effected, as all neuroses are, either by exhaustion, toxæmia, or remote irritation; 3. That the morbid processes giving rise to these states are diverse, and yet have much affinity, and may exist together; 4. That hyperexcitability, as a necessary result, tends to produce more or less paresis by exhaustion; 5. That paresis probably consists in slackening and cessation of normal vital chemical change, hyperexcitability in setting up of abnormal change, the former being comparable to an atrophy, the latter to a morbid growth; 6. That the therapy of either morbid condition needs to be modified by regard to the amount of the other coexistent with it.

THE DENTITION OF THE KOSTROMA PEOPLE.

By CHARLES S. TOMES, M.A.; and OAKLEY COLES.

THE Kostroma people now being exhibited in London, independently of their hirsute appendages, are of great interest on account of the remarkable condition of their jaws.

The man, Adrian, has in the upper jaw only one tooth, apparently a lateral incisor, though Virchow describes it as a canine; whilst in the lower jaw he has four incisors, or probably three incisors and a canine; and, from their texture, these teeth are doubtless of the second dentition. The man gives no account of any milk-teeth; but it is only reasonable to suppose that those at present existing were preceded in the usual way by the deciduous teeth. The boy, Feodor, has an edentulous upper jaw, and but four (temporary) incisors in the lower jaw. These are fairly developed, and well placed as to position. The accompanying engravings, taken from photographs, give an excellent idea of the personal appearance of the "hairy men"; whilst the woodcuts below show the jaws of Adrian and Feodor. The alveolar ridges of both jaws in the two subjects of this notice are not at all fully developed, and do not convey an impression of the teeth being retained within their osseous crypts, but rather of an absence of the dental organs altogether. Taking the face in its entirety, we observe that the jaws are the only parts that have apparently been dwarfed in the process of development, the malar region being normal in character. The angle of the lower jaw has, so far as can be ascertained, retained its natural form, so that, when the mouth is closed, the lower teeth, lip, and chin project in much the same way that they would do in the case of a patient who had been deprived suddenly of all the teeth with the exception of the lower incisors.

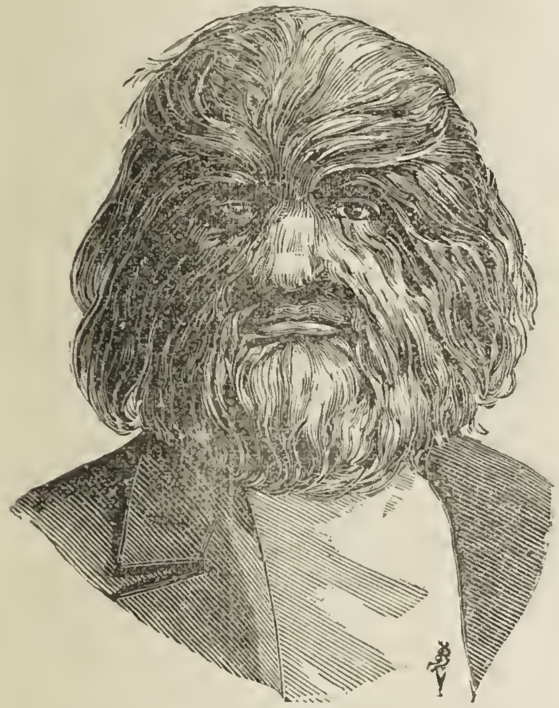


Fig. 1.—Adrian.

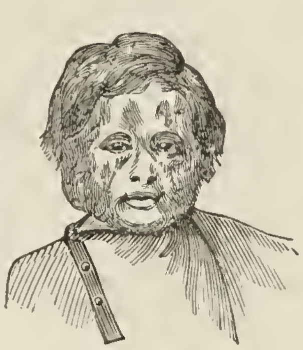


Fig. 2.—Feodor.

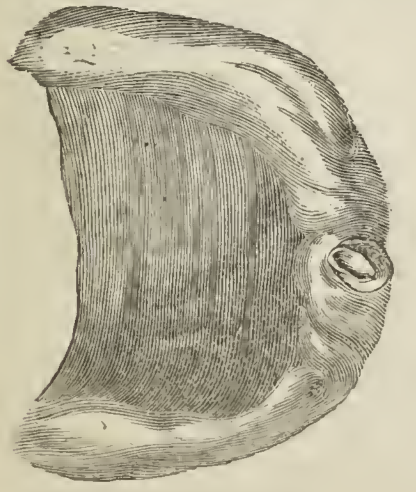


Fig. 3.—The Man's Upper Jaw.

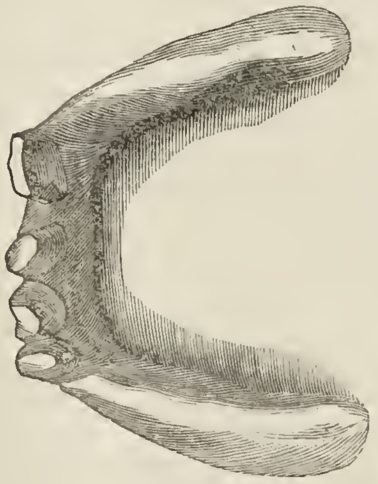


Fig. 4.—The Man's Lower Jaw.

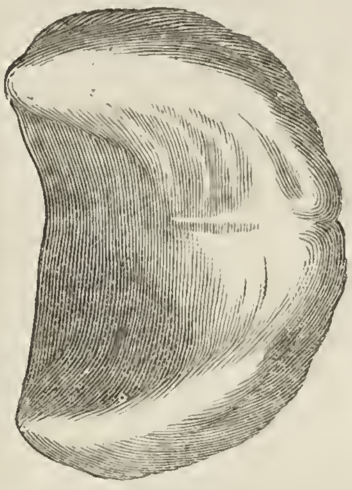


Fig. 5.—The Child's Upper Jaw.

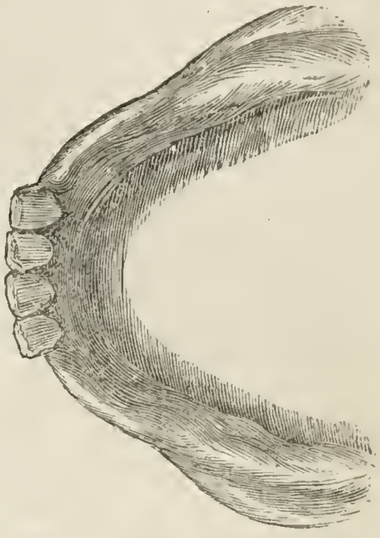


Fig. 6.—The Child's Lower Jaw.

A comparison of the upper jaws of the man and the boy with one another, and with normal jaws of various known ages, in which the Museum of the Odontological Society is very rich, reveals some relations of interest. The upper jaws were selected for this purpose, as there is, unfortunately, some doubt as to the accuracy of the model of the lower jaw of the man; that of the lower jaw of the boy is certainly accurate. The alveolar arch in Feodor's (the boy's) mouth corresponds very closely with that of a well grown child four years of age; that is to say, it is of just the same size and shape as an alveolar arch, which contains all the deciduous teeth in their places. Its posterior cornua fall short of those of children of five years, inasmuch as these latter are prolonged behind the last deciduous molar, to give space for the forming first permanent, or six-year-old molar. The alveolar arch in the man differs but slightly either in shape or size from that of the boy. Owing to its being rather less defined than that of the boy, it is difficult to measure it with the same accuracy; but it appears to exceed it very slightly in antero-posterior length, and only a little more in width. As has been already noted, this applies only to the alveolar border, and not to the whole upper maxilla. An abrupt bulging is noticeable in the upper part of the model, in the sulcus between the cheek and the alveolar border; and the malar processes are of large size, so that the face is broad and heavy.

It is, of course, unsafe to draw general conclusions from such scanty data; yet the relations existing between these two jaws seem to give some confirmation to the views as to the growth of the jaws set forth by Mr. Tomes, sen., and subsequently confirmed by Professor Humphry of Cambridge; for they indicate that the sole difference between the child's jaw and that of an adult is (disregarding a slight increase of width due to the greater breadth of the alveolar processes) a backward elongation of the cornua, strictly dependent on the successive addition of the posterior molars. For here is the alveolar portion of the jaw of a bulky man, the rest of whose upper maxilla is in no degree stunted, so far as we can judge, barely exceeding in size that of his child; and the explanation seems obviously to be that, as no posterior molars have been added, so no posterior elongation of the jaw has been effected. And the fact that the jaw of the boy has attained to its present size and form would seem further to indicate that the growth of the jaw up to a certain point is independent of the teeth, but that, after that point, its enlargement, which is actually little else than an elongation of its cornua backwards, is strictly and absolutely dependent on the successive additions of teeth posteriorly.

It should be added, to save misunderstanding, that the foregoing remarks apply solely to the form and size of the arch. The alveolar process, which is strictly dependent on the teeth which it carries for its depth, is in this respect necessarily deficient.

DR. BEALE'S VIEWS ON PUS-CELLS.

By JOHN HUGHES BENNETT, M.D., F.R.S.E.

The well-known corpuscles found in pus I, with most pathologists, call pus-cells. To this Dr. Beale objects. He says they are not cells. He admits that they are like young mucous and epithelial cells to look at; that they exhibit similar reactions, and are even alike in chemical composition; but they are not the same, because "each has a different life-history and performs a different function". If the bodies spoken of be not cells, why does Dr. Beale speak of them as such? Are distinctions between the various corpuscles only to be determined by their supposed life-history? This would be difficult, if not impossible, especially if the peculiar views of Dr. Beale are considered. Parts of the animal textures, and even of cells, which most physiologists believe to exhibit the clearest attributes of life, in his opinion are dead; for example, the striated substance of muscle and the exterior portion of a ciliated cell. Differing as we do on these fundamental points, Dr. Beale must pardon me for thinking that little benefit would result from entering into a discussion with him on the topics referred to.

But, with regard to pyæmia, I am surprised that Dr. Beale should have penned the last paragraph of his communication, because I so fully agree with him as to the confusion that would result from confounding what practical surgeons call pyæmia with suppuration of the blood, that, as I endeavoured to explain, I introduced the term leucocythæmia for the express purpose of avoiding it. It was with no intention of making "strictures" on the discussion, as Dr. Beale calls it, but with a desire to point out how the terms employed necessarily introduced a confusion which might be avoided. I regret that I have been misunderstood, and beg, therefore, to repeat that what is called pyæmia is not purulent blood, as the word itself indicates, but ichorhæmia—a poison evolved from ichorous or decomposed pus—a variety of septicæmia or toxæmia. As to the discussion itself, I regard it not only as one of great interest, but as having been most ably conducted, and likely to conduce to an advance in our theoretical and practical knowledge of a most important morbid condition.

Nice, March 23rd, 1874.

THERAPEUTIC MEMORANDA.

THE USE OF COCA.

IV.

I have employed coca for about two years at the Royal Southern Hospital, in the form of a tincture prepared by the Apothecaries' Company of this town, from leaves supplied, I believe, by Dr. Petrie, to whom I also was indebted for a sample. I have administered it in phthisis pulmonalis, in simple debility, and in one case of diabetes where there was great emaciation. The patient suffering from diabetes—Grace Hind—had been in hospital for four months, and the urine under the use of opium had been very greatly diminished in quantity. As emaciation continued, I prescribed a drachm and a half of the tincture of coca three times daily, in addition to her opium; and gave directions that she should be weighed. The drug was commenced on November 11th, 1872; and I find it noted on the 27th of the same month, that she had gained four pounds in weight. Its use was maintained until January 13th, 1873; but the increase in weight did not continue. The patient was discharged in the following month. There was no appreciable effect produced by the coca, either on the quantity or the specific gravity of the urine. In experimenting on myself, however, it has seemed to diminish the quantity of urea eliminated, as tea certainly does with me. Thus, on collecting the urine of two days, and carefully estimating the urea, I found the following results. When no coca was taken—all other conditions being as nearly as possible similar—there were voided in the twenty-four hours 35 ounces of urine, of specific gravity 1027, and containing 420 grains of urea. With one drachm of the tincture of erythroxylon four times daily, the amount was 35½ ounces, the specific gravity 1020, and the quantity of urea 315 grains. In phthisis, I could not see that the drug did any good, and I therefore discontinued employing it after a time. William Carter, M.B., Liverpool.

THE USE AND DOSE OF CROTON-CHLORAL HYDRATE.

I have now used croton-chloral hydrate in several cases, and my experience of it is as follows. For producing sleep, it is inferior to hydrate of chloral, being more uncertain in its action, and leaving in some cases an unpleasant sensation of fulness in the head, and in one case impairment of vision. I have never used a combination of it and hydrate of chloral. The cases where it will be found most useful are those of neuralgia, where it is desirable to relieve the pain, and not necessary to produce sleep; and in these I have found small doses (a grain and a half), repeated at frequent intervals, most successful.

The first case in which I used it was that of a lady who had suffered severely for months from trigeminal neuralgia, and had well-nigh exhausted all the usual remedies. A few doses of the mixture, of which I shall give the form, relieved the pain; and, by the use of iron and other appropriate remedies, she has recovered, and has not had any recurrence of the disease. In a case of severe spinal neuralgia in a young lady, it proved equally valuable. In both cases, I used the croton-chloral hydrate in combination with the bromide of potassium; and, as some may attribute the good effects to the latter, I should add that both ladies had used the bromide for the very same attacks, and had discontinued it as useless. I do not mean to convey that it will always succeed, as I have been disappointed by it in one case. The prescription was as follows: Croton-chloral hydrate, 24 grains; bromide of potassium, 2 drachms; distilled water, 8 ounces. A tablespoonful is taken every two hours until pain is relieved. As croton-chloral hydrate is very sparingly soluble in cold water, it should be rubbed up in a mortar in lukewarm water.

George Gray, M.D., Castlewellan, Ireland.

SELECTIONS FROM JOURNALS.

DISEASES OF WOMEN.

Incision of the Cervix Uteri.—Dr. Olshausen of Halle (Volkmann's *Sammlung Klinischer Beiträge*, No. 67), being convinced that incision of the cervix uteri is indispensable in the treatment of contraction, but that it is often employed without the necessary limitations, gives the following indications of the proper course to be followed. This treatment is not adapted to all cases of sterility attended with flexion and narrowing of the internal orifice, but chiefly to cases of dysmenorrhœa dependent on abnormal narrowness of the external os uteri; also to sterile women with a simply virgin state of the part, in whom the sound detects a relative narrowness of the external orifice. If there be at the same time elongation of the vaginal portion, he recommends that it be shortened by operation. The incision is best made with the knife recommended by Marion Sims. The after-treatment must be directed to prevent too rapid healing; but Dr. Olshausen disapproves of dilatation by tents, as septic poisoning has been known to follow their use. He prefers making the incised part as yielding as possible, and preventing rapid union by the application of the actual cautery or of solution of perchloride of iron. In cases complicated with anteversion, incision alone is seldom sufficient. In such cases, Dr. Olshausen has successfully removed a wedge-shaped portion of the anterior lip of the os. He expresses a guarded opinion against the means hitherto adopted for incision of the interior os.—*Centralblatt für die Medicin. Wissenschaften*, January 31.

Treatment of Uterine Fibroids by the Hypodermic Injection of Ergotine.—At a meeting of the Griefswald Medical Society last year, Dr. Bengelsdorf related four cases of uterine fibroid tumour which he had treated by the subcutaneous injection of ergotine. In two patients, aged respectively 61 and 49, in whom menstruation had ceased, twenty-one injections in each produced no result. In a third patient, in whom the tumour produced much distress from pressure on the urinary bladder, and in whom the menstrual discharge was prolonged and excessive, nineteen injections of ergotine greatly diminished the discharge; the tumour, though not apparently reduced in size, became more movable; and the urinary trouble was removed. In a fourth case, attended with chronic metritis, menorrhagia, and painful defæcation, sixteen injections of ergotine produced great relief of the symptoms, without exerting any notable influence on the tumour. He believes that this treatment is useful in cases of uterine fibroid, but with certain restrictions. In the first place, it is not likely to be of use in cases of fibroid tumours which have lasted beyond the cessation of menstruation, because the supply of blood to the new growth is no longer kept up by the increased vascularisation of the uterus during the menstrual periods—and it is by constricting the vessels that the ergotine acts. Secondly, he does not find that the remedy, when it acts, does so with such rapidity as has been stated. The result obtained in his fourth case has led Dr. Bengelsdorf to use the subcutaneous injection of ergotine in cases of chronic metritis, especially in young subjects; and he has found it more useful than the administration of extract of ergot. In almost all the cases which he has thus treated, the uterus was reduced in bulk, and the tenderness and uterine catarrh were removed. In one case, the nervous symptoms—hysterical clonic convulsions—were greatly relieved. He believes that it acts in these cases on the vessels. The formula which he employs is that of Hildebrandt, of 3 parts of ergotine in 7½ each of distilled water and glycerine. He has found the injection to produce pain and inflammation, without suppuration, at the part; but he believes that he has reduced the liability to these disadvantages by pushing the cannula sufficiently deep to make the injection quite beneath the skin, and then rubbing the part so as to favour the diffusion of the ergotine in the subcutaneous tissue. The injections are generally made at intervals of three, five, or seven days.—*Allgem. Medicin. Central-Zeitung*, January 21.

THERAPEUTICS.

Remedy for Chronic Hoarseness.—In chronic hoarseness, arising from thickening of the vocal cords and adjacent membrane, the ammoniated tincture of guaiacum is often a very efficacious remedy. It may be appropriately mixed with equal parts of the syrup of senega, and a teaspoonful of the mixture given two or three times a day.—*American Practitioner*.

Unguentum Althææ, or Marshmallow Ointment.—The Prussian *Pharmacopœia* gives the following formula: ℞ lard, 1 pound; curcuma, 2 drachms; water, 4 drachms; yellow wax, burgundy pitch, of each, 6 drachms. Boil the lard, curcuma, and water together, until all the moisture has disappeared; then add the wax and pitch, strain while hot, and stir while cooling.—*Philadelphia Medical Times*.

Electricity in the Treatment of Chilblain.—Dr. Alonzo L. Leach says that, in the treatment of chilblain, he found ordinarily the liquor iodi compositus, and aquæ ammoniæ, in equal parts, as recommended by Dr. Balfour, of the Royal Military Asylum at Chelsea, the most marked in its action. Last winter, it occurred to him to try the influence of electricity; he accordingly applied the secondary or induced current, and the result fulfilled his anticipations. This winter an aggravated case, of long standing, presented itself, and he pursued this mode of treatment; the relief afforded was so decided, as to leave no room for doubt of its efficacy. The ultimate result of frost-bite is a partial or complete paralysis of the vessels, as well as a nervous element, evinced by the pain and intolerable itching. Electricity tends to give tone to the parts, and restore them to their normal condition. This is the result sought for in all applications, but they only do so temporarily in a majority of cases. The cause reappearing, the pathological condition still remaining, we have a return of all the symptoms. Dr. Leach is convinced, from the success met with in those cases where he has used it, that electricity, applied for a period of time every day, or at longer intervals, as the case may be, will place the parts in a healthy condition, and effect a permanent cure.

Hypodermic Injection of Whiskey.—A man was brought into the wards of the Bellevue Hospital, having a crushed foot and ankle, as the result of being traversed by a railroad car-wheel. Previously to his admission, the patient had lost a great quantity of blood, and it was feared that he could never be rallied to the amputating point. Among the measures adopted for his restoration were hypodermic injections of whiskey, and these proved very efficient, not only for their immediate assistance in obtaining the stimulation of the alcohol, but they seemed to tide the man over a point at which his stomach had become very irritable, and rejected whatever was put into it. An ordinary dose, administered in this manner, is from fifteen to thirty drops. This man's pulse was raised sufficient to warrant amputation of the leg, which was done, after applying Esmarch's apparatus for arresting hæmorrhage. The apparatus was particularly adapted to this case, for the reason that it was desirable to retain all the blood possible, for the loss had already been too great. No blood was lost, and but four turns were given to the India-rubber cord.—*New York Record*, February 16th, 1874.

The Action of Ammonia and its Preparations.—Dr. Ranieri Bellini, in an article in *La Nuova Leguria Medica* (*Med.-Chirurg. Rundschau*, Jan. 1874), thus sums up the results of his researches on the action of ammonia and its salts. 1. All ammonia-salts are decomposed in the organism by the alkaline carbonates; the free ammonia combines with carbonic acid, when it meets with it, forming carbonate of ammonia. 2. The ammonia-salts with organic acids undergo this decomposition in the capillaries, where these acids are burnt up by the oxygen, and the ammonia is set free. 3. As a sequence of this decomposition, alkaline salts are formed at the expense of the carbonates in the blood and the acids of the ammonia-salts, if these be formed of mineral acids. 4. On the other hand, no alkaline salts are formed, or only for a short time, when organic acids are combined with the ammonia, since these acids are more or less quickly burnt and decomposed. 5. When double ammonia-salts, such as copper sal-ammoniac, iron sal-ammoniac, etc., are taken into the system, carbonates of the metals are formed in the blood. 6. Caustic ammonia, carbonate of ammonia, and volatile ammonia-salts, when taken in small doses, are entirely eliminated through the lungs; in larger doses, by other ways. 7. In both cases, elimination is very rapid. 8. Fixed ammonia-salts are eliminated only when they have been administered in rather large doses and are not entirely decomposed. 9. Whatever ammonia-salt is taken, carbonate of ammonia is always eliminated, and escapes by the lungs. If given in small doses, it is already decomposed before it reaches the arterial system; while it is eliminated by other organs if the dose be large. 10. Elimination is rapid in the case also of the salts. 11. From the ammonio-chlorides of copper and iron, the ammonia only is rapidly eliminated. 12. Caustic ammonia and carbonate of ammonia, before being absorbed, irritate the tissues with which they come into contact. 13. They exert a depressing action on the heart, nerves, and voluntary muscles. 14. This depressing action is based on an alteration of the blood, especially of the red corpuscles. 15. Small doses of caustic ammonia or its carbonate are not followed by depression, since the ammonia escapes through the lungs before it can enter the arterial system. In the introduction of ammonia into, and its removal from, the organism by the lungs, the irritation of the mucous membrane of the digestive canal is not communicated to the nervous centres of the circulation. 16. The caustic action of caustic ammonia and of the carbonates is produced only by concentrated solutions. 17. The irritant manifests its effects on the tissues on its entry into any exit from the organism, when it is removed from the blood with the products of secretion and suppuration. 18. The depressant action, which may even amount to paralysis, is felt more quickly and strongly by the heart than by the sensory and motor nerves and the voluntary muscles. 19. All preparations of ammonia fluidify the blood, the organic constituents of the tissues, and the products of secretion. 20. The single and double ammonia-salts exercise local irritation on the tissues with which they come into contact. 21. Some of them, especially iron and copper sal-ammoniac, escape from the body as caustic ammonia. 22. All the ammonia-salts have a depressant action on the heart; this is possessed in the least degree by the valerianate, succinate, and benzoate. 23. This depressant action is produced by the ammonia set free in the decomposition of the salts. 24. All ammonia-salts fluidify the blood, epithelium, epidermis, and mucus; this is least done by the double salts —copper and iron sal-ammoniac. 25. The single ammonia-salts vary in their locally irritating, depressing, and fluidifying properties. 26. Chloride, bromide, and iodide of ammonium have a fluidifying action on the albuminates of mercury and of lead.

SURGERY.

Subcutaneous Division of the Neck of the Femur for Bony Ankylosis of the Hip-Joint.—Dr. H. B. Sands reports (*New York Medical Journal*, December 1873), the case of a man upon whom he operated successfully for bony ankylosis of the hip-joint. The patient was twenty-five years of age, of fair constitution, but somewhat irregular habits, and had suffered from a severe attack of articular rheumatism, four years previously to the time of the operation. The right hip-joint was kept in a flexed position during convalescence, and subsequently remained rigid, the thigh being considerably abducted, and flexed on the pelvis at an angle of 110 deg. to the vertebral column. The patient could not rest the right foot on the ground without assuming a crouching attitude, and could not walk without crutches. The rigidity being found to be due to true ankylosis, the following operation was performed. A long, straight, narrow bistoury was thrust through the soft parts just above the great trochanter, and carried directly in front of the cervix femoris, so as to separate the soft parts from this aspect of the bone. A narrow saw was introduced along the track made by the knife, and the neck of the femur divided. It was then found necessary to sever the tendons of the adductor longus and the tensor vaginæ femoris; after which, the thigh was immediately and readily extended to a right line with the body, and kept there by a weight attached to the foot. The patient was put to bed, and confined there for six weeks, in the hope of obtaining bony ankylosis in the straight position. As it was found, at the end of that time, that the parts remained freely movable, he was permitted to get up and move around on crutches. There was a shortening of a quarter of an inch. He now walks quite well and steadily with a cane, an useful and satisfactory false joint having resulted.

ANATOMY.

The Mucous Membrane of the Larynx.—M. P. Coigne publishes, in the January number for the present year of *Archives de Physiologie*, some researches on the mucous membrane of the larynx, which are of much interest. He notices, first, the existence of a subepithelial reticulated layer analogous to the lymphoid tissue beneath the mucous membrane of the small intestine; also certain lymphoid bodies, which have been hitherto unknown, similar to the closed follicles of the small intestine. Great as may be the anatomical interest of this discovery, its pathological importance is greater. For the presence of these bodies may account for the ulcerations of the larynx which occur during the course of pyrexias, such as typhoid fever. Again, M. Coigne has observed, on the free border of the true vocal cords, certain papillæ contain vascular loops and probably a nervous twig also. With the greater development of these papillæ on the anterior half of the cord, may be associated the greater frequency of papillomatous growths at this part of the larynx. Besides the above, the author describes also some follicular glands whose ducts take an oblique direction so as to converge towards the free edges of the true vocal cords, with the manifest object of moistening a part liable to become dry. The closed lymphoid glands are situated chiefly beneath the mucous membrane of the false vocal cords and sacculus laryngis. Further, at the free border of both true and false vocal cords, the epithelium ceases to be ciliated and assumes a squamous character.

TOXICOLOGY.

Poisoning by Green Tea.—Dr. W. H. King writes, in the *St. Louis Medical and Surgical Journal*, that Mr. L., living in the country three and a half miles from Jacksonville, Illinois, purchased a quantity of green tea, with the assurance from the grocer that it was the very best. An infusion was made from it, for the evening meal. Very soon after supper, the father, mother, and child, constituting the family, were taken suddenly ill, with vomiting, purging, and cramps, all having drank freely of the tea—the child being attacked before finishing its meal. At 10 P.M., the symptoms growing gradually worse, the father dragged himself to a neighbour's house, one-quarter of a mile distant, to get a messenger to go for medical aid. On Dr. King's arrival, he found the child better, having sooner and more completely ejected the tea from the stomach; the father and mother were still vomiting and purging. Diluent drinks were given freely, and hypodermic injections of morphia administered, to control vomiting and cramps. All recovered, but were quite ill for some days. As a test, a portion of the tea was given to two dogs; in a short time, they were taken with vomiting and purging; one of them, a rat-terrier, was very nearly killed.

NOTES ON BOOKS.

Sir Henry Thompson's *Clinical Lectures on Urinary Diseases* come to us in a French dress, translated, annotated, and augmented by a very careful and able anatomical introduction by Drs. Hue and Gignoux (Paris: G. Masson). This handsome and well edited volume is, for English readers of French, preferable even to the London edition, for it is more complete. The translators are pupils as well as warm admirers of the author.

Mr. **Dalby's** *Lectures on Diseases of the Ear*, delivered at St. George's Hospital (London: J. and A. Churchill), are already well known to the profession, and are noteworthy for their clearness of expression, and for the evidence which they offer of the author's competency in a speciality which counts but few earnest followers, mixed with many illiterate pretenders.

Cheerful Words, by Dr. W. **Hyslop** (London: Baillière, Tindall, and Cox), the proprietor of a well known private lunatic asylum, is a collection of sermons specially adapted for delivery before inmates of lunatic asylums, unions, workhouses, hospitals, and other public institutions. It bears the name of a country printer; but it is so badly got up, that we are surprised that a respectable London publisher should be willing to put his name on the title-page. Medical publishers in London have been favourably known for their care in putting forth with their imprint mechanical work of a creditable kind. It is unsatisfactory to find frequent exceptions in the case of this firm, such as we have had recently to note. The matter of this book is beyond the range of our criticism; its intention is obviously excellent, and no doubt it will be widely welcomed.

Longevity: the Means of Prolonging Life after Middle Age, by **John Gardner**, M.D. (H. J. King and Co., 1874), is a very sensible and well written handbook for popular reading, by a physician whose *Handbook of Popular Medicine* has already shown him to possess the necessary qualifications for this rather difficult task. A general observation of the rules and knowledge of the facts described by Dr. Gardner would no doubt tend to prolong life; and, without disclosing any secrets, this little book may fairly claim to be ranked among those which diffuse useful knowledge.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

Subscriptions to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. **Francis Fowke**, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MARCH 28TH, 1874.

LONDON SLAUGHTER-HOUSES.

A paper on this subject was read on Saturday evening, March 21st, before the Society of Medical Officers of Health, by Dr. T. Orme Dudfield. The subject, he said, was of great sanitary importance, and must, in all probability, be settled in some way during the present year, the term being near its end that was fixed by Michael Angelo Taylor's Act, 1844, for the suppression of all trades scheduled as noxious within a limited area of roads and dwellings. A brief retrospect of the course of legislation with reference to slaughter-houses was given; and in illustration of the general ignorance of the provisions of the Act of 1844, it was stated that hundreds of such establishments have come into existence during the last thirty years, in direct contravention of the Building Act, being within the prescribed limits in which no new business of a noxious character was to be allowed. Speaking particularly of such of these as had their origin during the last eighteen years, the lifetime, thus far, of the Local Management Act, there could be no doubt they ought never to have been licensed at all.

The bill to repeal the abolishing clause brought into Parliament in the last session by Dr. Brewer, was withdrawn upon a reference of the entire subject to a select committee of the House of Commons. The evidence given before that committee was emphatic, and apparently decisive on both sides. On behalf of the butchers, it was contended that the improvements effected under the licensing system had rendered slaughter-houses innocuous, while the powers of inspection and opposition to renewal of licenses conferred upon local authorities were sufficient to insure all sanitary requirements being duly carried out. The results of personal observation led Dr. Dudfield to question the accuracy of this view, and the ground he took was in harmony with that portion especially of the committee's report, which stated the desirability of constant inspection, and of precise, stringent, and uniform regulations, with the ulterior object of using that inspection and those regulations for the detection of contagious diseases in animals and preventing the sale of unsound meat.

The principal recommendation of the committee was, however, opposed to the belief of the Society of Medical Officers of Health. The committee made the general wholesomeness of private slaughter-houses the ground of their future continuance; while the Society had expressed a decided opinion for their abolition by reason of their unwholesomeness. The select committee were influenced, no doubt, by the evidence of members after visiting certain premises. Those visits were paid while inquiry was in progress, and on days when no slaughtering was going on; at such a time every precaution would be taken to avoid gratuitous offence; and this inspection took cognisance chiefly of matters that were upon the surface, such as clean walls and floors, in respect of which many premises were scrupulously well kept. There were two conditions, however, which were of great importance, namely, position and construction. An improper site or defective construction must render premises "faulty and, indeed, objectionable". A slaughter-house should be a detached building, with a fair surrounding air-space; nor near accumulations of foul-smelling refuse, and sufficiently distant from other buildings to preclude offensiveness. It should be airy, well-lighted, and open to the roof; the walls being formed of impervious materials so as to allow thorough cleaning with soap and water, and the flooring also should be impervious, and slope to the drain, which should be incapable of disturbance by rats or foul air, or for the purpose of passing blood and filth into the sewer; a catch-pit for blood should be provided, and an abundant high-pressure water-supply be always available. So far are the existing slaughter-houses from fulfilling these conditions, that their use may be described as usually an accident—a shed, a washhouse, a stable, or mews, being converted wholly or partially to the purposes of slaughtering. Amongst facts ascertained by actual inspection, Dr. Dudfield stated that many of the slaughter-houses could be approached only through the dwelling-house or shop, horses were sometimes stabled in them, and in other instances there was full connection with the stabling. Some of the premises had dwelling rooms in actual occupation above them. In two-fifths of the total number visited, the drainage was found to be out of order at the very time when, as a preliminary to the annual licensing, inspection must have been looked for; and in several cases light was obtained by opening the doors, so that the business was carried on in public. All these conditions were quite consistent with an appearance of cleanliness, such as would impress favourably an inexperienced observer, and yet it would have been unreasonable to require their amendment at the cost of a considerable outlay for the improvement of premises so soon to be closed by the operation of law.

The particular recommendations of the select committee, as to the future regulation of the trade, would, if the butchers readily acceded to them, lead to a large reduction in the number of private slaughter-houses. Regulation, however, if extended to the circumstances of position and construction, would make havoc with many existing premises (unless these should all be privileged, which yet could hardly be intended as regards those reported by the committee to be "faulty and objectionable"). The primary defect of the present system was the want of penalties for neglect for constant recurrence. The alternative system of public abattoirs had worked so well wherever introduced, that it could hardly fail of success in the metropolis. It was not desired nor desirable to establish one vast abattoir, but a sufficient number of such places of moderate size to meet the necessities of the trade and of the community while enabling the slaughter of diseased animals and the traffic in unsound meat to be effectually proscribed. Such a number of private slaughter-houses as 1,700 was absurdly in excess of every legitimate requirement. It was to be observed here, that only in connection with public establishments could constant and effectual inspection be carried out, good sanitary conditions ensured, and cruelty and the sale of bad meat be prevented. Under the present system, and having regard to the multifarious duties and limited strength of the sanitary staff of any district, the inspection of slaughter-houses was and must be nominal, and it could have little further effect than to keep them moderately clean. By the introduction of abattoirs, the butchers would, in the long run, be the greatest gainers, and meat be rather cheaper than enhanced in price, judging from the experience gained elsewhere. Support might be anticipated for such a measure from the 162 wholesale dealers who bought live stock and had them killed at public slaughter-houses, as well as from the butchers (1,063 in number) who carried on their trade without themselves slaughtering animals. No great difficulty, then, was foreseen in carrying out this beneficial reform, should Parliament resolve to do that which it was advised to do by all persons of sanitary experience, and which its predecessor of thirty years ago deemed not unreasonable, though its shibboleth was not *sanitas sanitatum.*

THE CHARITY ORGANISATION SOCIETY.

The fifth annual meeting of the Charity Organisation Society was held at the Hanover Square Rooms on Wednesday week—the Right Hon. W. E. Forster, M.P., in the Chair. Among the speakers were Mr. Sclater-Booth, President of the Local Government Board; Mr. Walter, M.P.; and Mr. Kay Shuttleworth, M.P. The following passage from the report, which bears upon the medical charities of the metropolis, will be read with interest. The Council say:

The medical charities, and especially the dispensaries and out-patient departments of hospitals, have again occupied much of their attention. Their Medical Committee, which consists partly of members of the medical profession and partly of laymen, and of which they are glad to say that Sir Rutherford Alcock has recently consented to be chairman, reported in 1871 that the establishment of provident dispensaries appeared to them the first step towards the reform of the abuses of out-patient relief. There is no doubt a considerable class which can ill afford to pay the ordinary fees when sickness, with its attendant expenses and possible diminution of income, is upon them; but there are few, if any, above pauperism who cannot subscribe from one penny to threepence per week, whilst in work, to provide themselves and their families with necessary attendance in sickness. Several free dispensaries have recently been converted into provident dispensaries, and there are now no fewer than seventeen of these in London. The next step is to induce the hospitals to take some sufficient means of ascertaining what the exact circumstances of the persons that attend their out-patient departments are, and whether many of them ought not to be referred to provident dispensaries.

Another recommendation contained in the first report of the Medical Committee was, that provident dispensaries should be affiliated to hospitals, so that members might be entitled to hospital treatment when they required it. The Council are glad to observe that a Committee of Medical Charities in Manchester have made this a part of a comprehensive and well arranged scheme, which they have lately published. It is proposed to divide Manchester into districts, each with its provident dispensary, and to entrust the dispensaries with the power of recommending persons to the hospitals. It is to be hoped that this important step in the organisation of charitable relief may be tried ere long in some part of London.

The Hospital Sunday Fund will, no doubt, promote the efficiency and improvement of medical charities. The Council noticed with satisfaction the strong expression of opinion in the Report of the Committee of Distribution in favour of placing dispensaries on a provident footing.

The principle which underlies the action of the Council with reference to provident dispensaries—viz., that more extensive and more lasting good is done by enabling persons to help themselves, than by giving them free relief, applies, of course, to many other charities.

If people could be induced to lay by small sums regularly whilst they are in work, they would not have to look to the charitable for assistance to the degree that many now do. But just as the existence of numerous free medical institutions makes it difficult to establish provident dispensaries, so the distribution of petty relief in food or money makes it more difficult than it would otherwise be to induce the recipients to use their opportunities. Meagre and ineffectual as this relief generally is, it excites expectation out of proportion to its amount; and the largest share of it, too, often falls to the most importunate people, independently of any other considerations.

Dr. H. Gervis and Dr. G. Roper have been elected Physicians to the Royal Maternity Charity.

We learn with great pleasure, on the best authority, as will the friends of King's College generally, that there is no truth in the rumour, to which we last week referred, that Sir William Fergusson is about to resign his post at King's College Hospital as one of the surgeons to that institution.

AURAL SURGERY.

MR. HINTON, having resigned the active duties of his profession, has betaken himself to literary pursuits. He has been succeeded in his post of Aural Surgeon to Guy's Hospital by Dr. Laidlaw Purves, a gentleman of the highest competency.

THE HOPE OF AN INDIGENT DEVIL.

THE *New York Record*, of February 16th, says:—The Prize Essay Committee, New York State Society, reported that the essay upon "Colles' Fracture" had been awarded the Merrit H. Cash Prize, and that the motto of the essayist was, "The hope of an indigent devil." Upon opening the envelope, there was found the name of Thomas K. Cruse, M.D., Member of the County Medical Societies of New York and Westchester.

URN-SEPULTURE.

THE movement is rapidly growing towards the adoption of cremation as a mode of disposing of human remains more consonant with propriety, with the requirements of public health, and with well directed sentiment than burial. Bishops of the church, clergymen of all denominations, leading men of the professions in this country, are taking occasion to express their feeling in favour of a return to the practice of urn-sepulture. With the assistance of Mr. Siemens, F.R.S., Dr. Percy, F.R.S., and other competent authorities, Sir Henry Thompson has succeeded in demonstrating that the incremation of the body, after funeral rites, may be accomplished rapidly, completely, without any atmospheric pollution, and without any foreign admixture with the ash. It is unnecessary to repeat what he has well stated in his recent publications on the subject; but, as we have on several occasions of late years noted the grounds for preference of urn-sepulture over inhumation, as a more thoughtful and proper disposal of the body, and one entirely compatible and even conducive to the tender reverence for beloved remains, we read with satisfaction the recent wise comment of the Bishop of Manchester upon the thoughtless objection to urn-sepulture sometimes drawn from the doctrine of physical resurrection—which of course, and as he points out, does in no way really touch the question. We understand that a Cremation Society has been formed in this country, which proposes in the first instance to publish for signature a suitable declaration. Some considerable subscriptions have been contributed to assist in promoting the objects of the Society. The following is the agreed wording of the declaration.

"We, the undersigned, disapprove the present custom of burying the dead; and we desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and shall render the remains perfectly innocuous. Until some better method is devised, we desire to adopt that usually known as cremation."

Mr. W. Eassie, C.E., 1, Great Winchester Buildings, is the Secretary of the Society *pro tem.*, and to him signatures of the declaration may be addressed.

THE CHILDREN OF THE POOR.

AN excellent lady, Miss Buckton, who has been usefully spending her time in giving useful and, as it has proved, acceptable information to her poorer sisters in Leeds on the subjects of hygiene of the physical care of the body, mentions in an interesting pamphlet in which she has given an account of her experience and mode of work, some startling facts which incidentally reached her about the way in which new-born infants are often treated among the poor. The custom is to press the child's head so that the bones may be brought together; castor-oil or sugar and butter is administered, the body is bound as tight as possible, and the breasts are squeezed when the baby is a girl, "to break the strings". "To dispel the ignorance which leads to these cruelties," says Miss Buckton, "I provided myself with a skull and an enlarged drawing of Madame Bodichon's cartoon, showing the organs in a natural and an unnatural position. Several of my audience collected round me to verify my statements by facts which had come under their own experience. I learnt also from a written answer to one of my printed questions, that water on the brain is attributed to the practice of washing the heads of babies. The following is the curious account which was given. 'It is owing to the crueal and murderas treatment of the mothers and nurses washing their feamales heads; for nearly 9 out of 10 die from the water in head by washing their heads. The testimony of one of the best medical men, Dr. Fleming, males being a little stronger some escapes this butchering practice.' This, I found, is a very common belief, and, no doubt, accounts for a large number of the dirty and sore heads we continually see. In corroboration of this, another of my hearers writes: 'I have seen people myself try to comb'd off dirt and make it quite sore.' I met this statement the following week by giving a description of the wonderful way in which the brain is protected, and described the dreadful Russian hair-disease, which is caused by dirt. I explained that as the scalp is more closely provided with oil-glands than any other part of the body, soap as well as water should be used from the very first. I felt on this occasion, as on many others, the great advantages I derived from placing myself in friendly communication with my hearers. By this means my knowledge increased every week, so that, instead of keeping to my syllabus, I had continually to quit its order and to extend my course from eight to ten lectures."

THE OVERWORK OF MILLINERS.

THE Early Closing Association have issued an appeal on behalf of that overworked and ill-cared-for class, the milliners' and dressmakers' female assistants, which we heartily support. They state:

"The Board regret that, notwithstanding the existence of the Workshops Regulation Act, first passed in 1867, and subsequently amended in 1870 and 1871, frequent complaints of grievous overwork and protracted and excessive toil appear from time to time in the public press. Still more frequently do distressing cases, in which severe physical suffering, permanent ill-health, and even death itself, have resulted from infractions of the spirit, if not of the actual letter, of the Act, reach the ears of Government Inspectors and others who are interested in regulating and reducing the hours of labour. It seems to be a question with some whether the amendments, granting certain exceptions, have not been made to a great extent an occasion for reviving the evils which necessitated the passing of the original Act. It will be in the recollection of many that, some years since, the melancholy details of the death, chiefly from overwork, of a young girl employed in a fashionable West End establishment, arrested general attention, and created for the time being a deep and lively sympathy with the class to which she belonged."

There is a great deal of difficulty in putting the protective laws in force. Mr. Baker, the Inspector of Factories and Workshops, reports:

"I have myself had so many letters and personal calls by milliners' girls who have been employed into the small hours of the morning, and on visitation have found the statements to be correct, that I could fain have endeavoured to stop the practice by prosecutions; but such was the fear of dismissal, that I have never yet found one daring to give evidence before the justices, in consequence of the certainty of being a marked character from that day forward, and out of employment as soon as it was convenient for her to be discharged. With my subinspectors, this vexed position has been common enough. Such cases are, therefore, seldom or ever taken, and are, therefore, not seen in our lists of prosecutions."

The remedy lies mainly and in the first instance with the ladies; and it is heartily to be hoped that they will more and more, and by every means in their power, discourage the overwork of those who are employed in their behalf. This they can do in great measure by allowing sufficient time for the completion of their orders, and by making proper inquiries on the subject.

THE FELLOWS OF THE LONDON COLLEGE OF PHYSICIANS.

ACCORDING to the list just issued by the College of Physicians, London, there are 276 Fellows, who may be thus classified:—Having a medical degree from Edinburgh, 66; from London, 61; from Cambridge, 50; from Oxford, 38; from St. Andrew's, 24; from other sources—Dublin, Glasgow, and Foreign Universities, or *none*—36. Since 1518, there have been 90 presidents, 15 of whom have had the honour of knighthood or baronetcy conferred upon them—*i.e.*, 7 being baronets and 8 knights. All the presidents had an Oxford or a Cambridge degree except 5, the university conferring the degree being unknown in 3 of these.

RETIREMENT OF PROFESSOR HYRTL.

Dr. Hyrtl, the eminent Professor of Anatomy in the University of Vienna, delivered his final lecture on the 16th instant, and took leave of his class. In the afternoon, he met an assemblage of more than three thousand pupils and friends, who presented him with addresses and other expressions of esteem, which were feelingly acknowledged by him. During the day, more than fifty congratulatory telegrams were received from all parts of the world—Petersburg, Moscow, Paris, Philadelphia, London, New York, Constantinople, Berlin, Prague, Pesth, Cracow, and various other places in the Austro-Hungarian Empire, including Eisenstadt, Hyrtl's birthplace. The festivities of the occasion were prolonged to near midnight. On the following day, the Municipal Council of Vienna conferred the honorary citizenship on him.

HARVEIAN SOCIETY OF LONDON.

Recent numbers of the Journal have contained reports of proceedings which have taken place in this Society in respect to the proposed expulsion of Mr. Harry Lobb, whose advertisements in the daily and other journals are of long-standing notoriety. The proposal not being carried, the President (Mr. James Lane) and several other officers and members resigned. A special meeting was summoned on the 19th instant to consider the position of the Society; and Mr. Lobb's resignation of the membership was then tendered. Upon this, it was proposed by Dr. Sieveking, seconded by Dr. James E. Pollock, and carried *nem. con.*: "That the gentlemen who had resigned should be requested to withdraw their resignations and to resume their official positions in the Society." It is reported that all the intending secessionists have since signified their intention of rejoining; so that the difficulty which threatened to break up the Society may now be considered to have passed away. It is announced that an endeavour will shortly be made to pass a stringent rule against undue advertising, in order to prevent the recurrence of any similar crisis.

THE NEW DIRECTOR-GENERAL AND FUTURE ADMINISTRATION OF THE ARMY MEDICAL DEPARTMENT.

The medical officers of the army are fully justified in anticipating great benefits to arise from the administration of the new Director-General, Sir William Muir, if they may judge from past experience of his successful efforts in the public service. The zeal and ability with which he discharged the duties of a regimental surgeon throughout the whole period of the Crimean War were very favourably mentioned in a despatch by General Sir William Codrington. The remarkable sagacity with which he conducted the medical affairs of the army during the China War of 1860, and expedition to Pekin, as principal medical officer of the British and Indian troops employed on that occasion, was forcibly brought to public notice in the House of Commons by the Secretary of State for War, Sidney Herbert, who stated that never before had a British force, at such a distance from the shores of England, been preserved in such perfect health. Subsequently, at the time of the *Trent* affair, at the end of the year 1862, when it became necessary to despatch over 7,000 men from this country to North America, and, in conjunction with the troops already in the country and hastily raised militia forces, to make the whole army ready for taking the field under the trying circumstances of a Canadian winter, Sir William Muir was selected to organise and direct the medical arrangements. Although happily at the last the contest was averted, it was acknowledged that, so far as the medical department was concerned, everything had been got into complete readiness; and the harmonious manner in which Sir William Muir had brought the army medical officers and civil practitioners to cooperate in this result and to join in discharging the duties of the hospitals suddenly formed throughout the country, was universally praised. But, perhaps, the position in which Sir William Muir's services were attended with most benefit to his own department and to the public, and to which we would call most attention as an earnest for future success in the same direction, was that of Chief of the Army Medical Department in India. We have had the opportunity of seeing a Minute by the Government of India on the subject, which, though printed at the time only for official information, seems to deserve more extended publicity at the present time, when the whole body of army medical officers is interested in learning as much as possible of the probable character of the future administration of their department. The minute which follows speaks for itself; it is a tribute of which any public officer might well be proud.

From Government of India, Military Department, Fort William, 11th March, 1872, *to Dr. Muir, C.B., Inspector-General of Hospitals, Her Majesty's British Forces.*

Sir,—I am directed to acknowledge your letter, No. 19, dated 15th February, 1872, informing the Government of India of your appointment to the Head of the Sanitary Branch of the British Army Medical Department.

2. The Government of India have frequently had occasion to express their sense of the value of the services you have rendered during the time you have held the position of Inspector-General of Hospitals, Her Majesty's British Forces in India; but the Governor-General in Council, in expressing his regret at your departure, desires to take this opportunity again to record His Excellency in Council's full appreciation of the judgment, zeal, and ability you have uniformly displayed in the performance of the responsible duties entrusted to you.

3. While acknowledging the important assistance the Government have derived from your experience and advice, the Governor-General in Council, I am to state, especially recognises your unfailing efforts to improve the working of your department, and the sanitary condition of the soldiers, not less by your practical suggestions to that end, than by your opposition to unnecessary expenditure, which, if allowed, must inevitably reduce the power of the Government to give effect to measures of real reform and improvement. I have, etc.,

(Signed) H. K. Burnes, Colonel,
Secretary to the Government of India.

EAST END CONFERENCE ON PROVIDENT DISPENSARIES.

A Conference was held at St. Philip's Schools, Whitechapel Road, on the 24th instant—Robert Wigram, Esq., in the chair—to consider the following propositions.

1. It is desirable that all classes of the community not absolutely destitute should pay, so far as they are able, for their medical treatment.
2. Hospitals are intended for serious and painful cases, especially for such as require prolonged clinical treatment; and the attempt which has been made of late years to render them available, through their outpatient departments, for meeting the entire medical wants of the working classes, has been productive of much evil.
3. The ordinary medical treatment of the working classes should be locally provided for by provident dispensaries, based upon the principle of mutual assurance, but supplemented, when necessary, by honorary subscriptions, provision being made for the visitation of the sick, whenever their cases require it, in their own homes, by the medical officers of their respective dispensaries.
4. As the conversion of the existing free dispensaries into provident dispensaries, and the establishment of new provident dispensaries whenever required, is an indispensable preliminary to the reform of the system of medical relief, the exertions of all persons interested in the question ought, in the first instance, to be directed to those objects.

We understand that the immediate object of the conference was to prepare the way for placing some of the East End free dispensaries on the provident footing. It is certainly very important that the dense population of working people who inhabit the east of London should have no lack of opportunities of being provident in the matter of medical relief.

ACTION ON A LIFE-POLICY.

There was tried this week, before the Lord Chief Baron and a special jury, the case of Watson *v.* the Imperial Union Assurance Company. This was an action on a life-policy, to which the company pleaded misrepresentation and untrue answers to the usual inquiries as to the health of the insured. Mr. Day, Q.C., and Mr. Willis, were for the plaintiff; Mr. Serjeant Ballantine and Mr. Grantham were for the company. The policy for the sum of £1000 was effected in September 1871, by one Watson, of Wick Farm, Hove, described as a farmer, thirty-four years of age. He had to answer whether he had any one of the numerous diseases mentioned, to which he answered that "he was never ill, except the measles"; and, in answer to another question, he stated that he was of temperate and regular habits. On August 1st, 1871, he was examined by Mr. John Cordy Burrows, now Sir John Cordy Burrows, who testified that, so far as he could judge, his state of health corresponded with these statements, and certified in favour of his life as a good one for insurance. Mr. Burrows, however, had not professionally attended him, except on the occasion of the insurance, and had never seen him before or since. But Mr. Watson was also asked the name of "his ordinary or occasional medical attendant", and he answered that he "had got none"; whereas, in fact, he had within a year consulted a medical man—only, it was said, for indigestion, although it was suggested that the medical man had observed something more serious; and, at all events, his name was not mentioned. In February 1873, Watson died of diseased liver and kidneys; and the case for the company was, that these diseases were the result of habitual intemperance. In support of this case, several medical men, who had actually attended him in 1870 before the policy, and in 1872 after the policy, testified to the presence of symptoms of disease caused by intemperance; and other evidence was given to show that he was of intemperate habits. Moreover, on a *post mortem* examination, the heart, liver, and kidneys were found to exhibit traces of disease caused by intemperance. On the other hand, evidence was given to show that the deceased was of temperate habits when the policy was effected; and Sir John Burrows was called in support of the case thus presented. The Lord Chief Baron, at the close of a long trial, which lasted all day, left to the jury whether or not the deceased, in August 1871, was of temperate habits, and whether he had improperly omitted to mention the medical man who had attended him within the twelve months prior to the policy. The jury found for the plaintiff, but the Lord Chief Baron stayed execution.

RADCLIFFE TRAVELLING FELLOWSHIP.

THE following report has been addressed to the electors to the Radcliffe Travelling Fellowship, and was received on March 20th by the Lord High Chancellor, the Marquis of Salisbury, and the Bishop of London :

"My Lord Archbishop,—We have to report to your Grace and the Radcliffe Electors, that the candidates, considered as a body, are of unusual excellence. We recommend to the electors for appointment Mr. Samuel Hatch West, of Christ Church. With respect to two other candidates—Mr. Childs, of Merton College, and Mr. Moullin, Pembroke College—we consider that their work gives them claims but little inferior to those of Mr. West. Between these two gentlemen it would, perhaps, be difficult to decide whether of the two should be reckoned the second. We feel bound to say to you that, looking at the actual quality of the work done, we think it a grave misfortune that we have no power to recommend both these gentlemen for additional Fellowships, or for some mark of your approval. Moreover, we may not transgress the due bounds of our relation to you if we say that, viewing the actual merit of such persons, and the great advance which their work gives proof of in the scientific education of Oxford, we regret that there is no fund available whence some recognition could be given to persons who, as in this instance, have furnished proof of much industry, ability, and scientific attainment. We think that great good would accrue to the public if grants could, under proper regulations, be given to candidates in an examination of this character, who, although unsuccessful in gaining the first place, have, nevertheless, shown themselves to be men of eminent merit and promise.

"We have the honour to be, my Lord Archbishop, my Lords and Gentlemen, your obedient servants—Henry W. Acland, G. Rolleston, A. G. Vernon Harcourt, examiners for the Radcliffe Travelling Fellowship."

OPIUM.

FROM a governmental return recently issued, we glean a few interesting statistics illustrative of the rapid increase of late years in the exports of opium from this country. The exportation of opium from this country is a branch of trade of which we hear, as a rule, very little; and it is not frequently quoted in official returns and statistical compilations. However, this branch of our national commerce, comparatively insignificant though it may be as regards the extent of business transacted, has, like nearly every other branch, greatly progressed of late years, and has been sufficiently prosperous. Beginning with the year 1840, we find that the exports of opium from the United Kingdom were in the aggregate 35,848 lbs.; in 1850, they were 87,457 lbs.; in 1860, they were 98,072 lbs.; and in 1870, they were 150,414 lbs. These figures embrace, as will be seen, a period of thirty years—a not unimportant period, so far as the exports of opium are concerned. Without any rapid or sudden fluctuation, these exports have gradually and steadily increased—an increase of 135,000 lbs. in the period of thirty years. The fact will not be uninteresting to the medical profession and to all who give heed to the peculiar developments of commercial enterprise. We may, however, consider this increase in the opium trade from the point of view of its actual sterling value. The figures are as follows. In 1856, the declared real value of the exports of opium from this country was £38,609; in 1861, £233,305; and in 1870, £196,165. It will thus be perceived that, in point of sterling value, the opium trade is growing considerably, and assuming more importance. It has been the fashion, especially amongst men essentially commercial, to regard this branch of business with feelings of indifference, as being of no importance to any one—as being, indeed, a stagnant sort of business, not worth the cultivation. There is no doubt that the period embraced by the statistics which we have just quoted—that is, the thirty years from 1840 to 1870—were of considerable importance to the opium trade, and witnessed a development of the exportation hitherto unprecedented. It remains to be seen how this section of our commerce will conduct itself in the future—whether it will continue to show progressive features, or whether it will be content to remain stagnant and insusceptible of increase.

IRELAND.

THE salary of Dr. Smith, medical officer of the Ferbane Dispensary, Parsonstown Union, has been increased from £100 to £120 *per annum*.

AT a recent meeting of the guardians of Enniskillen Union, it was resolved that Dr. Rogers, late medical officer, should receive £80 *per annum* as a retiring allowance.

THE election petition against the return of Dr. O'Leary, of Dublin, for the representation of Drogheda, has been lodged, and among the grounds alleged are charges of bribery, treating, and undue influence, and other allegations to show that the election was illegally conducted. It is not expected that the Court to try the case will sit before the first day of the ensuing term.

DR. PARKES, Medical Officer of Kilmacow Dispensary District, co. Kilkenny, was last Sunday found dead, with a frightful wound in the head, which it is surmised was inflicted from violence; but, as the deceased gentleman had been out driving, it is uncertain whether his death arose from accident or not. An inquest will be held, when it is expected that evidence will be forthcoming which will throw more light on the transaction. Dr. Parkes leaves a wife and large family to mourn his untimely end.

THE CONJOINT EXAMINATION SCHEME FOR IRELAND.

OUR Dublin correspondent writes: The Conjoint Examination Scheme for Ireland is now the chief subject of professional interest in Dublin, and will, we believe, soon be the great medico-political question throughout the sister country. Last week we were only able to announce that a resolution condemning the scheme had been adopted by the Irish College of Surgeons at a meeting held just before we went to press on the 19th instant (misprinted the 12th in our last). As the English Conjoint Examination Scheme is all but complete, the reports from the Committee of Reference having been agreed to by the bodies most deeply interested, and the Apothecaries' Society being only excluded by legal difficulties, easily to be overcome by a formal Act of Parliament, it can scarcely be expected that Ireland will long remain behind in carrying out a similar and necessary reform. It may be well here briefly to review the history and present state of the Conjoint Examination Scheme in Ireland. In accordance with the same recommendation from the General Medical Council as that under which the English Conjoint Examining Scheme has been constituted, the President and Council of the Irish College of Surgeons, on October 5th, 1871, invited the other Irish medical authorities to send representatives to meet the representatives of the College of Surgeons in conference, "to take into consideration the present mode of conducting the examinations imposed by these respective authorities". Representatives were accordingly sent by each of the Irish medical authorities, and a report was agreed to by the Conference on February 10th, 1872, recommending a conjoint examining scheme including *all* the Irish medical authorities. This report was forwarded to the various authorities, and, we believe, fully discussed by the executive authority in each, namely, the Board of Trinity College, the Senate of the Queen's University, the College of Physicians, the Council of the Royal College of Surgeons, and the Court of Directors of the Apothecaries' Hall. The scheme thus proposed fell through, chiefly owing to objections raised by the College of Physicians. The Irish authorities having thus disagreed and brought forward no scheme for a conjoint examination, the General Medical Council, on March 4th, 1872, expressed its regret that no such scheme had been prepared, and hoped that the Irish authorities would be prepared with a scheme "by the 1st of July, 1872". Accordingly, the President of the College of Surgeons again summoned a conference, in which all the Irish medical authorities joined except the Queen's University. This University did not join in the Conference, but it does not appear that the executive body of the University was ever asked, as the Secretary writes, on April 17th, 1872, that "the *Chancellor*, after consulting *other members* of the Senate, does not think it advisable to appoint representatives of the Queen's University to attend another Conference" (the italics are our own). We do not profess to show who the "*other members*" of the Senate were, but it is quite manifest that the *Senate* never refused the invitation of the President of the College of Surgeons. The Conference met under this revived invitation, the Queen's University being alone unrepresented. Another scheme, differing but little from the last, was agreed to; this, again, met with opposition by the College of Physicians, but was agreed to by that College if the Apothecaries would consent to forego the privilege of examining at the final examination. This the Apothecaries refused to agree to; nevertheless, the scheme, as amended, was sent forward to, and approved of by, the General Medical Council, the Council expressing a hope that the Queen's University and the Apothecaries' Hall would join in the scheme. The Apothecaries' Hall gave its consent, but the Queen's University has not moved in the matter. The four consenting bodies agreed to go on, and appointed a Committee of Reference, which, after many months of laborious work, sent up a carefully compiled report to the cooperating authorities. In fact, all seemed to be going on well, when suddenly a fellow of the College of Surgeons called some of his friends together, held a private meeting (a "caucus," as our American cousins would call it), got a requisition signed, calling upon the President of the College to convene a meeting of the fellows "according to the provisions of the Supplemental Charter (clause 6), to take into consideration the proposed conjoint scheme of examination." The meeting was held, and as we informed our readers last week, the scheme was condemned. There were between fifty and sixty fellows present—not a large meeting upon such an important question. No copy of the scheme was forwarded to the fellows before the meeting. The most curious part of the whole proceeding is that this scheme now rejected by a hurriedly summoned and not numerously attended meeting, had been brought under the notice of the College in the annual report of the Council in June 1873, and that the College had adopted that report unanimously. The report contained a copy of a letter forwarded by order of the Council, to the President of the General Medical Council, enclosing the following resolution: "That the President and Council of the Royal College of Surgeons in Ireland, beg leave to impress upon the President and Members of the General Medical Council, their earnest desire that the scheme for a conjoint examination, forwarded to them by the University of Dublin, the King and Queen's College of Physicians, and the Royal College of Surgeons in Ireland, should receive, at their earliest convenience, the sanction of the General Medical Council, as required by clause 19 of the Medical Act." This act of the Council was deliberately approved of by the College in June 1873; yet, in March 1874, with but a few days' notice to the country fellows, without ever giving the fellows an opportunity of studying a document which, in all good faith in their Council, the College had tacitly approved a year ago, the gentlemen who recently met set aside the well considered scheme, in the adoption of which their own Council and three other medical corporations had concurred.

PUBLIC ANALYST FOR TIPPERARY.

DR. CAMERON, analyst for Dublin, writes to us as follows.

The remarks of your Dublin correspondent on the above subject might lead some of your readers to infer that I am a chemical Cheap John ready to work on the lowest possible terms. As I happen, on the contrary, to belong to that class of professional men who consider it unbecoming to accept fees lower than the recognised standard, perhaps you will permit me to dissipate any erroneous impression regarding me which your correspondent's remarks may have produced. I am public analyst for one-half of the County of Tipperary at a salary of £25 a year; and, at the suggestion of several grand jurors, I offered to act for the other half on the same terms, which would make the salary for the county £50 a year. As there are no towns of even 7,000 inhabitants in the county, and no proper organisation for carrying into effect the provisions of the Acts relating to adulteration in the county, £50 a year is a salary quite commensurate with the duties likely to be performed. I am analyst for the Queen's County, at a salary of £50 a year, and, during the last half-year, only some half-dozen analyses have been made by me for that county. Some counties for which I am public analyst have not sent me a single article for examination. I think, under these circumstances, it would be preposterous to expect the grand juries of Irish counties to give large salaries to public analysts until by some new arrangements—for example, the employment of the constabulary in the carrying out of the provisions of the Adulteration Act—the analysts are likely to have more work to perform. Even in England, the salaries of public analysts are by no means large; Liverpool, with its concentrated population of half a million, pays its able analyst £100. Some counties, I understand, give no salaries at all, but pay by results which generally may be expressed by the word *nil*. If I have not said too much on this subject, perhaps, I shall trouble you again with some observations on the defects of the Anti-Adulteration Acts of 1860 and 1872.

We shall be happy to receive Dr. Cameron's observations on the subject.

THE WEBB FUND.

THE following contributions have been received by Mr. Augustus Churchill, the Treasurer, to the 26th instant.

	£	s.	d.		£	s.	d.
Rev. J. Russell Stock...	3	3	0	A Friend of the Family.	2	2	0
Dr. Wheatley, Oporto..	5	0	0	Dr. Willoughby Arding.	0	10	6
Mr. C. Bleeck............	2	2	0	Dr. Cockle	3	3	0
Mr. Onley Savill-Onley.	1	1	0	Rev. F. Hildyard	5	5	0
Mr. George Meek	2	0	0	Dr. A. S. Taylor.........	3	0	0
Dr. Cahill.................	2	2	0	Dr. Andrew Clark	10	10	0
Captain Poland, R.N...	2	2	0	Mr. John Ferard	2	2	0
Mr. C. C. Ferard	10	0	0	Mr. W. H. Cochran ...	5	5	0
Mr. R. C. Griffith	5	0	0	Dr. J. Russell	2	2	0
Dr. Beddoe	1	1	0	R. L. F.	100	0	0
Dr. Dyce Duckworth...	1	1	0	Mrs. Holmes	100	0	0
Messrs. Yarde and Son.	5	5	0	Mr. O. C. Jackson	26	5	0
Dr. D. Fraser	2	2	0	Dr. E. T. Watkins......	1	1	0
Dr. Murchison............	4	4	0				
Sir H. J. S. Ibbetson, Bt.	10	0	0		330	0	6
Mr. W. H. Domville ...	1	1	0	Amount previously acknowledged	1478	14	0
Dr. Clifford Allbutt ...	1	1	0				
Messrs. Spalding and Hodge	10	0	0	Total............	1808	14	6

ERRATA.—In the list of subscriptions for February 14th, for Dr. Jeffson, read Dr. Jephson; and for Mr. E. H. Bradley, read Rev. R. H. A. Bradley.

REPORTS
ON
SANITARY ENGINEERING IN HOUSES, HOSPITALS, AND PUBLIC INSTITUTIONS.

BY WILLIAM EASSIE, C.E.

XI.—HOT AND COLD WATER, AND GAS SUPPLIES.

The Gas-Supply.—In England, as a rule, we are culpably careless about our gas-supply. A gas company, for instance, receives notice that the service of such and such a house is ready to be connected with their main; and when they have obtained a signed agreement setting forth who is responsible for payment, the meter is connected forthwith, and there is an end of it. The gas-fitter may have done many things badly, and not done some things at all; but the gas company seldom, very rarely ever, exercises any jurisdiction.* The gas-fitter next sends in his account, which is paid; and when the smell of escaped gas from some faulty portion of the pipes has become unbearable, he is sent for to remedy it, and charges for the rectification. The workman may be thoroughly incompetent, as gas-fitting is not, as it should be, a separate trade. Indeed, the artisan who performed the work may be a blacksmith, white-smith, glazier, brazier, plumber, bell-hanger, and gas-fitter, all rolled into one.

A gas-fitter, *who is a gas-fitter*, and who understands his business, will never take leave of a house until he has tested the pipes for leakage. Where this trouble is taken, the ordinary practice amongst us is as follows. When the pipes have been laid throughout the house, and the company's main connected to the meter, a temporary burner is fixed on each floor of the house, and the gas is turned on. The gas is now ignited at these trial jets, and allowed to burn for some little time. The main is then turned off, and at the same time the exact reading of the index is taken. When the gas left in the pipes has burnt out, the taps of the experimental lights are turned off; and if, after the lapse of an hour or so, the dial of the meter continue to indicate a consumption of gas, it is plain that it somewhere escapes, and the leak is searched for by the sense of smell, etc., and remedied.

Whether from sanitary reasons or wholesome dread of fire, I do not know, but in most of the large cities of the United States, every length of gas-pipe which has been laid in a house has to undergo even a severer ordeal than the above before the gas is laid on. The inspector examines the joints and elbows, scrutinises the plugs where brackets and chandeliers are intended to be fixed, and if there be the slightest departure from the rules, he insists upon all being set right. Before, however, the gas-fitter—a separate trade there—asks the gas company to make the connection with their main, he sets about proving the pipes. He stops up, with one exception, all the outlets which have been left for brackets and pendants, with plugs or with screwed caps. On the one not so stopped he attaches a force-pump, into the interior of which have been put a few drops of sulphuric ether. This pump is now connected with a gauge, and it is then set to work, generally until a high pressure has been registered. A high pressure in a gas-pipe at first appears unnecessary, but gas-fitters know very well that iron pipes have many latent weaknesses, so to speak—seams just ready to open, pinholes filled with grease, etc., which might not drop out for years—and a good pressure exerted would rip up the one and cause the others to fall out. When the gauge indicates a certain figure, therefore, the pumping ceases, and if the mercury fall, it is evident that there are one or more palpable leaks, which are at once sought for. The escaping ether will guide the fitter to these, and the defaulting pipes are replaced by others. The pumping is now continued, and the same routine recommences. If the mercury still descend, and the leak cannot be detected by the sense of smell, the joints are separately lathered over with soap, whereupon the weak places will be indicated by bubbles. These parts are then marked, heated by means of a portable spirit-lamp made for the purpose, and covered over with an approved and durable cement. When the inspector arrives, the pump is once more set in action, and as, the pipes are now tight, he has simply to cast an eye upon the gauge—the column of which no longer shows signs of sinking, examine as before mentioned how the pipes have been laid, and sign the requisite order. Some universal system of house-pipe testing should prevail here. It is common enough with us for gas-companies to test the gas-pipes which constitute the main before they are laid down, but the house-pipes are seldom properly overhauled by any one.

An escape of gas in a house is really a more serious matter than is generally admitted. People dread the effects of an explosion from gas, but they seldom recognise the evil effects which proceed from inhaling it. I have before alluded to a fatal case which had been published, and M. Ziegier has recently described another. An escape of gas occurred through a carious piece of pipe in the main, and the gas was conducted along an old foundation-wall to some distance, the end of which wall was immediately under the bedroom of a gentleman, who was in consequence seized during the night with the oppression and other symptoms of gas-poisoning. It was noticed that but little odour of the gas was discernible.

Besides the danger resulting from the escape of unburnt gas, we have to guard against the inhalation of the products of gas-combustion—carbonic and sulphurous acids, carbonic oxide, ammonia, and the like. The evil effects occasioned by these gases have been repeatedly set forth by medical sanitary authorities. Wherever, therefore, a gas-burner is fixed, a tube to convey these products into the foul-air shaft or to the outer air should be provided. When sun-burners, as they are termed, are used—burning large volumes of gas near the ceiling—a special means of withdrawal is always adopted; but it is the exception rather than the rule to find gas-burners connected with a hood and pipe or any kind of contrivance to rid the room of the irrespirable gases, or to lessen the heat and the humidity of the air which gas-burning entails. The most suitable kind of ventilation for gaseliers is shown at fig. 104, and the plan can easily be copied out in any house—a zinc tube being led from behind the centre flower of a room into the foul-air shaft, chimney, or outer air. Some ventilating grates—Captain Galton's, for instance—do not require an outlet for the air vitiated by breathing to be inserted into the chimney or foul-air shaft; but it must be borne in mind that no matter what system of heating be adopted, the products of the gas should be led away. If the products be not removed, the foundations of health will be silently sapped. Everything also in the room will, after a time, more or less suffer; the ceilings will be discoloured, the wall-papers will lose their finer tints, the upholstery will fade, the ormolu work will tarnish, the gilt upon the books will sully, and even the oil-paintings will lose their freshness.

If a room were adequately ventilated and the products of gas-combustion satisfactorily diluted, there might be no necessity for any special removal of such products; but how many houses are so constructed as to afford a renewal of fresh air to the requisite extent of over 5,000 cubic feet per burner per hour? Few houses, indeed, are able to supply the hourly 3,000 cubic feet needed for the use of the inmates. It is, therefore, not only imperative to provide an escape for the resultants from gas burning in a poorly ventilated room, but it is wise to bring in from the outer atmosphere a special supply of air for the gas-burners in a well ventilated one. This, however, necessitates the use of a form of gas-light which guards the fresh air for its own separate use; and, fortunately, such a thing is in the market.

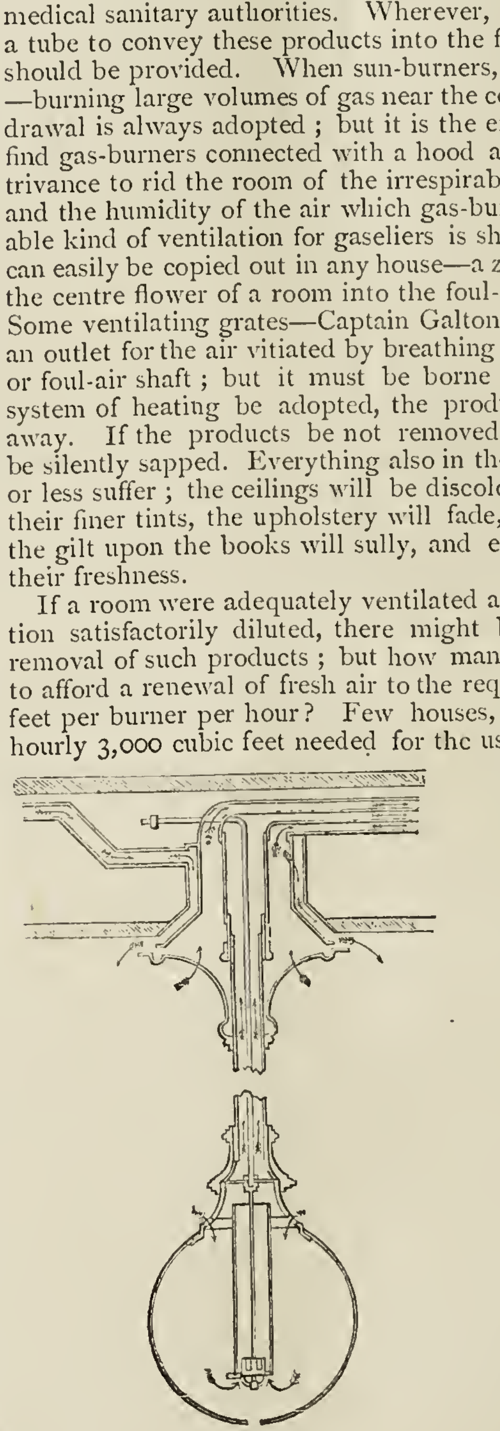


Fig. 106.

This ventilating globe-light as it has been named, is drawn at fig. 106, and the working of the system is as follows. When the burner is lighted at the aperture on the inner side of the globe by the spirit-torch, made for the purpose, and which avoids all chance of charred fragments of paper or wick falling into the globe, an upward current is created in the inner tube, and as this tube becomes heated, the air in the outer tube is also rarefied. The effect of this is to cause a movement of the vitiated air of the room to ascend and pass through the openings at the top of the stalk into the chimney or foul-air shaft by way of the specially provided abstraction-tubes, which are laid between or across the joists of the room above. As will be noticed in the sketch, a current of cold air from without is led into the room to replace the withdrawn hot air, and to support combustion.* The burner itself may be so constructed as to heat the gas before it is consumed, and the brilliancy of the flame in this way increased. One globe-light will be found sufficient to light an ordinary sized room; but when rooms require more light, a cluster of these globes is arranged in the form of a chandelier, the products from each globe being led off through the central tube. Besides the pendant form, these lights can also be used as brackets upon a wall. The degree of illuminating power can be modified by means of a regulation-cock fixed to the supply-pipe in the wall of the room. Too much commendation can hardly be bestowed upon this system of lighting. Until it appeared, it was impossible to consume gas in a nursery without evil effects following. It was also impracticable to illuminate a conservatory without causing danger to the more delicate kinds of plants.

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* I am informed that in Liverpool the Corporation refuse to connect the main with a house unless the tradesman who laid the house-pipes carries a certificate of competency. If this were a rule in all towns, much sickness, according to many eminent physicians, would be prevented: I might add, and many cases of surgery, too; for it has been my lot to witness some very bad accidents result to gas-men from careless manipulation, and at least one which proved fatal.

Memoranda upon the Gas-Supply.—There are a few precautions to be taken in laying down gas-pipes which every householder should know, in order that he may detect any negligence of the gas-fitter. For example, the service should have at least one inch in ten feet of a fall towards the main, and the meter should also be fixed above the level of the service where it enters the house; the pipes which supply the house should, moreover, rise from the meter. If the latter has to supply any rooms on a lower level than itself, a receiver should be put in the line of pipe so as to intercept the water. A similar receiver should be placed in every flat-lying pipe where it is exposed to condensation from the colder air outside. Composition pipes, which are mainly chosen because they are less bulky than iron pipes, and bend more readily, should never be bedded in plaster, as lime eats them into holes.† Where very small pipes *must* be hidden in the walls, they should be composed of copper. The iron pipes inside the house should be payed over with red lead or oxide of iron paint; and if laid in the ground outside the house between the meter and the main, they should be well coated with tar. All rising pipes should, as much as possible, be fixed so as to be easy of access, and covered over with a movable casing. When pipes *must* run under the floors, the skirting of those rooms should be fixed upon a hard wood fillet of its own thickness, and the floor-boards laid up to that; by so doing, much trouble will be saved afterwards. A plan of the whereabouts of the gas-pipes is also very essential in a large establishment.

When lights are seen to flicker, it is a token of the presence of water in the pipes, and this may be either in the house-service, the meter, or the main. In the two first cases the gas-fitter will easily remedy matters, and in the last the company should be requested to empty their syphon. After some years, too, the burners will be noticed to yield a very poor light, and in such a case it may be taken for granted that the pipes are full of what is called corrosion, and require cleansing; or what is commonly termed napthaline will have formed in the pipes—generally at some rectangular joint unprovided with a receiver—necessitating even a hammer and chisel to dislodge it.

The Hot-Water Supply.—Four winters ago, one prominent topic of conversation in domestic circles was the danger which frequently accompanied the use of the hot-water boilers which are placed behind the kitchen fires, etc., for the purpose of heating water for the baths and sinks. In December 1869, several fearful accidents occurred, notably one near Manchester, where a lady and her daughter were seated before the kitchen fire when the boiler burst, killing the former and scalding the latter.‡ Even when no life is lost, the damage done to property is considerable. In the case to which I allude, the ceiling was brought down, the walls battered, and the doors and windows destroyed.

The system of heating which permitted this disaster obtains over nearly the whole of this country. The boiler is placed at the back of the kitchen fire, and the hot-water circulating cistern near the top of the house—the latter being supplied by the general cold-water supply cistern situated at a still higher point. The boiler is generally as large a one as can possibly be accommodated at the back of the fire; and as the hot-water reservoir is at the top of the house, and as some of the draw-off taps are at or near the boiler, all the hot water may be made use of when no cold water can possibly enter the general cistern above by reason of frost. The boiler, pipes, etc., are therefore emptied, and the empty boiler becomes red-hot. In this condition of things a thaw takes place, the water rushes into the boiler, and the consequence is an explosion.

I have no hesitation in saying that this old system of heating water should be entirely discontinued, nor can all the precautionary measures which have been engrafted upon it since 1869 make it much more acceptable. Another objection to the common system is, that when drawing water from any of the taps situated at any distance from the flow or return pipes, a quantity of cold water, depending upon the length of the branch-pipe, has to be drawn off before the hot water arrives.

In the system of Mr. F. Dyer, which I have had fitted up with very satisfactory results, the cold-water cistern is at the top of the house; but the hot-water cistern, which is of iron, and takes the form of a cylinder, is placed anywhere beside the kitchen fire. The cold water is brought down from the general supply-cistern in the upper part of the house, and enters at the bottom of the cylinder. The boiler, which is a tubular one, made of malleable iron, is fixed at the back of the fire, and is so small as to contain little more than a quart of water. The fire has free access all round this boiler, therefore the water begins to circulate the moment the fire is fairly lighted. As the water in the small boiler is heated, part of it passes into the cylinder about half way up, and part courses at once through the supply-pipes, and where likely to be most useful: there is thus no loss of time, as hot water can be drawn before the water in the cylinder is fully heated. The return-pipe, which commences from the highest point of service, is made somewhat smaller in diameter than the flow-pipe—just sufficient, in fact, to keep the water circulating, and it is connected with the cold-water pipe near the cylinder. There is a tap fixed in this return-pipe, the use of which is to enable the servants to obtain, if needs be, warm water in the morning before the fire is lighted, and to do so is to stop the circulation during the night by turning off this tap; the hot water which was in the cylinder will then be at their service. The turning of the tap in question does not prevent the drawing of warm water at any time during the night in any room in the house; only of course in this case the cold water which was in the pipes would require to be first withdrawn. The Dyer system is drawn at fig. 107. There are several imitations, but I prefer the original.

It is impossible to suffer from any explosion if this system be adopted. As the cylinder is down stairs, whatever hot water is required must come from the top of this hot-water reservoir. If, through frost or obstruction, no water can flow from the cold-water cistern at the top of the house, and force the hot water up, there is a limit to the withdrawal of hot water to the various taps in the house; the cylinder will, however, continue nearly full of water, and remain with this only pledge of safety in it until it has wholly evaporated, which would not be likely to happen under six weeks' time. No frost in our country would last that time without an interval of thaw. There is, moreover, a safety-valve fixed at the top of the cylinder, the weight in the interior of which is apportioned to the head of water which it has to resist. An expansion-pipe is also led from the highest service to the top of the cold-water cistern. The cylinder itself can be cleansed out by means of a sluice-cock fixed below it; and if a little water be drawn therefrom about once in three months, the apparatus will be kept perfectly clean. If there be a linen-closet in the house, a coil of pipes can be taken from the cylinder to some place contiguous to such closet, by which means the linen will always be kept perfectly aired and ready for use. If the kitchen were in the basement, and the cylinder large enough, a coil might also be got into the hall or passage above to heat the entering air.

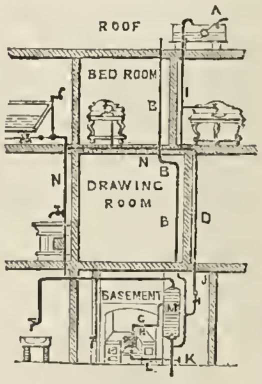

Fig. 107.—Cold-water Cistern, A; Boiler, H; Cylinder, M; Flows, C, B, N; Return, D, J: Expansion-pipe, I; Sluice-cock, K.

As will be noticed in fig. 107, there is a draw-off tap at one side of the kitchen fireplace, so as to supply hot water from the cylinder, and this will be found very useful for many requirements of the cook: but she should not be dependent upon this supply for hot water for the purer culinary purposes, because water which has to traverse such a distance and serve so many purposes over the house, cannot be considered absolutely pure. There should, therefore, be—in connection with an enamelled slate cistern down stairs, carefully removed from the chance effects of frost—a boiler attached to the kitchen-range, and the hot water from this boiler, besides serving the cook, might in most cases be made to supply the nursery and the dairy, where pure water is so important. The same cistern should also supply the drinking-water of the house, and if it were filtered it would be all the better. The water companies, for the most part, specify that at least one of the cisterns should be at a low level; and there need be, therefore, no additional expense beyond the enamelling of the cistern.

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* Where ample ventilation for all purposes has been secured for a room, these globe-lights, with one cone only, can be fixed, and the flame fed in the ordinary way, by the air passing through the room.

† Mice will sometimes attack these composition-pipes if laid within their reach. This is well vouched for, but no satisfactory reason has been given why. Most cases of gas escaping will also be found to have resulted from nails or screws penetrating these pipes.

‡ A cat and dog, which were crouching beside the fireplace, were also killed.

The Cold Water Supply.—After giving considerable attention to the matter, Dr. Parkes came to the conclusion that twenty-five gallons per head *per diem* is the minimum quantity of water which ought to be allowed for the use of a dwelling. About this quantity should also daily pass through the house-drains into the sewer, in order to insure a complete removal of all the solid wastes. The apportionment of the water per head is as under..

For cooking purposes	0¾	gallons.
,, drinking	0¼	,,
,, ordinary ablutions	5	,,
,, cleaning up	3	,,
,, laundry use	3	,,
,, bath use	4	,,
,, water-closets	6	,,
Margin and waste	3	,,
Total	25	,,

Dividing the number of gallons daily supplied by the seven largest water companies in London by the total population in each of their districts, it appears that about twenty-eight gallons are allowed to each inhabitant. When we consider the wants of the brute creation, this supply is evidently insufficient. Glasgow, which is the best water-supplied city in Great Britain, allows fifty gallons per head of population; and probably this is the correct figure to count upon.

Cisterns.—Given even the proper quantity of water, many houses are provided with only one cistern, and from this is, of course, supplied the drinking-water as well as the water for the closets. I could point out hundreds of houses in London in this predicament within the radius of a mile. This is very reprehensible, and sickness has been repeatedly traced to such a state of things. An independent cistern should be provided for drinking and purely culinary purposes, as already pointed out. A separate one may also be fixed for the supply of the water used for the scullery, and, in connection with the hot-water services, to the baths, lavatories, and sinks. A third one may, with advantage, be erected for water-closet purposes solely.

The drinking-water cistern is best constructed of slate slabs, enamelled inside. A wrought-iron cistern, coated inside with a tar composition, has been recommended, and it would, perhaps, rank next. Lead cisterns should never be erected in a house. The injurious effect of lead upon the human system has been pointed out times without number, but with too little effect; lead, moreover, slowly disappears under the action of some kinds of water. Zinc is also an objectionable lining for cisterns for similar reasons; and even well galvanised iron cisterns, although suitable for the storage of water to be used for common purposes, is unfit to hold water which is destined for the table. The service-pipe, also, which conveys the water from the drinking-water cistern, should never be composed of lead or galvanised iron. The only safe kind of pipe is the leaden-cased block-tin pipe. It may appear ridiculous to add, that the drinking-water cistern should be regularly cleaned out, at least once a quarter; but I have seen such culpable neglect on this head, that I feel self-pardoned for mentioning it. Water should also be laid on and a sink provided to every floor of the house; otherwise the housemaid, who begins to cleanse a house at the top storey, will almost invariably use the same water down to the staircase in the hall.

Memoranda on Cisterns.—In some of the large cities, and in London especially, owing to the regulations which define the water arrangements, not very many liberties can be taken with the supplies, or even with the wastes, but in country houses it is very different; and it would be wise there, as elsewhere, to guard against the following errors. For instance, any overflow* from any cistern should not deliver connectedly with the drain or into a soil-pipe, or even into a rain-water down-pipe which leads direct into the drain: on the contrary, it should deliver upon the leads, or over such a trap as those drawn at figs. 21 to 24. Too much attention cannot be paid to the drinking-water cistern in this respect; and mischief will be certain to ensue from any departure from this sound rule.

By way of example, I will now allude to a house which I was lately called upon to inspect. The house was situated in the most fashionable part of London, and contained two main cisterns. The cistern which supplied the kitchen-boiler, etc., had an overflow-pipe leading down into an *unventilated* house-drain, and the dead water in the main pipe which supplied the cistern was used for flushing the servants' closet in an area-vault, between the street and the cistern. This cistern was, therefore, open to two sources of contamination. As for the upstairs-cistern, which perhaps often supplied the bedroom drinking caraffes, it was even in a worse plight, for the waste from a housemaid's sink branched into the overflow of the cistern, and the pipe then passed into the trap of a closet. A singing-bird has been known to be poisoned by sipping water upon the surface of which tobacco-smoke had condensed; and what kind of health could be predicated for a person, especially an infant or an invalid, condemned to quaff the scum floating upon the water of cisterns so irrationally treated as these? Filtering will do much to remove impurities in water, and the silicated carbon-filter will deliver water, quite free from any of the constituents of milk which has been poured into it previous to filtering—and this is a crucial chemical test for a filter; but it would be well not to trust even to filtering in a case such as I have described. It is doubtless wise to fix filters in every drinking-cistern, even where good water is laid on; at all events, it renders "assurance doubly sure", and against the practice there is only the extra expense.

Well-Water.—Householders have been repeatedly cautioned against making use of well-waters which have not been previously analysed by competent persons. It is safe to presume that a well-water is unfit for drinking purposes, and that the water supplied by a water company is pure. Wells have before now been sunk in places almost honeycombed with old cesspools, with a result not difficult to imagine. In sending a sample of water to an analyst, it should be put into a stoppered quart-glass bottle, which has been cleaned out with sulphuric acid and then washed out with water. The bottle, when filled, should be corked and sealed, and within two days forwarded to the operator. In taking the sample, the vessel should be immersed in the water, and the mouth filled at some little distance below the surface.

Rain-Water.—Where the plan can conveniently be carried out, and where the drains can afford the withholding of the flushing water, it will be found very convenient to store, in an underground tank, that which falls upon the roof of the house. This tank can be built in brick-work in cement, or concrete work, puddled behind with clay outside, and rendered over with Portland cement inside. It should also be provided with a man-hole, to afford means of occasionally cleansing it out. The overflow from the tank should never run connectedly into the drain, but deliver in some space open to the air, which can be managed in a variety of ways. In calculating the size of a rain-water tank, so as to apportion it to the collecting surface, the space *covered* by the roof in square feet, multiplied first by 144, afterwards by 25—the average in inches of rainfall during the year—and then divided by 277, will give the products in gallons; or, what is about the same thing, twice the space covered by the roof will give the cubical feet of water likely to be collected during the year.

Some persons are inordinately fond of rain-water for culinary purposes, infusing tea with it, and so on; but in such circumstances some caution ought to be exercised, that this rain-water has not been collected from zinc roofs and lead flats. Those down-spouts only should be led into the water-tank to be used for cooking purposes which drain tile or slate-covered roofs. Even on these roofs a certain portion of the rainfall will have passed over lead flashings, ridges, hips, and valleys. This in a large slated or tiled roof, however, will probably not charge the water with more than one-twentieth of a grain of lead per gallon, beyond which a water becomes dangerous to use.

Even before it reaches the roof, rain-water is more or less impure—so much so, that many plants will grow in it independently of soil. It would be wise, therefore, to filter it before using it, either in the house or the laundry. The impurities of rain-water, according to Dr. Angus Smith, can be completely removed by filtration through the soil. It would be possible to construct an earth-filter on the delivery side of the rain-water tank in order to remove the nauseous taste of oil and soot from the intercepted soft water; but I think that it would scarcely be worth while to do so. A box-filter, fitted to the top of the suction-pipe connected with the pump over the tank, would serve all ordinary purposes. If the rain-water were stored in a slate-cistern or water-butt above ground, a low-pressure filter could be fitted to the end of the draw-off pipe. Where rain-water is of a necessity drunk, the eaves-troughs and down-spouts should be enamelled or silicated, and reach the tank through glazed earthenware-pipes. Generally speaking, rain-water should be excluded from the kitchen. It contains, amongst other harmful ingredients collected in the "upper deep", especially in towns where manufacturing trades are carried on, too much sulphuric acid, which "may be held to indicate the sewage of the atmosphere". Where rain-water can be got, over and above that desirable for laundry purposes, it will be found most useful for the occasional flushing of drains; some portion can also be led to a tank in the garden for distribution to the plants. The rain which descends upon greenhouses and conservatories may also with advantage be stored in a cistern fixed in the stoke-hole, where it can be sensibly warmed, and whence it can be withdrawn to fill the watering-cans.

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* The overflow-pipe is sometimes fitted up with a trap in the cistern. Pipes should be especially well guarded from frost, or the expansion of freezing water.

The Vane: Conclusion.—I have now traced the erection of a dwelling from the drains in the foundations gradually up to the cisterns in the attics, and have briefly adverted to the principal rules which ought to be observed both in building the house and in equipping it with the necessary services. To justly observe the architectural *unities,* I ought to conclude my last article with a few remarks upon the *roof* of the house, and will, therefore, do so by pointing out the best kind of vane.

A daily knowledge of the direction of the wind may seem of no consequence, but I am persuaded that more depends upon it than appears at first mention. Let me furnish an example. The main staircases of most houses now terminate in what is called a lantern-light, the glass sides of which are made to swing open, and beneath this is generally placed an ornamentally treated flat ceiling-light, which hides the lantern above. The ventilation of the whole house may depend upon this arrangement, the object of the swinging lights being simply to allow the escape of the foul air; and it can be easily imagined that, if the wrong light have been swung open, the wind may be possibly blowing the vitiated air back into the house. Had some one noticed in what direction the wind was blowing—and there is surely in every large house some one sufficiently interested in its ventilation—a glance at the perforated margins of the ceiling-light and a few pulls at the cords would have shut the one window and opened its *vis-à-vis.* But this is only one of the many advantages of a vane. There are many delicate persons who are debarred from a walk or drive during certain winds, and who might have been saved some risk, and certainly some trouble, if the house had been provided with a vane.

It is the exception rather than the rule to see town houses with this article, and the converse holds true of country houses; but it is simply because it is not customary for town residences to mount a vane—not because they will not work properly in a town, or because there is no actual necessity for them. Apart from valetudinarian reasons, I can understand that a vane may prove the centre of much interest and pleasure: at all events, one may as well be cognisant at early morning of the prevailing wind, as peruse it next day in the daily readings of the *Times.* A youthful meteorologist, too, with his anemometer, as well as his barometer, hygrometer, and thermometer, might not prove the least useful member of the family.

If I had meant to describe a common weathercock, I would have left the above sentences unwritten; but I intended to point out one which would register the direction of the wind in the house itself, and show upon the index in the hall or passage every varying sweep of the indicator. A vane upon the house-top—the utilising of which necessitates a journey outside—would prove troublesome in the last degree. A contrivance which embodies a perfect registration is drawn at fig. 108.

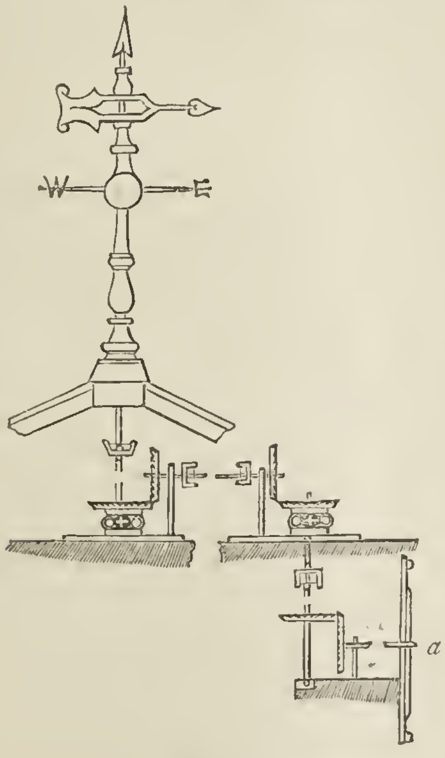


Fig. 108.

It consists of an iron standard, which can be fixed upon any convenient part of the roof; and, connected with its copper vane, is a rod running down to the passage of the ground-floor. As may be noticed, the rod can be carried in any direction, and down any number of storeys, by means of bevil wheels made of gun-metal, and poised upon compensating rollers; the rods being kept free from twisting by suitable universal joints, down to the dial at *a.* It is effective and cheap, automatic and ornamental.

THE ADDENDUM TO THE BRITISH "PHARMACOPŒIA".

I.

We published, some time since, a list of the more important articles contained in the Addendum, which is now on sale. The following short notes are provided for us by a good practical authority, and may be taken as being written chiefly from the dispensing point of view. We shall next week publish a further commentary from the medical and therapeutic point of view.

Æther aceticus is introduced, we believe, with a view to some alteration in the next edition of the work.

Ammoniæ nitras—for the purpose of producing *nitrous oxide.*

Amyl nitris is of doubtful utility.

Aqua chloroformi. We are at a loss to see why the *Pharmacopœia* should be cumbered with a formula for that which may be made extemporaneously without any trouble. The objection to the *Spiritus chloroformi* already on the *Pharmacopœia* is, that it is too dilute; the prescriber, wishing to give a dose of chloroform, is obliged to give also an almost intoxicating dose of alcohol. Possibly, the water may be introduced to meet this objection.

Areca is another useless encumbrance to the *Pharmacopœia.*

Aurantii fructus is given for the purpose of making a tincture from the fresh fruit, said to possess a finer flavour than that made from the dried peel.

Calcis hypophosphis and *Sodæ hypophosphis.* The hypophosphites, originally introduced by Dr. Churchill, having come into general use, it has been thought fit to give them an official sanction.

Charta sinapis is intended as a substitute for the popular remedy known as "mustard leaves".

Chloral hydras, from its great importance, naturally finds a place in the dispenser's text-book.

Extractum glycyrrhizæ liquidum possesses no advantage over the fluid extract usually kept, and made by diluting the ordinary extract.

Gutta percha is used in forming the liquid with which the *Charta sinapis* is prepared.

Hydrargyri oxidum flavum is an important addition, and one possessing advantages in ophthalmic practice over the ordinary red oxide.

Injectio morphiæ hypodermica. To those who know the importance of small quantities of liquid for hypodermic use, it will be difficult to see the object of making this solution just half the strength of that which has been in general use for years, thus necessitating the use of double the quantity of liquid.

Laricis cortex. The physiological properties of larch-bark were brought before the public in 1856 by Dr. Moore of Dublin (see *Pharmaceutical Journal,* vol. 18, p. 35), since which time it has been frequently prescribed with advantage.

Liquor magnesiæ citratis affords an effervescent aperient saline in imitation of the magnesian lemonade.

Oleum phosphoratum is the only manageable form for giving phosphorus, excepting that of the pills, a formula for which is also given in the present work. The advantage over the formula which has long been in use is, however, doubtful.

Pilula scammonii composita is intended to meet the requirements of those who wish to prescribe a purgative pill *without aloes.*

Pulvis elaterii compositus. The reason for this formula is not obvious. It is probably inserted in the interest of incorrect dispensers, in the weighing of very small quantities.

Pulvis glycyrrhizæ compositus. This powder of the German *Pharmacopœia* has recently come into rather general use, and the above formula appears to have been adopted in consequence; but why two of the most important ingredients should be omitted is not so obvious, and only serves to remind one of the threadbare joke of giving a play and omitting the principal character.

Suppositoria. The formulæ given for the suppositories are intended to obviate the inconvenience sometimes experienced from the melted fat in the old process; but it remains to be seen whether the application of an irritant like soap is an unqualified advantage.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Richet on Gunshot-Wounds of the Chest.—Specialism: Reliquet on the Urinary Organs.—The Germ-Theory.—Summer Course of Lectures.

A RETIRED cavalry officer of the French Army was lately taken to the Hôtel-Dieu with a gunshot-wound of the chest inflicted by himself in an attempt to commit suicide. The firearm used was a pistol, which was discharged through the seventh rib near its left sternal extremity. The bullet traversed the chest, and lodged itself in the back under the skin. The patient lived for three days, during which time he was greatly prostrated from internal hæmorrhage, which was accompanied with pneumothorax and emphysema. The *post mortem* examination showed that the seventh rib was fractured at its junction with the cartilage, and the track of the bullet was found in the pericardium and left lower lung, the heart having been also slightly grazed. Professor Richet, into whose ward the patient was admitted, took occasion to deliver a clinical lecture on gunshot-injuries of the chest, and explained the mechanism of the different modes of death in these cases. In the subject under notice, M. Richet was of opinion that death took place by asphyxia, owing to the compression of the lung by the blood and air in the pleural cavity; the quantity of the former (about a pint) not being sufficient to account for the death by hæmorrhage. In wounds of the chest, he said, death is almost always caused by asphyxia, though the mechanism of this phenomenon is totally different in each case, this difference depending, in the great majority of cases, on the existence or non-existence of adhesions of the lungs to the thoracic walls. The lecturer mentioned, as a curious fact, that, although in the normal condition the pleural surfaces should be free and non-adherent for the proper play of the lungs in the functions of inspiration and expiration, yet, in about half the cases of human subjects examined after death, adhesions have been found in the pleuræ. These adhesions, though abnormal or pathological, seem to have their utility in preventing the retraction or collapse of the lungs. In the absence of adhesions, therefore, death takes place suddenly or rapidly, as in the case under notice; whereas, when these are present, the fatal termination is more gradual, asphyxia being the cause in both instances. In the former case, again, death may take place by hæmorrhage; whilst, in the latter condition, this cause of death is rather more frequent, owing to the non-retractility of the lungs. For the treatment of these cases, M. Richet recommends that the patient be bled freely and frequently, to prevent suffocation and to favour the formation of coagula. This is to be followed by cooling and astringent drinks, ice, etc. The external wound should be occluded from the air, and perfect rest enjoined. The wound is not to be enlarged to give vent to the blood, unless the intercostal artery be wounded, or there be a collection of pus in the pleural cavity. To the question whether bullets ought to be removed in wounds of the chest, M. Richet replied in the negative, and recommended that the surgeon should wait until the wound in the pleura was healed; should, however, the bullet be out of reach, it had better be left alone, as instances are on record of men having lived for years with a ball encysted in the lung.

Notwithstanding all that has been said and written on both sides of the Channel in disparagement of specialism in medicine, specialists, in France at least, are, whatever be the motives of the parties referred to, daily on the increase; and, as mentioned in one of my last letters, we have the approval of specialties by no less an authority than M. Depaul, Clinical Professor of Obstetrical Medicine and Surgery of the Faculty of Paris, who, in the introduction to the first number of the journal recently founded by him, sets himself up as an apologist for specialists, and declares that it is almost impossible for any man to be an "encyclopædist". I have been led to these reflections in contemplating the degree of perfection to which each of the branches of the healing art has been brought. I lately gave you a list of the leading specialists in Paris, among whom I named Dr. Reliquet, who is an *ex officio* professor of the pathology of the urinary organs. He is the author of an excellent treatise on operations of the urinary organs, illustrated with plates, which is the best of its kind, in France at least, and which may be consulted with advantage. In glancing through the work, I find that Dr. Reliquet does not approve of Hunter's division of stricture of the urethra into spasmodic, inflammatory, and permanent, on the grounds that, in the strict application of the term, there can be but one kind of stricture, the words spasmodic and inflammatory merely implying certain symptoms superadded to the organic changes that take place in the urethra known under the name of stricture. After fully treating of the causes of stricture, the author devotes nearly one hundred pages to a description of the different means that are adopted for the cure of the lesion. In referring to the "immediate" method, which consists of forced dilatation, cauterisation, and internal urethrotomy, Dr. Reliquet condemns the former two; as, according to his experience, he has never known of a permanent cure. But the great danger attending internal urethrotomy, and other operations of the urethra, is the absorption of urine in the system, which is fully treated of in the introductory chapter of the work under review.

The germ-theory of fermentation and putrefaction is again brought on the *tapis* at the Academy of Medicine; M. Colin, one of the Professors of the Veterinary School of Medicine, contending that, whatever may occur in the process of fermentation properly so-called, that of putrefaction may take place without the presence of germs introduced from without, as maintained by M. Pasteur, the celebrated chemist, and one of the strongest opponents of the theory of spontaneous generation. Among other examples brought forward by M. Colin in support of his argument, he mentioned the following circumstance, which he submitted as a proposition. When the hoof of a horse that has been dead for some days is removed, it is found to contain bacteria. Whence could these have come? It is difficult to suppose, continued M. Colin, that they were introduced from without, considering that the hoof is hermetically closed on the bones of the foot, and that the former is impermeable to the air. M. Pasteur answered that he was not then quite prepared to reply, but that he was sufficiently convinced that the theory of spontaneous generation was a mere delusion. Here the matter stands for the present.

The winter course of lectures at the School of Medicine has just closed, and the summer session begins on Monday, the 16th instant. The following are the names of the Professors, with the subjects on which they are to lecture: M. Baillou—Medical Natural History; M. Béclard—Physiology; M. Charcot—Pathological Anatomy; M. Trélat—Surgical Pathology; M. Tardieu—Forensic Medicine; M. Regnauld—Pharmacology; M. Guéniot (acting for Professor Pajot)—Obstetrics; M. Vulpian—Experimental and Comparative Pathology; M. Hardy—Medical Pathology; M. Bouchardat—Hygiene; M. Gubler—Therapeutics and Materia Medica; M. Brouardel (acting for M. Bouillaud) and M. G. Sée (Charité Hospital), M. Béhier (Hôtel-Dieu), M. Lasègue (La Pitié)—Clinical Medicine; M. Richet (Hôtel-Dieu), M. Gosselin (La Charité), and M. Verneuil (La Pitié), M. Broca and M. Depaul (Cliniques)—Clinical Surgery; M. Roger (Children's Hospital)—Diseases of Children; M. Panas (Lariboisière)—Ophthalmology; M. Fournier (Lourcine)—Syphilitic Diseases.

BIRMINGHAM.

[FROM OUR OWN CORRESPONDENT.]

Hospital Saturday.—Improvements at the Queen's Hospital.—Testimonials.—Cases.—Public Health.—The Workhouse Infirmary.—Small-Pox Epidemic.—Sanitary Lectures for Women.—The late Dr. Dodson and Mr. Swain.

HOSPITAL Saturday has come round again. Many hundred workingmen have contributed their quota of labour "for the free benefit of the medical charities", and nearly £4000 has been already received.

Your correspondent's last letter recorded improvements in administration at the General Hospital. This one can enumerate substantial advance at the Queen's; carried, it is pleasant to record, unanimously. Equality as to beds, admissions, etc., has been established amongst all members of the staff. Experience has proved this to be of considerable importance not only for personal comfort but for the due status and authority of hospital officers, and for the good working of the institution; and we think that the greatest possible honour and credit are due to those gentlemen who, in deference to sound and disinterested principles, have willingly and freely agreed to divide their privileges. The objection that may be made to increasing the number of a honorary staff—an objection that has recently been raised at Leicester—viz., that the rota of admission-weeks becomes too long, and leads to lack of interest in cases—has been met in an able and satisfactory manner thus. There being four physicians and four surgeons, the first four days in every week are set apart one for each pair of officers, who see outpatients and receive in-patients always on the same day; the cases admitted on Friday, Saturday, and Sunday come under the physician or surgeon of the week; and thus, each one comes, as before, in rotation. Friday, as an out-patient day, is allotted to the last appointed physician, and Saturday is closed to out-patients and retained for operations, consultations, etc. Not only have the members of the staff been willing to equalise privileges, but they have shown themselves equal to what may be considered the height of professional virtue by sharing their fees: thus, they have abolished an extra fee which had been required in the obstetric department, have apportioned a share of the general fees to the obstetric surgeon, and another share to an additional officer about to be appointed—viz., a pathologist, who is to be an independent non-resident member of the staff.

With reference to this appointment, we observe with pleasure a limit placed on the number and dates of testimonials which are required to certify also to special fitness. A resolution on this same subject of testimonials, though alluding to gifts rather than to certificates, has been recently passed by the same Hospital Committee, on the motion of Dr. Heslop, and deserves record; for it provides "that servants, nurses, or other officials, shall not be allowed to contribute to testimonials to residents". The important bearings of such a resolution will be evident on consideration.

Minor, but important, changes consist in the appointment of two resident medical and two resident surgical assistants, and one resident obstetric officer, all paid and qualified; in the appointment of a "daily dresser"; in the rearrangement of beds, clinical lectures, etc.; and in provision for more punctual performance of duty by responsible officers in every department. The practical outcome of these and other changes will be, we are sure, in a few months very much to the advantage of the Hospital and all connected with it. They have been the result of much care and thought on the part of some of our ablest hospital reformers. What is wanted now, is earnest clinical work on the part of the students.

In the practice of the Hospital we have noted some interesting cases. Under Dr. Sawyer is a boy, aged 3, with complete right hemiplegia. It came on suddenly after an attack of measles, was accompanied by aphasia, and is considered to be due to embolism of the middle cerebral artery. Amongst out-patients, in many cases of odontalgia, Dr. Sawyer is using tincture of gelseminum with decided advantage.—Under Mr. Wilders is a case of traumatic popliteal aneurism occurring in an actor, and caused by dancing the cancan; under the diligent use of flexion, digital compression, and Bellingham's weight, the aneurism has become harder, but pulsation continues, and Mr. Wilders will tie the femoral on Saturday.—The same surgeon recently removed the tongue from a case of epithelioma, aged 62; the operation was performed with two *écraseurs,* and lasted thirty-five minutes; the patient has recovered well and with good power of speech.—Mr. Clay has had some satisfactory results from the subcutaneous injection of ergot in uterine fibroids, and speaks well of the value of pepsine for the destruction of "cauliflower" growths; he prefers the powder to a solution.—At the General Hospital, an instructive case has occurred in the practice of Dr. Foster. A man was "aspirated" for extensive and somewhat chronic pleuritic effusion, and next day gangrene commenced in his lower limbs. After some days he died, and embola were found in the iliac arteries, and were plausibly considered to have had their origin in the pulmonary veins.

The public health of the town continues to be unsatisfactory. In a very large out-patient practice at the Children's Hospital, almost every child seems to have, or have recently had, measles or whooping-cough; and the number of new cases of small-pox has amounted to sixty per week. The Workhouse Infirmary, which has now more than 950 inmates, has been visited by Mr. Henley and Dr. Monat from the Poor-law Board; and reported as overcrowded and as having insufficient medical aid, though in other respects satisfactory: there is only one permanent medical officer in charge! Our small-pox wards are in the immediate neighbourhood and under parish supervision, so that no patient can be admitted except as a pauper; consequently, many who ought to be in wards remain to spread infection at home. Public action is only just being taken to remedy this; and our able *confrère* Mr. Clay deserves hearty professional support in his public-spirited efforts to do so. On the subject of public health, it is a pleasing duty to record the earnest self-denying efforts of some ladies to teach the mothers of the lower classes the elements of nature's laws as to health. Miss Kenrick and Mrs. Bracey have been lecturing through the session in public rooms to upwards of 400 women, who have showed the greatest appreciation—questioning, and bringing written answers to questions, about food and air, and even circulation and digestion.

The annual meetings of many of our hospitals occur early in the year. The Wolverhampton and South Staffordshire Hospital presents a very favourable report, and begins to found within its walls a reference library—in this respect following suit to our own Eye Hospital. Our Women's Hospital offers also an interesting report of a successful year. We observe that its resident officer, Mrs. Dr. Atkins, resigns, in order to commence private practice here.

At the meeting of the justly popular Children's Hospital, Mr. George Dawson made a brief speech, which deserves record, as showing how attention is being directed to that monstrous evil—the state of the dwellings of our poor. Such references occur frequently in the speeches of our public men here. Mr. Avery's, for instance, and Mr. Chamberlain's articles in the *Fortnightly,* may be within the recollection of your readers. Mr. Dawson said—"The excessive mortality amongst the children was the great disgrace of this country; and, until Englishmen could find out some way in which little children could live in something better than pigsties, it would remain their disgrace. So long as they had that great idol, the divine rights of property, enabling men to let at a high rent a pigsty, in which they would be ashamed to put their beasts, so long they would have the reproach that one child out of six died before it reached five years of age. When this country came to its senses, and applied one half the money it spent in folly to cleansing the dwellings of the lower classes, and putting them into a state allowing of spiritual and intellectual life, the reproach would pass away."

This hospital has sustained a loss in the premature death of Dr. Dodson, the talented and promising house-surgeon who had recently graduated with high honours in London, and who is very much regretted here.—Only a few days later, the profession were again pained by the loss of the much respected Mr. Thomas Swain, who had conducted a large general practice in Birmingham for many years, and was a man of sterling worth and ability. The esteem in which he was held was attested by the large number of professional friends who attended his funeral.

REPORTS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

DECEMBER 16TH, 1873.

JOSEPH COATS, M.D., Vice-President, in the Chair.

Specimens, etc.—Dr. STRETHILL WRIGHT showed a man (well known in the London and Glasgow medical schools) with Extroversion of the Bladder. His urine was now albuminous, and it deposits tube-casts.—Dr. FINLAYSON showed a slightly Albuminous Urine from a boy with Rheumatic Pericarditis. It precipitated phosphates on heating, urates were thrown down on the addition of nitric acid in the cold, and below this a deposit of nitrate of urea was formed in the course of a minute or two.—Dr. HECTOR C. CAMERON showed a specimen of fluid which had coagulated after removal from a Hydrocele of the Neck.

Obscure Case of Cerebral Disease. Qu. Pons Varolii?—Dr. MCCALL ANDERSON showed a patient, and detailed her case. A young woman, aged 23, had, for about two years, been subject to left headache, and, of late, this had been associated with giddiness. In June 1873, a soreness was felt for a few days along the left side of her tongue, and, in a day or two, little tender lumps were felt there, but they soon disappeared. Taste was slightly affected. As the tongue improved, the vision of the left eye became affected, and it was said to be bloodshot for a day or two. In a week, the left cheek became stiff, and very marked paralysis of the portio dura on this side became established, traces of which could still be seen. The hearing was not affected. In a fortnight after this paralysis began, numbness and weakness of the left arm and hand occurred, and, immediately afterwards, there was a similar affection of the left leg, and subsequently of the right leg; but these affections were only partial, and had quite disappeared when shown. In another fortnight, sudden pain in the right arm was followed by numbness and weakness of this limb also. There never had been any twitchings. About April 1873, she had received a violent blow over the left eyebrow, and had strange sensations in the upper part of the head for eight or nine days. Her health had been good before this illness began, but the bowels were usually constipated, and the menstruation irregular. There were no appearances of syphilis. On admission to the Infirmary in August 1873, the facial paralysis (including the orbicularis palpebrarum) and the weakness of the limbs were obvious. There was no anæsthesia. The tongue was protruded in the middle line, but the uvula was deviated to the right. Dr. Anderson gave reasons for believing the symptoms to indicate the presence of a non-malignant tumour; and, after referring to a case published by Dr. James Russell (BRIT. MED. JOURNAL, October 24th, 1868), he said he thought its probable situation was at the pons Varolii.—Dr. THOMAS REID said he had examined the eyes, and he showed drawings of the ophthalmoscopic appearances. There was hypermetropia, one-twentieth, in both, and, in both, thinning of the choroid. The vision of the left was reduced one-half, but there was no special defect in any region of the field of vision. The papillæ in both were oval-shaped, and the vessels were accompanied in both by white streaks. The upper and inner aspect of the left disc was slightly cupped, and occupied by a network of cicatricial tissue continuous with the white streaks accompanying the vessels. Dr. Reid said the symmetrical character of the abnormal shape of the discs pointed to con genital or local rather than to intracranial causes. The intraocular changes, viewed by themselves, might be accounted for by the hypermetropia; but, in the light of the other symptoms, it was also possible that they were due to some general cause, syphilitic or other.—Dr. ALEX. ROBERTSON thought the symptoms pointed to some inflammatory lesion at the base of the brain.—Dr. FINLAYSON thought that the facial paralysis was of peripheral origin, and that no one lesion could satisfactorily account for all the paralytic phenomena. In view of the partial, transient, and multiform paralysis, so completely recovered from, he thought that a syphilitic or a hysterical element was strongly suggested.

Epithelioma.—Dr. HECTOR C. CAMERON showed: 1. A small epithelioma, removed from the cheek; 2. An epithelioma of the scrotum, removed from a paraffin-worker. Dr. Cameron said this affection was not uncommon amongst such workers. Dr. Reid stated that Dr. Longmuir of Bathgate had sent him several specimens of this affection from paraffin-workers. 3. He showed also a leg amputated on account of a large epithelioma, situated in the front of the tibia, on the site of an old ulcer. Dr. Cameron stated that he had twice seen limbs amputated on account of epithelioma on the scars of burns.—Dr. THOMAS REID and Dr. JOSEPH COATS showed numerous microscopic sections of these three tumours.

Cells in Ovarian Fluid.—Dr. W. MAC EWEN and Dr. R. FORREST showed specimens of ovarian fluid, and the former showed the microscopic cells supposed by Dr. Drysdale (Philadelphia) to be characteristic of ovarian tumours.—Dr. ALEX. ROBERTSON and Dr. JOSEPH COATS said they had submitted these cells to careful examination, and to the test with ether, but had failed completely to verify Dr. Drysdale's statements on this subject.

JANUARY 13TH, 1874.

W. T. GAIRDNER, M.D., President, in the Chair.

Cirrhosis of the Liver in a Cat.—Dr. JOSEPH COATS showed a specimen of cirrhosis of the liver occurring in a cat. This animal was 6 years old, and had always lived in a butcher's shop. For a year, it had been noticed to be swollen. It was emaciated, and weighed seven pounds; the liver weighed nine ounces. Two pints of fluid were removed from the peritoneum. The fluid formed a slight coagulum after removal; it contained numerous cells, which showed characteristic amœboid movements. The other organs were healthy. The liver was finely granular, but with no very definite depressions. The tissue was tough, and the microscopic appearances were those of somewhat advanced cirrhosis. There was a very great increase of the interstitial connective tissue, with corresponding atrophy of the proper hepatic tissue, the remains of which appeared like islands in the midst of the general basis of connective tissue; this, however, had not quite such a highly fibrous character as is common in very advanced cirrhosis of the human liver, but contained more round and spindle-shaped cells.

Complete Plugging of the Basilar Artery.—Dr. ALEX. ROBERTSON showed a specimen. A man, 48 years old, had a slight apoplectic seizure six months before death, and another which terminated fatally in six days, during which he was unconscious. The kidneys were sound, but the heart was hypertrophied, especially in its left ventricle. There was white softening of the back part of both thalami optici, but particularly of the left. The posterior lobes of the brain were anæmic, but not softened. The basilar artery was completely obstructed. Some patches of atheroma were observed in the middle cerebral artery and its branches. Dr. Robertson said that this case illustrated well the observations made by Heubner and Duret, who found, by injections of the arteries to the great basal ganglia of the brain, that each vessel was restricted to its own particular district, and did not inosculate at all, or only to a very slight extent, with those distributed to the parts adjoining. Hence, when any of them was obstructed, softening occurred in the area of its distribution, as in this case. In the convolutions and the vessels at the base, on the other hand, the inosculations were very free.

Cardiac Lesions, perhaps in part Congenital; Secondary Embolisms in Spleen and Kidneys.—Dr. GAIRDNER showed the heart of a boy 9 years old, with extensive disease of the aortic valves. During life, no cardiac symptoms could be said to exist, but there was a loud rushing murmur after the first sound, having an aortic area of distribution. There was no lividity; the aspect was that of anæmia. The absence of cardiac symptoms led to a suspicion, during life, of this disorder being congenital. There was a great enlargement of the spleen, which could be felt under the ribs, and there was some increase of the hepatic dulness. The urine was albuminous, but was not excessive in quantity; it was pale, of specific gravity about 1010-1012, and it deposited tube-casts. Latterly, slight dropsy supervened, and death occurred without any marked change in the condition. The heart was found hypertrophied. The aortic valves were competent, but the orifice was much contracted, the valves being covered over with vegetations, which dipped down into the ventricle. There were only two distinct semilunar valves; one of these, however, had a rudimentary division. The upper part of the septum ventriculorum was very thin. About half an inch above the valves, there was a small aortic aneurism of the size of a hazel-nut. The foramen ovale was open, but valved, and admitted an ordinary pencil easily. There were numerous embolic lesions in the spleen, and also in the kidneys: no amyloid reactions could be obtained in these organs. Dr. Gairdner thought the aortic valves were probably imperfectly formed at birth, rather than that the two segments had coalesced from disease. —Dr. FINLAYSON said this case was deceptive, as presenting a combination of extreme pallor, enlargement of the liver and spleen, albuminuria, and slight dropsy, such as usually indicated waxy disease of the viscera; but the presence of cardiac disorder had prevented Dr. Gairdner from arriving at this diagnosis, as cardiac complications were no part of the history of waxy disease.

Dr. GAIRDNER also showed the heart of a patient, described in his *Clinical Medicine*, in whom he had diagnosed Tricuspid Obstruction. The man died three or four years ago, when the correctness of the diagnosis was verified; the tricuspid orifice was not constricted, but a globular tumour attached to the wall of the right auricle obstructed the passage into the right ventricle.

JANUARY 20TH, 1874.

W. T. GAIRDNER, M.D., President, in the Chair.

Hyperæsthesia after Injury.—Dr. HECTOR C. CAMERON showed a case of hyperæsthesia, arising from injury. Three years ago, the boy received an injury in the palm of the left hand (somewhat higher than the middle of it) from the point of a pair of scissors. There was a cicatrix visible, which was still painful on firm pressure. Immediately afterwards, he complained of pain on any touching of the cleft between the middle and the ring finger, including half of each finger, and also the half of each nail. Five months ago, he began to learn a trade, in which he had to hold a chisel in the left hand; this increased the pain, and the fingers became cramped on trying to hold it. After this, undue sensitiveness began to be felt on the skin of the left back, below the scapula, for about six square inches, and there was a difficulty in carrying the left arm backwards. There was distinct prominence of the left angle of the scapula, as compared with the right. Pressure over the nerves at the inner aspect of the humerus brought on pain, and there was tenderness over the second, third, and fourth dorsal spines. Some sensitiveness existed also in the skin, about the parotid region, on the right side. The fingers could be moved, but the grasp of the hand was impaired. There was a diminution of the tactile sensibility over the affected area of the fingers, and a hot sponge was felt as being colder there than on sound fingers; there was no sensitive spot to the hot sponge in the spine. —Dr. GAIRDNER said he always thought hyperæsthesia a bad name for such conditions, inasmuch as the sensibility was, in this and other cases, really impaired, though perverted. He mentioned a case of generalised neuralgia, lasting a lifetime, from a somewhat similar injury to the hand.—Dr. KNOX thought the hyperæsthetic nerve was a communicating branch of the ulnar, and not the median.—Dr. FINLAYSON referred to this case as strengthening M. Létiévant's doctrine as to the pains felt after the section of nerves.

Specimens.—The Secretary showed for Dr. RENFREW the heart of a girl, 13 years old, who died of Pulmonary Œdema, associated with Mitral Disease. The foramen ovale was patent, admitting a pencil. There had never been cyanosis, but a cousin of this girl had died in infancy with cyanosis.

Dr. GAIRDNER showed an Aneurism opening into the bronchus.

Dr. MCCALL ANDERSON showed two preparations of Aneurisms treated by Galvano-puncture.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, FEBRUARY 6TH, 1874.

JOHN ANDERSON, M.D., Vice-President, in the Chair.

On the Influence of the Sympathetic System in the Production of Inflammatory Thoracic Diseases. By F. MOON, M.B.—Dr. Pavy, in his lectures on Diabetes, mentioned that, when he divided the superior cervical ganglion of the sympathetic, he could, at will, produce diabetes in the lower animals, but that he found it impossible to keep the subjects of the operation under observation for any length of time, because they all died in a few days with pleurisy and pneumonia. The same lesion which produced the diabetes, caused also the inflammatory affections of the lung. The object of the paper was to show that, as regarded the production of thoracic inflammations, the same thing took place in the human subject. 1. There was a class of cases of pneumonia, pleurisy, or bronchitis, which seemed to be directly traceable to disease, or injury of the sympathetic in the neck. 2. Many, if not most, of these cases must be distinguished from others, by the temporary presence of sugar in the urine. According to Drs. Harley and Beale, it was not very uncommon to find sugar in the urine of pneumonic patients. 3. Impressions of cold, leading to thoracic affections, were mostly felt at the back of the neck, and between the shoulders; and consequently this, and not the front of the chest, was the proper place to apply the necessary protection. The first case related was that of a man, aged 26, who caught cold from riding outside a coach all night, in cold weather, with the neck exposed. This produced extensive and deep inflammation of cellular structures in the neck, followed by rheumatic affection of the right shoulder, elbow, and wrist, ending in suppurative inflammation of both pulmonary and parietal pleura on the same side. The case occurred before the publication of Dr. Pavy's Lectures, and no search was made for sugar in the urine. In the second case, a man fell heavily backwards on the edge of a board, and bruised the back of his neck. Much cellular inflammation followed, and in ten days he had severe pleuro-pneumonia on the left side. There was sugar in the urine, which continued until after the man had perfectly recovered, some months afterwards. In cases of stricture of the œsophagus, treated by dilatation, injury by probangs produced, in two cases, pneumonia and pleuro-pneumonia. A woman choked herself with a piece of meat, and used great violence with the handle of a spoon in an attempt to dislodge it. The spoon penetrated the left side of the pharynx, causing emphysema of that side of the face and neck. It had also bruised either the pneumogastric in the carotid sheath, or the branches of the sympathetic accompanying the carotid, or the sympathetic ganglia in the neck. She died in two days, with acute pericarditis, and pleurisy on the left side, having had old chronic emphysema on the right side. Here, Dr. Pavy's experiment was exactly repeated. The pain in the back of the neck, often felt in bronchitis, must sometimes arise from local mischief, and not always from muscular fatigue, the pain arising from the causative disturbance, and not always from the muscular fatigue of dyspnœa. A low form of pneumonia, or pneumonic phthisis, often accompanied diabetes. This might arise, in some cases, not directly from the diabetes, but from the neurotic lesions originating the diabetes. In cases of severe injury to the head, pneumonia sometimes set in so rapidly, that it could hardly arise from inflammation of the veins of the diploe, but seemed rather to be produced by direct injury to the nervous centres acting, as in Dr. Pavy's experiment, through the sympathetic. Again, in cases of extensive carbuncle in the neck, where the tissues were deeply implicated, pneumonia not unfrequently occurred. This pneumonia might not always be phlebitic or pyæmic, but was not unlikely to arise from inflammatory action, extending to the sympathetic in the neck. This seemed the more probable, inasmuch as sugar was occasionally found in the urine of patients with extensive carbuncle at the back of the neck. In sunstroke, pneumonia often supervened. Europeans in India were always careful to keep the back of the neck protected from the rays of the sun, knowing that overheating of this part was a frequent cause of sun-stroke. Although the pneumonia of sun-stroke might, and often did, arise from overheating of the whole mass of the blood, it was not improbable that, in some cases, it might arise from injury to the sympathetic in the neck.

FRIDAY, MARCH 6TH.

F. MOON, M.B., President, in the Chair.

Dr. J. BRAXTON HICKS read a paper on Paracentesis Abdominis in Ascites, complicated with Tumours; and on Incontinence of Urine in Women.

Dr. PRIOR PURVIS exhibited the Heart of a child ten months old, with only one auricle and ventricle.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, JANUARY 10TH, 1874.

ROBERT D. LYONS, M.D., President, in the Chair.

Laryngeal Tuberculosis.—Dr. WILLIAM MOORE exhibited a specimen from a woman, aged 28, who had been admitted to Sir P. Dun's Hospital last November, with almost complete aphonia. This had persisted for six weeks previously, and was increasing. The only other symptoms were a slight dry cough, and a hissing, whistling, or stridulous inspiration. There was some consolidation of the right lung. On December 18th, sudden dyspnœa set in, and it was found that scarcely any air was entering the lung. The patient died quietly, on Christmas morning. At the necropsy, some tubercular deposit in the lung was discovered. There was œdema of the glottis, and especially of the epiglottidean folds. The arytænoid cartilages and ventricles of the larynx were ulcerated, and the vocal cords and base of the epiglottis were studded with tubercles. The aphonia differed from the symptom in aneurism in its persistency.

Double Ureter.—Dr. W. G. SMITH showed a specimen of double ureter, leading from the right kidney. The left kidney was normal, and an ordinary duct led from it into the bladder. The two right ureters had separate openings into the bladder.

Injury Inflicted by a Hay-Chopping Machine.—Mr. W. STOKES showed the remains of the right hand of a lad, aged 16. The cog-wheels of a patent hay-chopping machine caught his coat, and dragged in his hand, which was cut in pieces, down to the second row of the carpus. There was copious hæmorrhage. Mr. Stokes removed the first row of the carpus by Esmarch's bloodless method.

Urinary Fever.—Dr. BENNETT exhibited the viscera of a man, who had long since suffered from intermittent fever and dysentery, and latterly from a tight urethral stricture. The patient was under treatment for some time for this last affection, and on New Year's Day partial dilatation of the stricture had been attempted by a sea-tangle bougie, No. 1. At 3 P.M., he passed urine with some difficulty, owing to the tenderness resulting from the previous manipulation. At 4.50 P.M., he was sitting over the fire, shivering violently. At 6 P.M., he was in high delirium. In another hour he became quiet, and again conscious. That night he slept tolerably well, but suffered from headache. Next day the temperature was 103 deg., and the pulse as high as 140. On January 3rd, he had two rigors, and the thermometer ranged to 104 deg. On the 4th and 5th, the rigors were frequently repeated, and finally they became almost incessant, the thermometer generally reading 105 deg. Ecchymosis of one conjunctiva occurred about this time. The man died on January 9th. The spleen was enlarged, but healthy; the liver was quite healthy; a slight deposition of recent lymph was found in the pleuræ, but the heart and lungs were comparatively free from disease. Both kidneys were soft, of a fatty colour, and in a state of extreme fatty degeneration. In the hilus of one kidney a quantity of purulent urinous fluid was found. The bladder was extensively diseased, its walls much hypertrophied, and its internal surface of a deep cherry colour. A large abscess existed near the recto-vesical *cul-de-sac*. This opened by a narrow, irregular aperture into the prostatic sinus. A stricture, about half-an-inch in length, consisting of a gristly deposit, was found at the junction of the membranous and bulbous portions of the urethra. The brain was injected with serum, and a recent clot was found lying on the outer surface, and over the fissure of Sylvius on the right side.

Carcinoma of the Liver.—Dr. A. W. FOOT exhibited a specimen of diffuse metastatic carcinoma of the liver, taken from the body of a man, aged 60, who had been admitted into the Meath Hospital, a week before his death, with ascites of one month's existence, and œdema of the lower limbs and genitals, but no tint even of icterus. Increasing dyspnœa required tapping, which he did not survive many hours. The small quantity of fluid remaining in the peritoneal cavity, twenty-five hours after death, was turbid (that removed during life had been thin and clear); and some purulent matter had gravitated into the depths of the pelvis. There was some flaky fibrinous exudation upon the intestinal coils, and more thickly over the right lobe of the liver. Dr. Foot considered that a subacute peritonitis, with sero-purulent effusion, had been for some time in action, from the irritation of the prominent hepatic tubera. Increase of portal tension, and the pressure of the large and heavy liver on the inferior cava, would also account for the ascites and anasarca. The liver weighed 7 lbs. 9 oz., and was bossed with numerous projections, mostly cream-coloured, varying in size from the disc of a half-crown to a threepenny piece. The older and larger tubera presented the dish-like depression, or cancer-navel, caused by the peritoneal aspect, or summit of the nodule, falling in and becoming concave, from the absorption of the fatty detritus, produced by degeneration of the oldest cells of the nodules. Surrounding the gastric orifice of the œsophagus was an extensive, soft, white, condylomatous-looking, fungoid ulceration. More than three-fourths of all hepatic cancers were metastatic, and of the metastatic, two-thirds were metastases from primary disease in the region of the portal vein. He considered the chronic pain in the left shoulder, which was felt during life, to have been due to the gastric ulcer, and analogous to the shoulder-tip pain of the right side in some cases of hepatic disease. The spleen, weighing 11 oz., was quite free from disease, soft and wrinkled. Both lungs were studded with numerous cream-coloured nodules, of the size of peas and marbles; the heart, though relatively proportioned in its parts, weighed but 7 oz. It was an undecided point whether phthisis or carcinoma produced greater cardiac atrophy.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

A COLLIERY DISTRICT.

AT a meeting of the combined Sanitary Authorities of the District of Auckland, in the County of Durham, Dr. Thorne Thorne, one of the inspectors under the Local Government Board, brought under notice the shocking condition of the towns and villages in this portion of the northern coal-field. During the decennial period 1861-70, the death-rates from all causes—from enteric fever and scarlet fever, and also that prevailing amongst infants—was, in the Auckland District, far higher than the mean corresponding rates for the County of Durham and for the kingdom generally. In the Local Board District of Bishop-Auckland, the death-rate from fever alone during the past two years has been nearly five times as great as that prevailing in London and in the large towns and cities of England, and, in the urban district of Spennymoor, nearly thirty out of every hundred children born alive die in the first year of life—an infantile death-rate which, we believe, can hardly be equalled in any of the most neglected portions of the kingdom. All the usual causes of high death-rates prevail throughout the district. The sewers are in places so constructed that their contents ooze into the surrounding soil, and foul air is forced into the dwellings of the population; and, although the streams are practically open sewers, yet in some localities their contents are used for domestic purposes. In some villages, there is no drainage whatever; a water-supply has to be procured from polluted sources at a distance; there are no closets of any description, and the surrounding soil is made to receive all forms of liquid filth. In addition to these conditions, and notwithstanding the present wealth of the colliery-owners, to whom most of these places belong, many of the colliers' houses have only one habitable room, which is at times greatly overcrowded, and has to answer for day-room, sleeping-room, kitchen, sick-room, and even to afford accommodation for the bodies of persons who have died of infectious diseases; a large fire being at the same time kept up both day and night. And, notwithstanding the prevalence of such conditions, there is no proper sanitary organisation, the medical officers of health have no means of ascertaining the existence of even the fatal cases of infectious fevers, and the inspectors of nuisances, instead of being employed in performing the proper duties of their office, are engaged in work of a totally different character. Dr. Thorne, having explained to the authorities how the several conditions which had come under his notice conduced to the certain spread of infectious diseases and to the production of a large general and a large infantile mortality, drew attention to the imperative necessity which existed for the adoption of such sanitary measures as will relieve this district of the disgraceful sanitary circumstances under which a large proportion of the population are now living; and, if we may judge by the comments of the local press, a general opinion prevails that inspection of this colliery district on the part of the Central Authority has come none too early.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

PORTSMOUTH.—In his first annual report on the sanitary condition of the borough of Portsmouth, Mr. G. Turner calls attention to the low death-rate prevailing in the town. During the period reported on, it has been at the rate of 17.6 per 1000 inhabitants; and whereas it is the generally received opinion that this comparatively small mortality is, in great part, due to the artificial composition of the population, consisting, as it does, to a considerable extent, of soldiers, sailors, and convicts, Mr. Turner shows by statistics that, when deduction is made for these classes, the death-rate amongst the ordinary population, instead of being greater, is only 17.1 per 1000. The deaths amongst children under one year of age have been at the rate of 15.6 per cent. of the births, a rate which Mr. Turner describes as "very low". When compared with the infantile death-rate which prevails in the large manufacturing towns of the north, this mortality may be deemed low; but it appears to us to be high for a town which has a general mortality only slightly exceeding that obtaining in the healthy rural districts of the kingdom, the more so, as in these latter the mortality of children under one year of age is only about ten out of every hundred registered births. The general sanitary circumstances which prevail in Portsmouth, and which are described in the report, lead us to fear that the borough is by no means effectually protected by sanitary measures against the outbreak of infectious diseases, and that its small mortality is certainly not due to perfect sanitary organisation; indeed, many of the causes of a high general and high infantile mortality still exist in the town. In some parts, water is still procured from a porous chalk soil, in which there are numerous cesspools, and on the surface of which stand open and wet midden-privies; cesspits, receiving water-closet contents, are frequently sunk within a few feet only of underground apartments; and out of 19,000 houses in the borough, only about one-third are connected with the system of sewerage. The ventilation of the sewers is also quite inadequate, and it is the more urgent that this matter should receive special attention, because, during high-water, the outfalls are closed, and the sewage is pent up in the sewers. The offensiveness of individual ventilating shafts is, however, as Mr. Turner observes, no argument in favour of their being closed; it is, on the contrary, a strong indication for the construction of an increased number of openings through which atmospheric air may enter the sewers, and the foul air escape in a sufficiently diluted state. Mr. Turner's report is a very complete one, and appended to it are a series of statistical and meteorological tables, which are drawn up with considerable care.

SUNDERLAND.—In one of his recent weekly reports on the health of the borough of Sunderland, Dr. H. J. Yeld states that, on inspecting the premises of a person who had died of typhus, it was found that nine persons were holding a wake in the room where the corpse lay, and, although they were made fully acquainted with the risk they ran of taking the disease, all efforts to persuade them to leave were fruitless. In places where the Sanitary Authority has provided a mortuary, under section 27 of the Sanitary Act of 1866, such cases might be dealt with by the removal of the dead body, on the ground of its being "in such a state as to endanger the health of the inmates of the house".

ST. MARY-CHURCH.—At a meeting of the Local Board of Health of this place, the Medical Officer of Health and others strongly urged the closing of a polluted well, contrary to the expressed wish of its owner, and of several tenants using its contents. We regret to say that, although the Sanitary Authorities may compel the provision of a proper supply of water throughout their district, yet they have no power to close a well, however foul its contents may be. The next Bill relating to public health will, however, it is believed, confer this power on all Sanitary Authorities.

DRAINAGE OF THE RICHMOND DISTRICT.

THE Richmond Rural Sanitary Authority, having applied to the Local Government Board for power to put in force the Lands Clauses Consolidation Act, 1845, with respect to the purchase of some land, in the parish of Barnes, for the purpose of carrying out a scheme of drainage, for a district comprising Barnes, Mortlake, Kew, and Petersham, Major Tulloch, C.E., one of the Inspectors of the Board, has held an inquiry as to the advisability of the application being granted. The system which is proposed for adoption, is a scheme involving intermittent downward filtration, similar to that which has hitherto been found to work so well at Merthyr Tydfil. Mr. Bailey Denton, C.E., gave evidence to the effect that, although a small portion of the land consisted of clay, yet the proposed site was unusually well adapted for a system of intermittent filtration. The Inspector stated that, before he reported to the Local Government Board, he should visit the sewage-works at Merthyr Tydfil.

AMENDMENT OF THE LAW OF PUBLIC HEALTH.

SIR,—There is so much to be said on the subject of the amendments which are required in sanitary law, that it would be impossible to even refer to, much less discuss, a tithe of them, within the limits of an ordinary communication. However, as you invite remarks on the suggestions which my friend Dr. Syson has made on this subject, I take the liberty of briefly offering some. (See JOURNAL, February 14th, p. 217.)

1. This practically asserts the necessity of making a good deal of what is now voluntary duty, on the part of Sanitary Authorities, compulsory. As to the importance of such an amendment, there can be little difference of opinion. Dr. Syson's proposal is a very practical one, if the Local Government Board is prepared to accept the responsibility and odium of "putting on the screw," wherever it is necessary to do so. Would it not be better to insert "shall," in all cases where "may" now stands, and give the Local Government Board authority to suspend the requirement in any particular case, where good reasons could be shown for doing so? The distinction may appear a minute one between the two methods of proceeding; but, in the one case, the interposition of the Local Government Board would be, in appearance, less arbitrary than in the other. However, the means are comparatively unimportant, so long as we arrive at the end which is desired; and that is, to leave as little as possible to the option of local authorities.

2. Sir C. Adderley's Public Health Bill—which will, it is to be

hoped, now become a Ministerial measure—contains just such a power as Dr. Syson suggests, making any well, public or private, likely to be used for drinking purposes, and which is, from any cause, unwholesome or injurious to health, a nuisance, and enabling it to be abated, as other nuisances can be. The power of abatement is, however, given to the magistrate, and not to the Sanitary Authority. In some cases, where great urgency existed, this might introduce a difficulty, and perhaps it would be as well, in such cases, to give the Sanitary Authority power of immediate closure; but, generally, I think that the provision of the Bill will be found sufficient.

3. This is a much-needed provision. The distinctions, created by the Public Health Act of 1872, between rural and urban authorities, are not only absurd in theory, but mischievous in practice. Abundant illustrations could be given, of really rural districts superintended by authorities in whom are vested urban powers, and of the reverse. It is only in the cases of one or two matters, which have to be provided for by bye-law, that any distinction need be made between different authorities; and that might safely be left to the Local Government Board to make.

4. Sir C. Adderley's Bill gives power to any justice, on complaint by a Medical Officer of Health, or other officer of a Sanitary Authority, to grant a warrant to enter any place in which unsound food is believed to be kept, and to take away the same. Would not this be sufficient? Would Dr. Syson's suggested amendment give practically larger powers?

5. Is this amendment necessary? Does it not suppose a difficulty which does not exist? Surely the persons to whom Dr. Syson refers would be, both morally and legally, "in charge" of the infected person, in the cases which, I presume, he contemplates. Every minor must be in charge of some one. The difficulty is not to find who is in charge of the case, but to enforce the adoption of proper measures by that person, when found.

6. This suggestion proposes to extend to all Sanitary Authorities a power now given only to Urban Authorities (Artisans' and Labourers' Dwellings Act, s. 18). The necessity for some such provision as this is unquestionable; it would, however, be desirable if some one, who has had more practical experience of the Act than I possess, would state whether it is a workable one. Its provisions seem, in some respects, rather cumbrous. Does Dr. Syson intend it to be understood that the Salford Improvement Act gives the Local Authority power to condemn houses without appeal? If so, it goes very much farther than the Act quoted above.

7. I quite concur in this suggestion, so far as the plans relate to matters of a sanitary nature, such as ventilation of rooms, drainage, structure of walls, etc. The restriction of the provision, on this point, to Urban Authorities only, which Sir C. Adderley's Bill makes, seems to me to be founded on a misconceived fear of the undue activity of Rural Sanitary Authorities, in objecting to plans. I believe that the fear to be entertained is rather in the opposite direction.

8. This is very desirable.

I may add, that several of the above were considered, with other matters, at the recent Conference of Medical Officers to Combined Districts, the report of which will, I hope, soon be ready for publication.

I am, etc., FRANCIS T. BOND.

Gloucester, February 13th, 1874.

SIR,—You invite comments on Dr. Syson's suggestions. I quite agree with the suggestion, No. 4, that the police should have power to seize suspected articles of food, and private persons be empowered to bring them to the Medical Officer of Health, or to the Inspector of Nuisances.

I have seen meat exposed for sale in a public market which I would have condemned; but my inspector was miles away, and the police refused any assistance, and I did not feel inclined to travel some miles with a lump of bad beef to show it to a magistrate, in order to get an order to destroy it.

If the Medical Officer of Health's opinion be worth anything, it cannot be necessary to have it supplemented by the opinion of a layman; and the Medical Officer of Health should have the power of making the order for the destruction of the objectionable article.

Can you spare me room to relate an instance of the working of the Act, which occurred to me a few months ago? The Inspector of Nuisances came for me one Saturday, at 5.30 P.M., to go to a neighbouring small town, and give my opinion as to the condition of some herrings which were being exposed for sale. I took train and went, and found twelve baskets of herrings in a horrible condition. I gave the necessary certificate, and was going home, when the Inspector told me that he was going to hire a cart, and take the herrings to the nearest magistrate, in order to get the requisite order for their destruction, and he requested me to accompany him, as my directions might be needed as to where, or how, they were to be disposed of. I objected; but being new to my office, I was not certain (having had no instructions), as to whether or not I was obliged to go. At last I agreed to go. The magistrate lived two or three miles off; and, after some delay in getting a cart, the Inspector and the fishes set off. I walked, being somewhat ashamed of my odoriferous charge. The magistrate, I was told, saw and smelled the fishes, said, "Take them away," and gave an order for their destruction. When the Inspector rejoined me with the order, I was asked, not unnaturally, what was to be done with them? I thought at first of upsetting them into the Wear; but that was clearly against the Act. So I said they must be buried. Where? I did not know where. It was dark, and really to find a burial spot was a difficulty. At last we went in procession along the road, calling at various farm-houses as we passed, soliciting permission to inter the condemned fishes (which, by the bye, emitted a beautiful phosphorescent hue). At last an old man gave us leave to bury them in a great manure-heap—principally ashes—by the road-side. A lanthorn and spade were borrowed, and a grave was dug, into which the Inspector poured basket after basket of stinking fish, until the hole was filled; then he heaped more on, until there were as many above as below ground. Then I thought quicklime was needed, and some was got and put on, and the grave heaped over with ashes; and at between eleven and twelve at night, the wearied Inspector and I started off home from the burial-place of the fishes. If I had had power to give the order for their destruction, a suitable place could have been found within a quarter of a mile of the market-place. I had, subsequently, to attend two days at the police-court to give evidence against the fishmonger.

I am, etc.,

A MEDICAL OFFICER OF HEALTH OF THE COUNTY OF DURHAM.

SIR,—There cannot be two opinions regarding the incompleteness of the Public Health Act of 1872, particularly to any one who has had some practical experience of its working. It is so imperfect, that Local Sanitary Authorities or their officers have to be weekly asking the Local Government Board if they have power to remove this and that nuisance, and under what circumstances and conditions they can do so. With regard to Dr. Syson's "instalment", I think his suggestions are good in the main, though in a few particulars I regret to differ from him.

1. That the word "may" should be replaced by "shall" I object to, because in many instances it is only right that conditions and circumstances injurious to health should be left to the discretion of Local Authorities and their officers, who alone are in a position to form correct opinions. The degree or extent of any condition is to be the criterion of whether it is injurious to health or not: an eye-witness only is capable of judging; therefore, "may" be removed or abolished after inspection and examination is, in my estimation, better than "shall" be removed or abolished after examination.

2. I think Dr. Syson has been wrongly informed, for public wells, pumps, or springs, can be closed up under certain conditions. On this head I append a copy of a letter I received from the Local Government Board a few weeks ago, in answer to an inquiry made by me in consequence of a difference of opinion among the members of Sanitary Boards in my district. (See *Appendix* 1.)

3. The powers of Urban and Rural Sanitary Authorities should only be assimilated in proportion to the oneness of the work to be performed; for instance, a pigstye or a privy in the centre of a large town should be treated differently from one in a rural district with a scattered population and abundance of salubrious atmosphere.

4. The police generally have very little knowledge as to whether a piece of meat is wholesome and fit for human food or not. To know this requires even the most careful examination of medical officers who have studied the laws of pathology. I think the seizure, etc., should be left in the hands of Inspectors and Medical Officers of Health; and let the police give information in case of any suspicion.

5. I consider that the phrase "persons in charge" is much more comprehensive than what Dr. Syson suggests, for it includes every one and any one. The more general it is made the better.

6. The Act does provide for the closing of any house unfit for human habitation, unless it be put in a habitable condition.

7. I should recommend that all plans for buildings be submitted to the Local Sanitary Authority, their Medical Officer of Health, and a competent architect, for their approval or otherwise.

8. General forms should be issued by the Local Government Board, but particular forms should be left to the officers.

The greatest obstruction I have experienced with regard to efficiently carrying out my duties is from the want of information, more particularly with reference to the outbreaks of zymotic diseases. To remedy this difficulty, I have had packets of post-cards with my address printed on them, and have left one with every Medical Officer in my district, with a request to let me know on their first visit to any case of infectious or contagious diseases. I think this will answer admirably in the absence of a better system. I must say, with regard to the medical men in my district, that they are willing in every respect to further hygienic laws, and that hitherto I have found the greatest help and assistance from them, for which they have my best thanks. A better batch of medical gentlemen is not to be met with in Great Britain.

Another obstruction in the way of carrying out my work—to my own satisfaction, at least—is the want of power to enter at any time a lodging-house, to prove whether overcrowding does or does not exist. The same want I also feel in regard to many private dwellings, where overcrowding and the immoral mixing of the sexes occur. This can only be reached by bye-laws; but the Local Government Board is very particular as to the nature of the bye-laws they will sanction. I add a communication received from the Local Government Board on this subject, which may be useful to some of your readers. (See *Appendix* 2.)

The Medical Officer of Health or Inspector of Nuisances should have power to enter any public school, for the purpose of proving the sanitary or insanitary condition of it, without a magistrate's warrant, and the Local Sanitary Authority be empowered to close these schools on any outbreak of zymotic diseases. I append another letter from the Local Government Board on that question. (See *Appendix* 3.)

I am, etc., ANGUS MACKINTOSH, M.D.,
Medical Officer of Health, Chesterfield.

Appendix 1.

Local Government Board, Whitehall, S.W., Jan. 26, 1874.

Sir,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 21st instant. In reply to your question, I am directed to state, with regard to "private wells", that the Rural Sanitary Authority have no power to close them where the water is unfit for use. They can only inform the owners of the state of the water, and warn them against using it.

With regard to "public wells", I am to point out that, under section 11 of 29 and 30 Vict., cap. 90, and section 78 of the 11 and 12 Vict., cap. 63, the Rural Sanitary Authority may substitute for a "public well" another equally convenient; and if such substitution were made, the contaminated well might probably be closed.

I am, Sir, your obedient servant,
FRANCIS FLETCHER, Assistant Secretary.

To A. Mackintosh, M.D., Medical Officer of Health, Chesterfield.

Appendix 2.

Local Government Board, Whitehall, S.W., Jan. 19, 1874.

Sir,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 8th instant; and, as regards your inquiry whether the Inspector of Nuisances or any other official has power to enter a lodging or any other private house at night, or at any other time, to prove that overcrowding does or does not exist, to state that no power of entry is given by the statutes to either the Medical Officer or to the Inspector of Nuisances.

If the Sanitary Authority have any bye-laws in force for this district under the 29 and 30 Vict., cap. 90, section 35, it is necessary that reference should be made to them to ascertain whether they bear on the point. I am, Sir, your obedient servant,
DANBY P. FRY, Assistant Secretary.

To A. Mackintosh, M.D., Medical Officer of Health, Chesterfield.

Appendix 3.

Local Government Board, Whitehall, S.W., Nov. 18, 1873.

Sir,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 21st ultimo, and, in reply, to state that, unless there is some bye-law of the Local Board at Chesterfield applicable to the case, you have no authority, as Medical Officer of Health, to interfere in the way that your letter describes.

If, however, you are permitted to enter the school, or if you lay an information as to the existence of a nuisance in the school before a justice, and obtain a warrant to enter the school, you can make the examination suggested. If you then find the school to be so overcrowded as to be in a state dangerous to health, you can proceed under the 18 and 19 Vict., cap. 121, section 11, to take the necessary steps for abating the nuisance. I am, Sir, your obedient servant,
JOHN LAMBERT, Secretary.

To A. Mackintosh, M.D., Medical Officer of Health, Chesterfield.

MR. JOHN H. ASHWORTH, L.R.C.P.Ed., L.S.A., L.F.P.&S.Glas., has been elected Medical Officer and Public Vaccinator to the Bourne Workhouse and District, *vice* Burn, deceased.

MILITARY AND NAVAL MEDICAL SERVICES.

A MOST excellent successor to Staff-Surgeon Willis has been found, as Senior Medical Officer of H.M.S. *Sultan*, in the person of Dr. W. N. Brake, late of H.M.S. *Jumna*. Dr. Brake has joined at Portsmouth, and taken up duty. The captain and officers of the *Sultan* entertained Dr. Willis at dinner a few evenings ago, on the occasion of his departure, when high eulogiums were passed on the worthy doctor, and also upon his successor, who was received with the utmost cordiality.

ARMY MEDICAL ECONOMICS.

CERTAINLY the profession has not overmuch reason to thank the *late* Secretary of State for War. As a result of his innovations, and often ill-judged economical measures, we are given to understand that recruits for militia regiments are directed to be taken to the nearest military surgeon for examination as to their fitness for the service, and not, "as heretofore", to the surgeon of the militia regiment for which they desire to enlist. In this way, no doubt, a saving is effected, but with what result? A double injustice is done: first, to the military medical officer, who has extra work, for which, however, he gets no extra pay, thrown on his hands; secondly, to the militia surgeon, who is in this way "done out of" his fees for examining the recruits. This is the way our late rulers encouraged medical officers to take an interest in their duties, as well as to induce proficient members of the profession to enter Her Most Gracious Majesty's Service.

ASSOCIATION INTELLIGENCE.

WEST SOMERSET BRANCH.

THE spring meeting of this Branch will be held at the Royal Clarence Hotel, Bridgwater, on Thursday, April 2nd, at 5.15 P.M. The following question has been settled by the Council as the one on which each member should be asked to express his opinion at the said meeting:—"What is your opinion as to the relative value of chloral hydrate and opium in allaying pain and inducing sleep?"

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, March 2nd, 1874.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE next meeting of the above Branch will be held at Newport, Monmouthshire, on Friday, April 10th, 1874.

Gentlemen intending to bring forward communications are requested to send the headings to the Secretary by the 24th instant.

ALFRED SHEEN, M.D., *Hon. Sec.*

BATH AND BRISTOL BRANCH.

THE next meeting of the session will be held at the York House, Bath, on Thursday evening, April 16th, at 7 o'clock. E. L. Fox, M.D., President, in the Chair.

R. S. FOWLER, }
EDMUND C. BOARD, } *Honorary Secretaries.*

Bath, March 26th, 1874.

CORRESPONDENCE.

DR. SNOW BECK'S CASES.

SIR,—In the JOURNAL for February 28th, Dr. Snow Beck makes an elaborate show of vindicating his assertion that he had himself seen nine or ten cases of death by septicæmia, caused by the injection of perchloride of iron into the uterus to arrest *post partum* hæmorrhage. He begins, as usual, by repeating Dr. Heywood Smith's case, so that this has now been published several times, and adds another. In the following number of the JOURNAL, two more are published. Then comes a blank. Where are the five or six remaining cases which are required to make up the tale?

It cannot be made up by repeating the same cases over and over again, nor by such other erratic arithmetical processes as distinguish his argumentations on this subject. He must be reminded that two and two make four, and no more.

I will not at present discuss the cases which, at length, after much difficulty, have been extracted from him. I will only observe that much of their value must depend upon his making good his statement that "he has seen nine or ten cases," by publishing the details of the five or six cases, which are still *in nubibus*.

I am, etc., ROBERT BARNES.

MR. MORGAN'S INOCULATIONS.

SIR,—Attention has been called by Mr. Berkeley Hill, to a sentence which appeared in your report of the discussion at the Medical Society upon Mr. Morgan's paper. Taken by itself, that sentence as published might certainly lead to a misconception, and the subject is so important, that the explanation requested by Mr. Hill is not uncalled for.

In order to be perfectly accurate, the sentence in question should read, "Mr. Morgan had now shown experimentally that the secretions from a syphilitic person, whether accompanied by an open wound or not, would communicate actions resulting from constitutional syphilis." What those actions would be in persons who, not previously syphilitic, had, as Mr. Hill states, been demonstrated before Mr. Morgan began his experiments. John Hunter had shown, in the experiment which he performed upon himself, that the secretion derived from the urethra of another person might communicate constitutional syphilis. This Hunter proved conclusively to his own mind, and the minds of his followers; but his experiment and the observations of others to the same effect, were explained, and explained away in such a variety of ways by Ricord and his disciples, that Mr. Morgan's experiments, or some of a similar nature, were necessary in order to demonstrate to the profession that the secretions in question were inoculable. Mr. Morgan's experiments therefore supply the complementary evidence which was required. In answer to Mr. Hill, as to what secretions from a syphilitic person, unaccompanied by any break of surface, are contagious, so as to produce constitutional syphilis, I would say that the secretions from the mucous membranes generally near the orifices of the body are so; and I would include the mucous membrane at the back part of the urethra. The secretions proper to different glands, such as the milk and the semen, I believe not to be contagious.

I am, etc., HENRY LEE.

9, Savile Row, March 16th, 1874.

INSTRUCTION OF MIDWIVES.

SIR,—Many of your readers must, with myself, have frequently admired the pluck and British bull-dog pertinacity with which our good friend Dr. Steele seizes upon a subject, and, in spite of kicks and blows, sticks to it until he has effected his purpose. He has this time, however, mistaken the object of his attack; and, while I have no hope of making him relax his hold, I cannot help endeavouring to point out to him that the frail being that we are attempting to improve is in no way a worthy object of his attack; too small to excite his jealousy, and too weak to afford him a fair fight.

He magnifies the office of midwife, and looks upon her as a formidable medical opponent, when, in reality, the woman we would instruct can be little more than a midwifery nurse, capable of relieving the general practitioner of an unremunerative, uninteresting, and physically exhausting class of cases. Having experienced the miseries of a large ten shilling midwifery practice in a mining district, I can confidently assert that the continuous attendance night and day upon women of the humbler class when in labour, has an unmistakably deteriorating effect, mentally, morally, physically, and pecuniarily. No time is left for reading, exhausted nature demanding every spare moment for repose or relaxation. Night after night spent amidst discomforts of every kind, reduces, at length, even the strongest. The tempter now appears; stimulants are on these occasions freely offered and urgently pressed. What is a weak and jaded mortal to do? There is but one answer. Give up all low midwifery practice.

It is well for young men to attend for a time, and as far as their strength will permit, a large number of labours; but, when their practice is established, they do best to follow the plan adopted by most intelligent general practitioners, and hand over to the midwife all those patients who cannot afford to pay remunerative midwifery fees. Although obstetrical work is very justly looked upon as the key to general practice, it may, nevertheless, if injudiciously followed, have exactly the opposite effect. A man who has been up all night, or detained all day, at a labour, is often either tempted or obliged to neglect his other duties. Visits which should have been paid are omitted, and the resulting fees are consequently lost, perhaps together with one or more chagrined and slighted patients. Dr. Steele, I repeat, is mistaken in his present attack. Were he to succeed in turning the midwives out of every village into the workhouses, he would not have done anything to his own credit, or for the benefit of the profession of which he is so worthy a member. His intentions, I know, are the very best, but, in this instance, his enthusiasm exceeds his discretion. He is unconsciously working against the interests of the general practitioner, and endeavouring to deprive the department of medicine to which he belongs, of the honour which would accrue to it in providing for the instruction of midwives, and suggesting laws for the regulation of their practice.

I am, etc., J. H. AVELING.

1, Upper Wimpole Street, W., March 16.

EXEMPTION OF MEDICAL MEN FROM SERVING AS JURORS.

SIR,—Dr. Kinloch is quite correct in his quotation of the forty-third section of the Court of Session Act, 1868, repealing certain exemptions depending on any Act passed after the Act Sixth, George the Fourth, but the clause only applies to jury trial in civil cases, and not to criminal trials.

I may add that, as a rule, jury trials in civil cases only occur in Edinburgh before one of the judges of the Court of Session. My medical brethren can keep themselves at ease about the clause quoted by Dr. Kinloch; it does not refer to them, but to what is known in Scotland as special and common jury-men, and their qualifications.

March 14th, 1874. I am, etc., M.

THE PROPOSED CONJOINT EXAMINING SCHEME FOR IRELAND.

SIR,—You announce that this scheme has been condemned at a meeting of the Fellows of the Royal College of Surgeons, Ireland. Let me explain a few of the reasons why four-fifths of those present did so when they came to understand its provisions, for the document had not been previously circulated amongst them. It does not establish uniformity of examination; for the Queen's University is determined to stand apart, the pupils of Trinity College are to be examined by that body for their first professional examination, not by the Conjoint Board, and apothecaries are to be further examined, the diploma of physician and surgeon being previously obtained. It does not establish uniformity of fees, for the ordinary candidate pays thirty guineas, the graduate of Trinity five; the latter pays, however, the fees for the M.B. and M.Ch. to his university.

As regards monetary considerations, the scheme deprives our College of about one-third of its income from licence fees, while it multiplies eightfold the corresponding receipts of the Apothecaries' Hall, its examiners being also shareholders in the Company. Again: out of the fees of non-university candidates, it pays some £225 to professors and examiners of the University, which body gives in return no advantage whatever to such candidates. Other gains to Dublin University are very apparent; seven or eight of her professors will be examiners, while not one of the lecturers in any of the other five schools can be appointed by the College of Surgeons, owing to provisions of the charter; half of the first professional examinations by the Conjoint Board will take place within her walls for all students *except her own*, and no student can enter any medical school until he has passed the preliminary examination in that university. Your readers will see that the English scheme is far more just. Can it be wondered at that our Fellows, foreseeing the extinction of this College and the five schools under its protection, enthusiastically condemned this imperfect and most partial scheme in its entirety? It is vain to suppose any such scheme will be forced on us by the Medical Council, which has no such power, or by Parliament. Our great Association will, I trust, promote a Bill to procure direct representation on the Council, for Ireland wants such most of all; for instance, but one medical man has a voice in the election of the Dublin University representative, two in the case of the Queen's University, and twenty-one in that of the College of Surgeons. The graduates and Fellows should be respectively the electors. If a general Act enforcing co-operation be ever obtained, it will not deal as unfairly with my College as the condemned scheme proposed to do. The able pamphlet of Dr. Lyon Playfair, and recently that of Dr. Kidd, have led me to reconsider the question of Conjoint Boards, and I hope next week to visit several of the Scotch bodies, which still remain separate, or conjoin in a restricted sense, to learn the working of their systems.

I am, etc., E. D. MAPOTHER.

18, Merrion Sq. N., Dublin, March 24th, 1874.

SIR,—At a meeting, convened by certain Fellows of the Royal College of Surgeons in Ireland, held to-day, opposition to the details of the scheme already adopted by the Council of that body, by the Trinity College, by the King and Queen's College of Physicians, and the

Apothecaries' Hall, was declared, whilst the principle of the Conjoint Scheme of Examination for Ireland was admitted. Some of the originators of the meeting were opposed to any conjoint scheme; but they were unsuccessful in carrying the meeting with them.

It now remains to be proved whether a matter of detail as to the numbers of courses of lectures to be demanded of the future students will be allowed by the profession, by intending students, and by the country generally, to stand in the way of a scheme of conjoint examination for this country. If anything be required in this direction, it would seem to be a pruning off of a number of the lectures put down in the curriculum condemned by the meeting of this day, and a greater assimilation to the number of courses required by the English scheme.

I am, etc.,
A Fellow of the Royal College of Surgeons in Ireland.

OBITUARY.

THOMAS EBBAGE, F.R.C.S., L.S.A., Leamington.

Mr. Ebbage, who died at Leamington on the 15th instant, was born at Bungay in Suffolk. He received his medical education at St. Bartholomew's Hospital, and became a Licentiate of the Apothecaries' Hall in 1833, a Member of the Royal College of Surgeons of England in 1835, and a Fellow in 1858. He practised at Leamington for nearly forty years with great success, and was greatly respected by his fellow townsmen as well as his professional brethren. At the time of his death, he was the oldest practitioner in the town, except Mr. Jones.

Mr. Ebbage was well known to many of the members of the British Medical Association, having acted as Honorary Local Secretary when the Association held a very successful meeting in the town of Leamington. The great success of that meeting may be attributed chiefly to the untiring efforts of the late Dr. Jeaffreson, the President for the year, and Mr. Ebbage. The remarkable amount of tact, kindliness, and hospitality which he showed on that occasion endeared him to many members of the Association, but more especially to its officers, who had the benefit of his services. Although of retiring habits, he was elected President of the Birmingham and Midland Counties Branch for the year 1872-73, the year the Association met in Birmingham. Again, he showed generous hospitality towards his professional brethren by entertaining at his house all the members who wished to visit Leamington. He continued an active member of the Association to the last, having attended a meeting of his Branch as late as Thursday, the 12th instant.

Mr. Ebbage was twice married; first, to Miss Minster, daughter of an eminent solicitor at Coventry; and, secondly, to Miss Jeaffreson, daughter of a clergyman at Tottenham, and niece of the late Dr. Jeaffreson, of Leamington. He was buried in the parish churchyard of Leamington on the 20th instant, most of the members of the profession in Leamington and many thousands of the inhabitants being present.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, March 19th, 1874.

Messiter, Matthew Arden, Repton, Derbyshire

The following gentlemen also on the same day passed their primary professional examination.

Rawlings, Alfred, Guy's Hospital
Theed, William Cawood, Guy's Hospital
Walker, Hyde Edwards, London Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

BRADFORD (Lancashire) URBAN SANITARY DISTRICT—Medical Officer of Health: £20 per annum.

BRISTOL LUNATIC ASYLUM, Stapleton—Assistant Resident Medical Superintendent: £80 per annum, rising to £120, furnished apartments, board, etc. Applications, 2nd April, to J. F. Williams, Clerk to Visitors.

CHORLTON-UPON-MEDLOCK DISPENSARY—Resident Medical Officer.

COUNTY DOWN INFIRMARY, Downpatrick—Assistant Surgeon and Registrar.

EASTERN DISPENSARY, Bath—Honorary Medical Officer.

EAST SUFFOLK HOSPITAL—House-Surgeon: £100 per annum, furnished apartments, board, etc. Applications, 1st April.

FULHAM UNION—Medical Officer for No. 4 District: £50 per annum, and fees.—Public Vaccinator for No. 3 District. Applications, 1st April, to T. Aplin Marsh, Clerk, Hammersmith.

GENERAL HOSPITAL, Birmingham—Physician. Applications, 28th instant, to W. T. Grant, House-Governor.

GUILDFORD UNION—Medical Officer and Public Vaccinator for the Albury District: £60 per annum, and fees. Applications, 9th April, to Mark Smallpiece, Clerk.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Resident Clinical Assistants. Applications, 6th April, to the Sec.

HULL GENERAL INFIRMARY—Physician.

KILBURN DISPENSARY—Two Resident Medical Officers: £120 and £80 per annum, apartments, etc., respectively. Applications, 6th April, to the Hon. Sec., 32, Boundary Road, N.W.

KILMACTHOMAS UNION, co. Waterford—Medical Officer for the Kilmacthomas Dispensary District: £120 per annum, and fees. Applications, 14th April, to David Power, Hon. Sec., Newtown, Kilmacthomas.

KING'S COLLEGE HOSPITAL—Assistant-Physician.—Pathological Registrar and Curator of the Museum.—Assistant Dental Surgeon.

LONDON HOSPITAL—Physician.

LUNESDALE UNION, Lancashire—Medical Officer for Workhouse: £11 per annum. For District No. 1: £49 per annum, if resident in the village of Hornby; any other part of district, £30 per annum, exclusive of usual extras.

MACHAR (Old), Aberdeenshire—Medical Officer for part of the Southern Division, and the Poor House. Applications, 10th April, to Thomas Skeene, Inspector of Poor, Aberdeen.

MIDDLESEX HOSPITAL—Assistant Physician; Assistant Obstetric Physician; Dental Surgeon. Applications, 31st instant, to the Weekly Board.

NEWCASTLE-UNDER-LYME RURAL SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

NEWCASTLE-UNDER-LYME UNION—Medical Officer and Public Vaccinator for the Whitmore District: £15 per annum, and fees. Applications, 30th instant, to Joseph Knight, Clerk.

NORTH LONDON CONSUMPTION HOSPITAL—Physician. Applications, 15th April, to W. Hornibrook, Sec.

PADIHAM and HAPTON URBAN SANITARY DISTRICT—Medical Officer of Health: £25 for one year. Applications, 31st inst., to J. R. Fletcher, Clerk.

POCKLINGTON UNION, Yorkshire—Medical Officer for the Sutton-upon-Derwent District: £24 per annum.

PRESTWICH UNION—Medical Officer for the Bradford District: £20 per ann.

ROYAL INFIRMARY, Edinburgh—Resident Physician.

ST. SAVIOUR UNION—Medical Officer for the Newington St. Mary District: £130 per annum.

ST. THOMAS'S HOSPITAL—Dispenser: £100 per annum.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

TEWKESBURY URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

UNIVERSITY OF LONDON—Examiners, viz.: two in Medicine, two in Surgery, two in Anatomy, two in Physiology, etc., two in Obstetric Medicine, two in Materia Medica, etc., and two in Forensic Medicine: £150, £150, £100, £150, £75, £75, and £50 each, respectively. Applications, 31st instant, to Dr. Wm. B. Carpenter, Registrar.

WESTMINSTER HOSPITAL—Surgical Registrar: £40 per annum. Applications, 31st instant, to the House Committee.

WILTS COUNTY LUNATIC ASYLUM, Devizes—Assistant Medical Officer: £100 per annum, board, residence, etc. Applications, 31st instant, to Clerk to Committee of Visitors.

WYNNSTAY and WATERLOO COLLIERIES, near Ruabon—Medical Officer. Applications, 1st April, to Wm. Jomes, Sec., 25, Chapel Street, Rhos-y-Medre, near Ruabon.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Eagle, H. F. C., M.R.C.S., appointed Surgeon to the Queen Adelaide's Dispensary, Bethnal Green Road.

Owen, Alfred Lloyd, M.B., B.A., M.R.C.S.Eng., appointed Surgeon for In-Patients at the Royal Portsmouth Hospital.

*Parker, Rushton, F.R.C.S. (Demonstrator of Physiology in the Liverpool Royal Infirmary School of Medicine), appointed Pathologist to the Liverpool Royal Infirmary, *vice* *W. M. Banks, F.R.C.S., appointed Assistant-Surgeon.

Wood, R. A. H., M.R.C.S.Eng., appointed Assistant-Surgeon to the Ladies' Charity and Lying-in Hospital, Liverpool.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

Mudd.—On March 21st, at Steyne Place, Bognor, the wife of *Frederick C. Mudd, M.R.C.S., of West Pallant, Chichester, of a daughter.

MARRIAGE.

Stewart—Conner.—On March 24th, at Christ Church, Belfast, by the Rev. Robert Vance, M.A., rector of St. Catherine's, Dublin, uncle of the bride, James Stewart, Esq., B.A., L.R.C.P.Ed., son of R. Stewart, M.D., Medical Superintendent of Belfast Hospital for Insane, to Matilda, daughter of the late Richard Conner, Esq., of Belfast.

DEATHS.

Kieran, James, M.D., at Belturbet, on March 8th.

Latham.—On March 24th, at 442, Hackney Road, Emily, the wife of Charles W. Latham, M.R.C.S., L.S.A., Surgeon Tower Hamlets Rifle Brigade, of erysipelas, four days after the birth of a son, still-born.

Toyne, Henry William, L.F.P.S.Glasg., at Ebor House, Beswick, Manchester, on March 14th.

*Woodman, Frederick, M.D., L.R.C.P.Lond., at Bedford [House, Deal, aged 34, on March 15th.

The Mayfair Minstrels.—A concert, in aid of the funds of the new Dental Hospital, was given in the Lecture Hall of that institution on Wednesday night by the Mayfair Minstrels. The affair was a great success. By the energy of a few ladies and gentlemen, over £100 was obtained, without any of the costly machinery usually attaching to the collection of money for charitable institutions.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Social Science Association, 8 P.M. Dr. Hardwicke, "On the Abolition of Slaughter-Houses in Towns, and Legislation on Noxious Trades."—Medical Society of London, 8 P.M. Dr. Brunton, "On the Therapeutic Use of Aconite: with illustrative Cases". Mr. Braine will exhibit a new Foot-Regulator and Nitrous Oxide Economiser.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Discussion on Dr. Playfair's paper "On Puerperal Thrombosis"; Dr. Copeman (Norwich), "On Consultation Midwifery in Private Practice"; Dr. Saboia, "On a New Operation for Atresia Uteri"; and other communications.—Royal Microscopical Society, 8 P.M.

THURSDAY.—Harveian Society of London. 7.15 P.M.: Meeting of Council. 8 P.M.: Dr. R. Farquharson, "On the Effects of Continued Physical Exertion on the Heart and Large Vessels."

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

Authors desiring reprints of their articles published in the Journal, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

We cannot undertake to return Manuscripts not used.

Communications respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

L.R.C.P.Ed.—The mere licence of an examining body does not give its possessor the *right* of calling himself Doctor.

Dr. Sankey.—Thanks.

We have received an important communication from Dr. D. T. T. Maunsell (Dublin), but, unfortunately, too late for insertion this week.

Mr. Pillischer's letter next week.

The Case of Mr. Jackman.

Sir,—After sixteen years' service as Medical Officer in the Barnstaple Union, a fresh election took place at the end of the year, without giving me any notice whatever, although, under contract, I was entitled to two months' notice. Consequently, I applied to the Board for a superannuation, under the Act passed in 1870, being seventy-three years of age, and labouring under disability, of which I gave a medical certificate. The guardians at their weekly meeting, about six weeks since, proposed granting me an annual allowance of two-thirds of my yearly salary, whilst others proposed one-third, viz., £20 *per annum*, or eight shillings per week, the salary being £60 per year. The latter was carried by a majority of five. However, after this, it was necessary to give one month's notice to every guardian, to confirm it. At the end of the month, in a most extraordinary manner, they put it to the vote again, and thirteen voted for, and seventeen against; whereby I lost what before had legally been proclaimed by four.

If you will lay this statement before the profession and the public, you will greatly oblige: as, having no funds to fall back on for future support, makes my case the more sad. I am, etc., John Hawkes Jackman.

Swymbridge, Barnstaple, North Devon, March 18th, 1874.

Contributions will be gratefully received by the Editor of the Journal, and by the Rev. John Russell, the Vicar, and Pyke Nott, Esq., Bydown House, Swymbridge, Barnstaple, North Devon.

Notice to Advertisers.—Advertisements for insertion in the British Medical Journal, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. Fowke, not later than *Thursday*, twelve o'clock.

Medical Ethics at St. Bartholomew's Hospital.

We have received the following correspondence.

6, City Road, E.C., February 13th, 1874.

Sir,—Yesterday morning (Thursday), early, I was sent for to see an old patient residing in Old Street, who, I was informed, had injured his leg the previous evening. I found he had slipped, hurt his leg, and been taken to St. Bartholomew's Hospital, where he was told his leg was broken; and the gentleman who attended to him wished him to remain in the hospital, but the patient refused to do so, and was taken home with a simple bandage round his ankle and foot. I attended to him and saw him twice yesterday, but this morning, to my astonishment, I am told that last evening the person who was with the patient at the time of the accident had called at the hospital, taken the gentleman who attended to the injury the night before with him to Old Street; that the gentleman then took the case out of my hands by removing my applications and setting the leg. I have to ask you to kindly inform me—1. The name of the gentleman who was on duty on Wednesday evening, and who attended to the injured leg? and 2. Whether either student or house-surgeons, while on duty for the hospital, are allowed to follow patients home and to interfere with neighbouring practitioners?

By replying, you will oblige Yours, Chas. J. Elwin.

The Warden of St. Bartholomew's Hospital.

P.S. The question of the interference by students at the hospital with practitioners who reside near large hospitals is so great, that I must claim the right to send whatever correspondence there may be, either between myself and the authorities of the hospital, or between myself and the at present nameless gentleman, to the medical journals.

St. Bartholomew's Hospital and College, February 14th, 1874.

The Warden of the College of St. Bartholomew's Hospital begs to acknowledge the receipt of Mr. C. J. Elwin's letter of February 13, 1874. As the patient referred to by Mr. Elwin received proper attention on the part of the officer who saw him, there is no ground for complaint as regards the hospital. With regard to the subsequent event, Mr. Elwin's letter distinctly states that the hospital officer was sent for, and taken by a friend of the patient to the patient's home. This reduces the matter to a question between the patient and two medical practitioners, with which the hospital has nothing to do.

C. J. Elwin, Esq., 6, City Road, E.C.

6. City Road, E.C., February 15th, 1874.

Sir,—I yesterday received from the Warden of St. Bartholomew's Hospital a communication which is a reply, but not an answer, to my letter of February 13th, in which I requested to be informed of the name of the gentleman who was on duty on Wednesday evening. I have, therefore, a second time to request you to forward me the name and status of the gentleman who has acted so unprofessionally. With regard to the latter portion of the communication, I must refuse to admit that the matter is reduced to a question between two medical practitioners; for if the gentleman was on duty for the hospital, who is designated by yourself as the hospital officer, I must distinctly deny that while in that capacity he can be a medical practitioner, and therefore, in my opinion, it is a matter with which the hospital has do do.

Awaiting your reply, I am, Sir, yours, Chas. J. Elwin.

The Warden of St. Bartholomew's Hospital.

St. Bartholomew's Hospital and College, February 16th, 1874.

The Warden of the College of St. Bartholomew's Hospital begs to acknowledge the receipt of Mr. C. J. Elwin's letter of February 15th, 1874. If Mr. Elwin has a complaint to make on a matter concerning the hospital, his proper course is to lay it before the governors of the hospital.

To C. J. Elwin, Esq.

6, City Road, E.C., February 19th, 1874.

To the Governors of St, Bartholomew's Hospital.

Gentlemen,—I have to lay before you the following facts, in order that I may obtain information which has been twice applied for from the Warden, but which I have been unable to obtain. A patient of mine, on the evening of Wednesday, February 11th, met with an accident and was taken to your hospital, where he was informed by the "hospital officer" that his leg was broken. The same gentleman wished him to remain in the hospital, but the patient refusing, he was taken home in a cab with but a simple bandage round his foot and ankle. The following morning (Thursday, February 12th) I was sent for early. I attended to the leg, and saw the patient the same day for the second time. The next morning (Friday) I was told that the previous evening a friend who was with the patient at the time of the accident had brought the gentleman from the hospital, and that he had set the leg, thereby taken the case out of my hands, although it must have been patent that some one had attended to the patient after he had left the hospital the previous night. On inquiring at my patient's, I can get no information as to the gentleman's name who has been guilty of this breach of professional etiquette, but that "it was the gentleman who attended to the leg at first". I have also made two distinct applications for the gentleman's name to the Warden of your hospital, but unsuccessfully. I have, therefore, to point out—1. That a fractured leg was sent out of the hospital with nothing but a simple bandage on; 2, That a gentleman while on duty for the hospital has interfered with the patient of a private practitioner, and has been guilty of a breach of professional etiquette; 3. That I have applied to the Warden, and been unable to obtain the name and status of the gentleman who was on duty at the hospital during the evening of Wednesday, February 11th.

Trusting that I am now in the right path to obtain the desired information,

I remain, gentlemen, Chas. J. Elwin.

St. Bartholomew's Hospital, London, E.C., February 26th, 1874.

Sir,—Your letter of the 19th instant, addressed to the Governors of this hospital, has to-day been laid before the Committee of Almoners, by whom I am instructed to inform you that Mr. E. Jepson was the house-surgeon who attended to the patient therein referred to when brought to the hospital on the 11th instant.

I am, Sir, your obedient servant,

C. J. Elwin, Esq., 6, City Road. W. F. Cross, Clerk.

6, City Road, E.C., February 27th.

Sir,—Having, after repeated applications to the authorities of St. Bartholomew's Hospital, at last ascertained from the Committee of Almoners that you were the house-surgeon on duty at the hospital on February 11, when Mr. M—— of Old Street was taken to the hospital with a fracture of the leg, but refused to remain as an in-patient, I have to ask you to explain the circumstances under which you, while acting as house-surgeon for the hospital, on the evening of February 12th attended at the house of Mr. M——, and, although I was in attendance at the time, you, without communicating with me, thought proper to interfere with my applications and to set the leg.

Awaiting your reply,
I am, Sir, yours,
Mr. E. Jepson, St. Bartholomew's Hospital.
CHAS. J. ELWIN.

A QUERY.

SIR,—The Committee of the Bristol Lunatic Asylum are in want of a "person" of "high character and experience" as Assistant Medical Officer, to whom they offer £80 a year.—A Board of Guardians in the country require a Master of a Workhouse, at £140 yearly.

Why should an Assistant Medical Officer of "high character and experience" be worse paid than the Master of a Workhouse?
I am, etc.,
A HOUSE-SURGEON.
March 1874.

NOX.—Certainly; any registered practitioner is entitled to make a *post mortem* examination for a coroner, and to give evidence at the inquest.

NEW MEDICAL AND CHEMICAL TERMS.

SIR,—Having been five and thirty years in full practice as a general practitioner, and at the same time wishing to keep pace with the times, I find myself sometimes unable to do so, in consequence of the numerous un-dictionary words now employed. I consequently ask if you will, through your widely circulating columns, kindly enlighten me, and I have no doubt many others, whether there is, or is likely soon to be, any little work which will include those words which I cannot find in my present dictionaries, including Fowler's medical one, etc. (1860).

The new and absurd word *aspiration* is a stumbling-block to many, and is, I fancy, of French origin. The English of it is "suction"; and as the French for suction is *sucement*, as well as *aspiration*, I think it would be the better word of the two, as less likely to puzzle an English reader, who would naturally regard aspiration as an English word, on which his dictionary would throw no light. Paresis, again, is a new word not in the above dictionary. There are also numerous new chemical words, of which even my little knowledge of Greek will not aid me in discovering either the derivation or meaning; and I am sure, sir, I am only expressing the feelings of thousands of my medical brethren, as well as of pharmaceutical and chemical students, etc., when I solicit your aid and co-operation in inviting the attention of competent persons to this important subject, with a view of inducing some one to publish, say, a cheap compendium to the present medical and chemical dictionaries, limiting it, perhaps, to those new words which have been coined during the last twenty or thirty years, especially the new chemical names, which, even to middle-aged practitioners, have neither sense nor meaning. Take *aldehyde*, for example. Is it a compound of two elements—one of which is met with in Aldgate, and the other in Hyde Park? or what is it? Again, I meet with *chlorodyne*, and, with my little knowledge of Greek, try to trace its derivation from χλωρὸς, "green", and ὀδύνη, "pain"; but, as this does not satisfy me, I add the letter T to it, and make "green paint" of it; but what it has to do with the meaning of the word I know no more than I do of its secret composition, which has always prevented me from prescribing it. The new ether and alcohol compounds, and their (to many) outlandish names, require some little explanation as to why they are so called. Formyl and croton-chloral-hydrate also may be included.

Apologising, sir, for thus trespassing upon your pages, I sincerely hope you will be the means of bringing some one forward to publish a cheap little work (Medico-Chemical Lexicon), containing simply the latest coined words, as an addendum to our present ordinary medical dictionary, for I feel sure it will be well patronised by the many who are anxious to keep pace with the present times. Would you also kindly suggest that the coiners of new words would, in future, make them a little more expressive than the "green pain" or "paint" one; say, as expressive as the word "church", from οἶκος (oikos), the House; κύριου (kuriou), of the Lord; which, reversed, makes kuriou oikos, hence kuri-kos, kurkos; Scotch kirk (k hard); English church (k soft).
I am, etc.,
A. B.
Spalding, March 1874.

HOSPITAL OUT-PATIENT REFORM ASSOCIATION.

SIR,—I beg to enclose two letters received—one from Dr. Lush, M.P., and the other from Dr. Hawksley—with reference to the meeting of the above Association. The importance of the subject of hospital reform, and the well known ability of the writers, must be my excuse for asking you to give to these letters the wide circulation which will be secured by insertion in the columns of the JOURNAL.
I am, etc.,
H. NELSON HARDY.
21, Fitzroy Square, W., March 21st, 1874.

"Fisherton House, Salisbury, March 18th, 1874.

"Dear Sir,—I regret very much that I was unable to attend your meeting today. Your letter followed me about; but, though I gave Dr. Rogers to understand my intention to be present, I found I could not do so. I fully hope, however, that the present system of hospital management will, ere long, receive amendment, especially in the out-patient class. It is the same in county as in the metropolitan hospitals, and the evil is crying.
Faithfully yours,
"J. A. LUSH.
"H. Nelson Hardy, Esq."

"6, Brook Street, Grosvenor Square, W., March 18th, 1874.

"Dear Dr. Meadows,—I intended accepting the kind invitation of the Hospital Out-patient Reform Association for this evening, and offering a few observations on the question you meet to discuss: I fear, however, that I shall not be able to attend, and I therefore trouble you with the following remarks, which perhaps you will have read if you think well to do so. The question has been constantly before us at the Charity Organisation Society, and I believe there is perfect unanimity of opinion in that body that reform in the administration of medical charities is urgently demanded. The reasons for this, I think, may be arranged under these heads.

"1. The demoralising effect on a large body of the community is, that medical relief can be had for the asking, without investigation and discrimination. From the governor's letter to begging for food, wine, etc., is an easy transition: thus the small beginning of the dependent and pauper spirit and practice.

"2. The injury done to the deserving by the overcrowded state of the waiting-rooms, caused by the presence of so many who have no right to be there.

"3. The imposition by the charities on the benevolent public when exaggerated and misleading accounts are published week by week of the numbers *relieved*; it should be written, of the numbers *injured*.

"4. In the case of out-patient departments of general hospitals, the injury inflicted on the *in*-patients by the foul air introduced from the waiting-rooms.

"In illustration of the first head, I wish to mention that yesterday I happened to see my coal-merchant, a man remarkable for good sense, and, mentioning the matter of relief to him, he said, "I see constantly the ill effect of indiscriminate charity. The medical man in my neighbourhood, who is a very kind-hearted man, by accident met me the other day, and, seeing that he looked ill, I inquired how he was. 'Oh!' he said, 'I have been up all night with a poor woman in —— Court.' 'Ah!' I said, 'I fear you will get little reward for your work there.' 'No,' he replied, 'they are so poor that I must look upon it as a work of charity.' 'Where,' said I, 'is it? because I know some people in that court.' 'It is Mrs. ——, No. —, —— Court.' 'Indeed, you astonish me,' I said; 'that woman ought not to be an object of charity; her husband is in my employ, and earns regularly £2 17s. a week.' The other day we were a little pressed for want of men at the wharf, and, seeing a great hulking fellow doing nothing, who was known to me, I called to him to come on for a job. 'No, thank you, sir,' was his reply, 'my old woman brings her 3s. 6d. to-night, and that's enough for me.'" A third instance he mentioned of a stone sawyard near his wharf, where two men had been employed for fifteen or sixteen years, earning their six or seven pounds a week. Their employer adopted steam to do his work, and these two men were turned off. In a short time they were found to be in the workhouse as dependents upon charity, though for years they had been earning each nearly three or four hundred a year.

"Now, these examples were given to me in a few minutes by one practical man, and are they not indications of the immense improvidence and indifference to honest pride affecting the mass of our artisans and labourers? Is it, then, benevolence or cruel neglect to facilitate the progress of such a state of things? I doubt not, the latter.

"Poor-law dispensaries should efficiently provide for the destitute; provident dispensaries for those who are too poor to pay the ordinary charge of medical practitioners; and hospitals should receive all the severe cases of illness or accident which to their receiving officers appeared right and necessary, but out-patient departments should be abolished. The Poor-law and provident dispensaries would efficiently keep their wards supplied with suitable cases.

"Believe me, my dear Dr. Meadows, yours sincerely,
"THOS. HAWKSLEY."

ANEURISM OF ARCH OF AORTA.

Patient cannot swallow food
So well, he says, as once he could.
Œdema, pain, sometimes pulsation,
Something wrong with Respiration.
Five may-be causes for dyspnœa;—
Veins, vagus, bronchus, lung, trachea.
If these are by the tumour pressed,
The breathing will be much distressed.
Guy's Hospital Gazette.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, March 20th; The Ayr Advertiser, March 19th; The West County Lantern, March 14th; The Scotsman, March 19th; The Brighton Examiner, March 17th: The Leicester Advertiser, March 21st; The Blackburn Standard, March 25th; The Hull Evening News, March 20th; The Sunderland Times, March 20th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—
Sir William Fergusson, Bart., London; Dr. Murchison, London; Dr. J. F. Payne, London; Surgeon-General Mouat, London; Mr. H. Nelson Hardy, London; An Associate; Mr T. G. Horder, Nenthead; Mr. James Sedgwick, Boroughbridge; Mr. H. F. C. Eagle, London; Surgeon-Major Gore, Ballinglass; Mr. T. Watkin Williams, Birmingham; Mr. Fowler, Bath; Mr. Board, Bristol; Dr. Sisson, London; Mr. Southam, Manchester; Mr. Hindle, Over Darwen; Mr. Fairlie Clarke, London; Dr. Wardell, Tunbridge Wells; Mr. Wheelhouse, Leeds; Our Birmingham Correspondent; Dr. J. W. Burman, Devizes; Mr. Jackman, Swimbridge; Dr. Stephen Mackenzie, London; Mr. E. L. Davis, Carmarthen; Our Paris Correspondent; Mr. W. M. Banks, Liverpool; Mr. Oakley Coles, London; Dr. J. W. Moore, Dublin; Mr. Eastes, London; M.R.C.S.E.; Dr. W. Ainslie Hollis, London; Dr. Shingleton Smith, Bristol; Dr. Goodridge, Bath; M.D.; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Millen Coughtrey, Auckland, New Zealand; A Correspondent; Mr. Rushton Parker, Liverpool; Dr. Joseph Hutchinson, Brooklyn, New York; Dr. T. O. Dudfield, Kensington; Dr. Douglas Maclagan, Edinburgh; Dr. F. T. Bond, Gloucester; Mr. Morton, London; Mr. W. H. Michael, London; Mr. Whitwell. Shrewsbury; Mr. Walter W. Reeves, London; The Secretary of the Pathological Society; Dr. Rutherford, London; Dr. Hughes Bennett, Nice; Dr. Wood. Philadelphia; Dr. Marcet, Nice; the Secretary of the Early Closing Association; Mr. W. Tallack, London; Mr. Marsh Jackson, Smethwick; Dr. C. O. Baylis, Tunbridge Wells; Dr. G. H. Kidd, Dublin; Dr. H. Gervis, London; Mr. D. H. Finlay, London; Dr. Boyes, Hastings; Dr. Wrangham, Wragley; Dr. Sankey, Cheltenham; Mr. T. Cuddeford, London; Mr. Pillischer, London; Dr. J. Rogers, London; Dr. D. T. T. Maunsell, Dublin; Mr. Teevan, London; Mr. V. Jackson, Wolverhampton; Dr. Trollope, Hastings; Dr. Robinson, Dublin; Dr. Mapother, Dublin; Dr. C. F. Moore, Dublin; Our Own Correspondent, Dublin; Dr. J. M. Fothergill, London; Mr. Hughes, Carmarthen; Mr. Liddle, London; Dr. Rumsey, Cheltenham; The Secretary of the Obstetrical Society of London; Dr. Edis, London; The Secretary of the Microscopical Society of London; The Secretary of the Social Science Assoociation, London; L.R.C.P.Ed.; Mr. R. Robinson, London; Mr. Seabrook, London; Dr. Hunter, R.N.; Mr. R. A. H. Wood, Liverpool; Dr. W. Squire, London; etc.

BOOKS, ETC., RECEIVED.

The Sphygmograph: its Physiological and Pathological Indications. By Edgar Holden, A.M., M.D. Philadelphia: Lindsay and Blackiston. 1874.

OBSERVATIONS
ON
HARE-LIP AND CLEFT PALATE.

By SIR WILLIAM FERGUSSON, Bart., F.R.S.,
Surgeon to King's College Hospital.

[*Concluded from page* 404 *of last number.*]

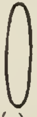
It is now more than thirty years since I proposed the application of the practice of myotomy in the operation for cleft palate. Excepting in a few instances, objection has never been taken to the theory. There are instances where division of the levator palati muscles need not be resorted to, and union may with confidence be anticipated, but these are the exceptions; and doubtless it is owing to this preliminary step, that I can boast of a success well nigh equivalent to the usual result in hare-lip operations. Half-a-dozen instances of non-union are all that I can number in between two hundred and three hundred operations. The result contrasts favourably with that of Roux, who, as is recorded, was well content with success in two out of every three cases on which he operated—amounting to about one hundred and twenty operations in all. My theory, I maintain, is as sound as that in the operation for strabismus; yet I congratulate those who have succeeded without its application, and I freely admit that there are instances where the operation may, and does, succeed without this preliminary to the ordinary process. Since the above date, when I drew attention to the remarkable success of Dr. Mason Warren and some other American surgeons in this operation, particularly that of Warren, in dealing with cleft in the hard palate, I am not aware of any material modification in regard to the mechanical process of closing the cleft in the soft palate, but in cleft in the hard palate there have been many; and, in other matters respecting the operation, I know of no more interesting story than that of the gradual steps of improvement which have taken place, in regard to this operation, within my own experience of professional practice.

In early days, more than forty years ago, I believe it was the custom, in all cases, for the surgeon to sit or stand in front of the patient, with a light on the palate as favourable as could be secured. The strain on the surgeon's neck, back, and hands, was considerable; but, worst of all, he usually got his face so bespattered with blood that his features could scarcely be recognised. In the course of time, the operator gradually edged to the side, until, like the dentist, he came to do his work standing on the patient's right side, whereby he avoided the splutter incidental to such a spasmodic ordeal as the patient was of necessity subjected to. In my own practice, I soon preferred the recumbent position for the patient, whilst standing on his right hand. Every facility was given to sit up, spit, and gargle with cold water. The necessities for both these means of relief seemed urgent; more so, perhaps, in the operation which I myself practised—viz., the division of the levator palati muscles—a step which induced a more free escape of blood than simply paring the edges of the gap. Then came two inestimable advantages—introduced by Mr. Smith of St. Bartholomew's Hospital—the gag and chloroform.* The association of these two agents seems imperative; and, by their aid, Mr. Smith proved that the operations on the palate could be performed in childhood as readily as after puberty. With such adjuncts, I have myself operated at all ages, from one year up to adult life. Chloroform without the gag would be worse than useless; the gag, without chloroform, would, in my opinion, add to the sufferings and miseries of the patient. Until I recognised the advantages of the gag, I supposed that the operation under chloroform would be specially hazardous; but when I found that, with the use of the gag, the blood could be readily sponged away, and the proceedings otherwise much facilitated, I fancied that the operation had reached a stage of perfection which left little to be desired as regarded art and science. With good assistants, skilled in chloroform, the use of sponges, and otherwise, it seemed to me that little was left for the surgeon to devise in regard to this difficult and formerly painful proceeding.

I claim to be the first in this country to have drawn special attention to Dr. Mason Warren's method of dealing with fissure in the hard palate. The proposal of that surgeon to peel the soft tissue off the bone on each side of the fissure in the hard palate has been extensively acted upon with varied modifications, but with very indifferent success. For myself, I may say that I have tried perhaps every plan that has been suggested, but I have been sorely mortified with the results. Some cases, after one or more operations, have turned out admirably; but in a large number the result has been such as to have made me despair of closing these openings by operative means. There are instances where such hopes should never be entertained, owing to the wideness of the gap and configuration of the parts; but there are probably as many as one half of the cases amenable to operation which have such slight deficiencies in the hard palate, that I have always acted on the idea that closure in the mesial line would or might be effected here as in the soft palate. Experience led me to give up the plan of Mason Warren of trying to close the gap in both soft and hard parts at the same time, even in instances where the defect in bone was but slight. For many years latterly I have ceased to meddle with the front part of the gap where the bones have been implicated, reserving the attempt for a subsequent operation; but, to facilitate the approximation of the margins of the soft palate, I have often followed the plan practised by Roux, of making transverse incisions, so as to divide the soft parts from the posterior margin of the osseous palate. Whilst I have had reason to feel satisfied with this step, I have in no way found my efforts to close the hole in the hard vault more successful. From time to time, on subsequent operations for the express purpose of closing such openings, I have been highly satisfied with Mason Warren's plan of separation—that of paring the soft tissue from the hard, by working from the margins outwards to the alveoli, sometimes, in addition, making the lateral incisions proposed by Mr. Field of Brighton, or by making these lateral incisions first, and separating the soft tissues towards the mesial line. In some instances, I have had good results from a sort of gliding process, facilitated by separating the front end of one of the flaps from its connections; but, altogether, the success of these operations has not been equal to my anticipations or desires. Since using chloroform, I have been solicited by patients, again and again, to try further operations, but the results have led me to give little encouragement to such proceedings. Latterly, however, a dawn has opened on my hazy views in this respect; and my chief object in putting these observations on cleft palate together is to draw attention to my latest experience on the subject.

My impression is, that the frequent failure in this latter kind of operation is induced by the contraction of granulations, whereby the lateral portions are so drawn towards their original position, that the union in the central line is either prevented or broken, and thus the gap remains when the side-flaps have resumed their original positions. An idea came into my mind years ago which, however, I thought so wild, that I could not dare to bring it into practice. Repeated failures, however, by usual methods, brought it more forcibly into my thoughts, and at last I resolved to put it into execution. My project was that, instead of making the separation between the soft tissue and bony palate, for a quarter of an inch or so, I should divide the palate, soft tissue, and bone, about a quarter of an inch from the margin of the gap on each side, cutting the soft tissue in the roof of the mouth with a scalpel, and the bone, with mucous membrane above in nostrils, with a chisel, by means of which I could push the margins towards the mesial line; so that, having been previously made raw by removing the mucous membrane, they might be brought into apposition and held so by stitches.

This project was carried into execution in King's College Hospital on November 22nd, 1873, in the following manner.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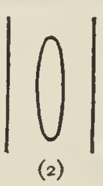
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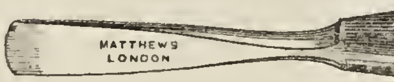

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J. H., aged 18, had the soft palate closed two years ago; a small aperture remained in the hard, which had been twice operated on unsuccessfully by the ordinary proceeding. The patient was placed under the influence of chloroform, and the mouth held open by Wood's gag. The aperture was about this size (1); the edges were made bare by dissecting off the mucous membrane; then, by means of a small scalpel, an incision was made on each side to this extent (2). The back part of these wounds penetrated the soft palate, and in front they were close to the bone. Then the point of a chisel, like this (3), was forcibly, but carefully, pushed upwards through the bone into the nostril through each wound, and, by slight lateral movements of the blade, each lateral portion could be readily made to meet the other in the mesial line, whereby the raw margins made at first could be placed in apposition. The parts were then held together by a single stitch introduced in the usual way, passing, on each side, through the soft tissue, so that it might remain steadily in one place. At the conclusion, the conditions seemed much as after the operations formerly effected. Subsequently, granulations filled the lateral gaps as on previous occasions; but, when the stitch was removed, union in the centre seemed firm, and was not disturbed by any dragging power, such as I supposed had, in earlier operations, drawn the flaps upwards and outwards towards the bone. The

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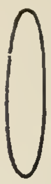
* An admirable paper on these adjuncts was written by Mr. Smith in 1869, and published in the 51st volume of the *Medico-Chirurgical Transactions.*

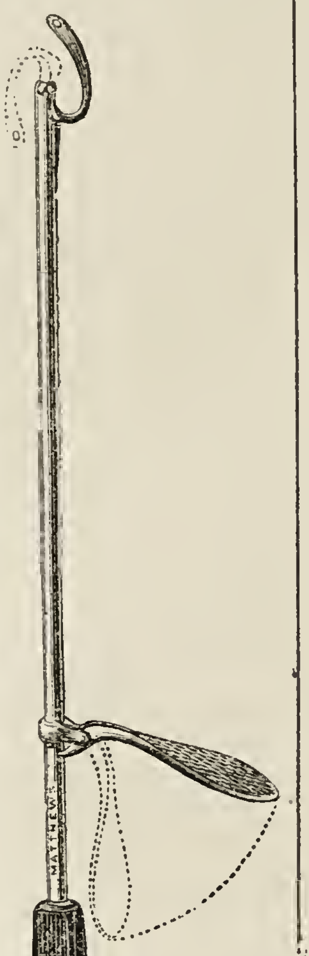


(4)

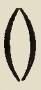
result was perfect, and I have heard nothing to the contrary since the patient left the hospital. On the same day, I repeated similar proceedings on a patient who had had a successful operation on the soft palate, but on whom I had been unable, after four different attempts to close a fissure in the hard. Here the opening was larger, being about this size (4). Similar steps were followed, and, to all appearance, during the first eight days, with similar results. Two stitches were employed, but, on removal, the edges, where one had been, seemed to fall asunder. Two days afterwards, a new stitch was put in, by means of an ordinary aneurism-needle, and the margins made raw by a gentle scrape. The hole was thus closed; and, on removal of the stitch, eight or ten days later, union was perfect. Since this patient left the house, a small separation has taken place, which has left an opening a little larger than the point of a probe. I have recently had made, by Matthews Brothers, a modification of a most ingenious needle suggested long ago by my friend Mr. Brooke of Westminster Hospital, for introducing stitches into the soft palate in operations on cleft in that part. The point of his needle was sharp; and I have often used it with much satisfaction. The point here, it will be observed by the figure (5), is blunt, like that of a common aneurism-needle. The dotted lines indicate the course of the point, as the projecting handle at the side of the shank is pressed.

Soon afterwards, a third case came under notice in private practice, wherein, after closing the soft palate, I had failed to succeed with the hard, by the ordinary proceeding. Here the opening was midway in size between the cases above related. The steps were much the same as in the first, excepting that I passed the threads through the lateral apertures without fixing it in the soft tissue. After the knots were tied, they never slipped from their position. These were left some days longer *in situ* than in the previous cases, and on removal, union in the mesial line was perfect. This union, I have recently heard, remains perfect.

A fourth case has recently come under my care at King's College Hospital. The gap here was larger than in the three preceding cases. It was an inch long, by more than a quarter of an inch wide. The lateral incisions were of proportionate length, and when the parts were brought together, a gap into each nostril was visible. Here three stitches were used, and, as in the case last related, they were passed through the side incisions, without piercing the soft tissue.



(5)

A fifth case is now under notice. Here the ordinary operation was performed on the soft palate in June 1873; and the front part, which involved a small portion of the hard palate, was left untouched, in the conviction that it would be better to leave it alone until a future date. The aperture left was at the end of the healing process, of this  size. Here the scalpel and chisel were used as above described, and the parts were satisfactorily placed for union in the mesial line.

From the experience already obtained, as also from careful consideration of the subject, I feel justified in calling attention to this addition to what is already more or less familiarly known to those who have studied this complicated subject. At first thought, several strong seeming objections arise. It might be doubted if the osseous palate could be cut and moved in the way described. If an experiment were made on a roof of bone in the natural condition, it would be impossible; for, if the chisel were pushed through the bone a little on each side of the mesial line, it would be impossible to move the intervening portion towards the middle line, because the space is already filled up. This objection does not hold, however, in the malformation; for the space is not filled up, and the vacancy permits the osseous margins to be approximated. Then, division of bone on the two sides, and breaking the front part of each, seems so rude, rough, and destructive, that the idea arises that caries or necrosis might ensue. But in reality the process is, in my opinion, less hazardous than when the flaps of soft parts are dissected or forcibly pushed or drawn off the bone. Besides the fact that these parts do not always unite, one flap or both will occasionally slough, and so things are rendered worse than ever.

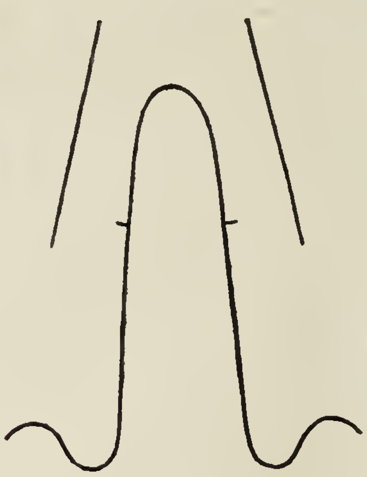
In favour of the proceeding about which I now write, I can state from experience that the loss of blood is much less; and on that account there is less trouble in mopping out the pharynx, and consequently less hazard in the use of chloroform; that the tissues on the lower surface of the bones are not so much disturbed or divided as by the older process; that the periosteum and their tissues below are less disturbed than otherwise; and that, from all these circumstances, there seems less risk of sloughing of the semi-detached parts.

As to the healing of the lateral wounds, I am of opinion that the gap will invariably be closed, and that in the bond of union there will be a firm cicatrix of soft tissue, and possibly bone; that the vault of the mouth will be as firm as in a normal condition, and probably firmer than where a fortunate result has followed the process of Warren, Field, or Langenbeck.

These observations apply solely to instances where the surgeon, in a first operation, has not attempted to close the gap, or has failed in a design to secure union throughout. They will apply, however, with equal, even greater, effect to instances where heretofore, in my own experience, I have left the front part of the cleft untouched. I remember scores of instances of the kind, wherein I now feel confident the whole gap could have been closed by the process above described, with, as I imagine, as much success as attended the operation on the soft palate. In cases of defective hard palate, after the usual preliminaries, and having bared the edges of the gap in the front, in hard as well as in soft, I would now make the additional wounds with scalpel and chisel, as above recommended, thereby hoping to avoid a second operation by doing all at once, under the beneficial influence of chloroform.

Since the above was written, I have had an opportunity of putting these latter views into execution. A youth of eleven years of age, on whom I had operated soon after birth for wide hare-lip, was brought under my notice, with a fissure extending from the lip to the uvula. A year ago, I had advised delay of a proposed operation on the gap in the soft palate, which was very wide. Now, I thought I should venture to test the proposal in an unusually severe case. Under chloroform, the usual incisions for dividing the levator palati on each side were first made; then the edges of the gap were pared as far forwards as to within half an inch of the front; next the scalpel and chisel were used in the way described; and, finally, six stitches were introduced—two through the hard part, without piercing the tissue; and four through the soft parts, in the usual way.

This diagram (6) in part illustrates the proceeding. The little dot on each margin shows where the soft palate and bone join, and the line at each side indicates where the scalpel was applied, and, it may be supposed, before the chisel was introduced to prise the parts towards the mid-line. Unfortunately, the first two stitches slid together, so that practically they acted only as a single one. The effect was, however, highly satisfactory. There was no tension in the front of the gap in the soft palate. The approximation of the bones took off all drag, such as is common under ordinary circumstances; and the result has been equal to my anticipations. The whole of the gap in the soft palate has united, and even a considerable part in the hard. With another operation in front—a repetition of this new process—I am convinced that the gap may be closed up to the alveolar ridge. I have no doubt whatever that, in instances where there is only a slight fissure in the hard palate, the surgeon, by use of the chisel, will thus be enabled to close it, and that in the soft with a certainty hitherto very questionable.



(6)

In my anatomical knowledge of such malformations, there is one condition which I fancy might prevent these views being carried into effect. In the generality of severe cleft in the hard roof, the lower and back part of the vomer is incomplete; but in some cases the vomer is entire, although perhaps swayed to one side; and it remains attached by its lower margin to one side of the hard palate throughout. Here would be a difficulty which might puzzle; for, although the chisel might permit the approximation of the edges, it would be difficult to introduce stitches; but even here there would be a redeeming quality in the new process, for pushing the parts to the mid-line might lay them so together that, though union should not occur, they would lie so close that a fissure might elude ordinary observation. In one of the cases above recorded, I have found that entire union in the mid-line has really not taken place. The margins are, however, in such close approximation, that the want of union can be ascertained only by slipping the point of a probe through the suspicious-looking part.

With these remarks, I leave the subject for the present, under conviction that I have touched new ground in a most complicated field of anatomy and surgery, and in sincere hope that I have added to, if not completed, the power of surgery in such cases of malformation.

THE CROONIAN LECTURES
ON
FUNCTIONAL DERANGEMENTS OF THE LIVER.

Delivered at the Royal College of Physicians.

By CHARLES MURCHISON, M.D., LL.D., F.R.S.,
Physician and Lecturer on Medicine, St. Thomas's Hospital.

LECTURE I.—*Concluded.*

Notice of Dr. Croone.—Present Notions as to Functional Derangements of Liver unsatisfactory.—A. FUNCTIONS OF THE LIVER IN HEALTH. *Historical Sketch; Galen's Views; Obsequies of Liver by Bartholin; Modern Views; Functions of Liver threefold.* I. *Sanguification and Nutrition.* II. *Disintegration of Albuminous Matter.* III. *Secretion of Bile; Composition, Origin, Quantity, and Uses of Bile.*—B. FUNCTIONAL DERANGEMENTS OF LIVER. *Objections to existing Classification; Proposed Classification.* I. *Abnormal Nutrition.* 1. *Corpulence;* 2. *Emaciation.* a. *Deficiency of Bile;* b. *Diabetes;* c. *Other Varieties of Emaciation.* II. *Abnormal Elimination; Symptoms of Retained Bile; Cholestearæmia.*

THE quantity of bile secreted by the liver has been shown experimentally to increase suddenly after a meal, reach its maximum in about two hours, and then gradually decline; while by abstinence it is greatly lessened. In considering the functional derangements of the liver, it is very necessary to remember that the total quantity of bile secreted in twenty-four hours by a man eating an ordinary amount of food is much larger than might be expected from that which is discharged from the bowel. The daily quantity of human bile has been usually calculated from what has been observed in dogs with artificial biliary fistulæ,[*] and the principal results have been as follow. According to Kölliker and Müller, a dog consuming daily about one-fifteenth of its own weight of meat secretes in twenty-four hours 36.1 parts of fluid bile in 1000 parts of its own weight. According to Dr. George Scott, a dog consuming daily about one-fourteenth of its own weight of meat secretes in twenty-four hours 23.13 parts of fluid bile in 1000 parts of its own weight. According to Bidder and Schmidt, a dog consuming daily about one-seventeenth of its own weight of meat secretes in twenty-four hours 19.19 parts of fluid bile in 1000 parts of its own weight. Making allowance for the greater relative weight of the liver in the dog than in man,[†] it follows from these results that the amount of fluid bile secreted in twenty-four hours by a man weighing 160 pounds, and on full diet, is, according to

Kölliker and Müller	66.742 ounces
Scott	42.763 ,,
Bidder and Schmidt	35.476 ,,

Similar experiments have been made on dogs by Nasse, Platner, and Stackman; and from their data Carpenter has calculated that a man weighing 154 pounds should secrete daily about forty ounces of bile. It may be assumed, then, from experiments on the lower animals, that the quantity of bile secreted in twenty-four hours by the human liver is about forty ounces; and this inference is, on the whole, confirmed by what is observed in those rare cases where a biliary fistula discharging bile is produced in the human subject by the ulcerative perforation of the fundus of the gall-bladder, the cystic duct remaining patent, while the common bile-duct is closed; although in some instances the quantity of bile has been less than in health, from the patient being greatly emaciated and taking little food. One case of the nature referred to has come under my own notice, the particulars of which are worth mentioning. The patient was a lady aged 40, whom I saw in October 1869, in consultation with Mr. Curling. Owing to an obstruction of the cystic duct by a gall-stone, the gall-bladder became inflamed and converted into a chronic abscess, which was opened externally. A fistulous opening resulted, which discharged a scanty colourless viscid fluid, and gave exit to several small gall-stones. But after four months, with a fresh attack of biliary colic and vomiting, the concretion in the cystic duct was dislodged and projected into the common bile-duct, which it obstructed, as was proved by the motions becoming white, and by bile being poured in large quantity through the fistulous opening. This state of matters continued for forty-one days (the patient passing white stools, but having scarcely a trace of jaundice), when there occurred another attack of biliary colic and vomiting, during which the concretion escaped into the duodenum, and the flow of bile was restored to its proper channel. In this case, the quantity of bile secreted in twenty-four hours was fully two pints, although the patient did not weigh more than about 130 pounds, and was eating but a moderate diet.[*] I have collected several other cases[†] of a similar nature, in which the results more or less corresponded with that observed in my patient; but I will not occupy time in reading the details. I will merely mention that Fauconneau Dufresne, in his exhaustive memoir upon Biliary Calculi in the Human Subject, observes that from the external biliary fistulæ, to which they now and then give rise, enormous quantities of bile may be discharged, so as to inundate the patient. He mentions one case in which the daily amount was two pints.[‡]

Although the amount of bile secreted daily must vary in different persons, and in the same person under different circumstances, being modified by the quantity and quality of the food, the activity of respiration, and other conditions, it is clear, from the facts now mentioned, that but a small proportion of what is ordinarily secreted is discharged from the bowel. Berzelius found in 1000 parts of fresh human fæces only 9 parts of a substance similar to bile, which, on the calculation that the daily fæces of a man weigh 5½ ounces, would make a total of 24 grains of dried bile in the day.[§] Now, assuming that the liver secretes 40 ounces of bile in the day, containing only 5 per cent. of solid matter, which is considerably below the average proportion, the amount of dried bile secreted in one day would be 960 grains, or forty times the quantity discharged from the bowel. According to Bischoff, man discharges about 46 grains of the (altered) biliary acids by the fæces *per diem;* whilst Voit's estimates give 170 grains as the quantity daily formed by the liver; 124 grains must, therefore, be otherwise disposed of.[‖] Bidder and Schmidt have also found that not more than one-eighth of the sulphur of the bile is normally excreted with the fæces.[¶] The bile-pigment is generally believed to be all voided by the fæces; but this is clearly not the case, if there be any truth in the view already referred to, that urinary pigment is formed from bile-pigment; while the fact familiar to all clinical observers, that the bile-pigment discharged from the bowel is greatly increased by calomel and other aperients, without any corresponding increase of secretion by the liver, also seems to show that, under ordinary circumstances, much of the bile-pigment secreted by the liver is not discharged with the fæces. It may be added that, in carnivorous animals and in snakes, although bile-pigment is secreted in abundance by the liver, the quantity discharged with the fæces is even relatively less than in man.[**]

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[*] On this subject, see Bidder and Schmidt, *Die Verdaungssäfte und der Stoffwechsel*, 1852, p. 186; Dr. G. Scott, Beale's *Archives of Medicine*, 1858, vol. i, p. 218; Carpenter's *Human Physiology*, 7th edition, p. 144.

[†] The weight of the liver of the dog is, from six observations of Bidder and Schmidt, as 1 to 26 of the whole body. According to Quain, the weight of the liver in man is as 1 to 36 of the whole body.

[*] Further details of the case will be found in *Pathological Transactions*, vol. xxii, p. 152.

[†] Dr. J. Hertz of Königsberg has recently recorded the case of a female aged 28, in whom the daily flow of bile from a biliary fistula was eighteen fluid ounces. It is doubtful, however, if all the bile secreted was really discharged from the fistula; for, though the stools were of a pipe-clay colour, the fact that the flow of bile into the bowel was restored after closure of the external opening by needles (but not for six days, during which no jaundice appeared), seems to show that the obstruction of the common bile-duct was not complete. (*Berliner Klin. Wochenschrift*, April 7th, 1873.)

In the twenty-seventh volume of the *Medico-Chirurgical Transactions*, Mr. W. R. Barlow records the case of a man aged 54, in whom, in consequence of a strain, the common bile-duct became temporarily obstructed, probably by a gall-stone. The result was, that in twelve days thirteen pints of fluid accumulated in the gall-bladder. Dr. Owen Rees found, on analysis, that four-fifths of this fluid was pure bile, so that nearly one pint of bile must have been secreted in the day, although the patient was under the antiphlogistic treatment of the day (1844), and had been repeatedly bled from the arm and leeched.

In the thirty-fifth volume of the *Medico-Chirurgical Transactions*, the case is recorded of a female aged 64, in whom the daily discharge of bile from a fistula was only eight ounces. The fistula was the result of a large gall-stone obstructing the common bile-duct, and existed for six months, at the end of which time the woman died from exhaustion. The small quantity of bile in this case was accounted for by the circumstance of the patient being very poor and having insufficient food.

In the fourth volume of the *Transactions of the College of Physicians*, Dr. Saunders recorded the case of a female, aged 66, who discharged a large gall-stone through the abdominal parietes. For three weeks afterwards, "a very profuse discharge of bile ran perpetually from the wound", although the common bile-duct remained pervious.

Haller, in his *Physiology*, alludes to the case of a man with a biliary fistula, from which four ounces of bile escaped in six hours; but there is no mention as to whether or not the common bile-duct was closed. (*Physiologia;* Berne, 1764, tome vi, p. 605.)

[‡] *Mém. de l'Acad. Royale de Méd.*, 1847, tome xiii.

[§] Budd, *op. cit.*, p. 52.

[‖] Carpenter's *Human Physiology*, 7th edition, p. 435.

[¶] *Die Verdaungssäfte und der Stoffwechsel*, 1852, p. 218.

[**] Liebig states, that in the carnivora the whole of the bile is reabsorbed (Budd, *op. cit.*, p. 51). Todd and Bowman also state that in carnivorous animals, "little or no bile is found in the excrements"; and "in the boa, although the liver is large, and no doubt secretes bile freely, the excrements contain no trace of bile" (*Physiology*, vol. ii, p. 259). Although the excrement of snakes, after feeding, does present a brownish colour, and differs from the white masses of uric acid voided at other times, Marcet, who is an authority on the subject, states that the excrement of the boa is "nearly entirely composed of urates". (*Philosophical Transactions*, 1854, p. 279.)

The question then arises as to what becomes of the bile which is not discharged from the bowel; and it is obviously one having an important bearing on the pathology of many cases of jaundice, as well as upon that of many functional derangements of the liver. The reply is to be found in the fact, that a large proportion of the bile secreted by the liver is again absorbed, either by the biliary passages, or by the mucous membrane of the bowel. From what is now known of the diffusibility of fluids through animal membranes, it is impossible to conceive bile long in contact with the lining membrane of the gall-bladder, bile-ducts, and intestine without a large portion of it passing into the circulating blood. The constant secretion and reabsorption of bile is, in fact, merely part of that osmotic circulation constantly taking place between the fluid contents of the bowel and the blood, the existence of which is too little heeded in our pathological speculations[*] and in therapeutics, although attention was called to it eighteen years ago by Dr. Parkes, in the Goulstonian Lectures on Pyrexia delivered before this College. "It is now known," says Dr. Parkes,[†] "that, in varying degrees, there is a constant transit of fluid from the blood into the alimentary canal, and as rapid reabsorption. The amount thus poured out and absorbed in twenty-four hours is almost incredible, and of itself constitutes a secondary or intermediate circulation never dreamt of by Harvey. The amount of gastric juice alone passing into the stomach in a day, and then reabsorbed, amounted in the case lately examined by Grünewald[‡] to nearly twenty-three imperial pints. If we put it at twelve pints, we shall certainly be within the mark. The pancreas, according to Krœger, furnishes twelve pints and a half in twenty-four hours, while the salivary glands pour out at least three pints in the same time. The amount of the bile is probably over two pints. The amount given out by the intestinal mucous membrane cannot be guessed at, but must be enormous. Altogether, the amount of fluid effused into the alimentary canal in twenty-four hours amounts to much more than the whole amount of blood in the body; in other words, every portion of the blood may, and possibly does, pass several times into the alimentary canal in twenty-four hours. The effect of this continual outpouring is supposed to be to aid metamorphosis; the same substance, more or less changed, seems to be thrown out and reabsorbed, until it be adapted for the repair of tissue or become effete." How many times this cycle of movement is repeated, before the bile is extruded from the system, we have no means of knowing; but, in the course of this osmotic circulation, much of the bile appears to become transformed into products, which are eliminated by the lungs and kidneys, while at the same time this circulation assists in the assimilation of the nutritive materials derived from the food.[§]

In the first place, it assists in the absorption of fat. It is a well known clinical fact that, when the common bile-duct becomes obstructed from any cause in man, the fat throughout the body wastes. Many years ago also, it was shown by Drs. Bright and Owen Rees that, in cases of this sort, an unusual quantity of fat may often be detected in the stools.[*] Bidder and Schmidt likewise found that, after applying a ligature to the gall-duct of a dog, the animal absorbed less fat than before, and there was also a diminution of fatty matter in the chyle in the thoracic duct; the amount absorbed was calculated from a comparison of the fat eaten with the amount passed in the fæces.[†] There are also grounds for thinking that the entrance of bile into the bowel facilitates the absorption of the albuminous constituents of the food. The bile neutralises the acid that passes from the stomach into the duodenum, and in doing so causes a precipitate of peptones. It is difficult to say what purpose is served by this precipitation; but some experiments of Bernard led him to the conclusion that gastric juice, when mixed with pancreatic juice and bile, has a more solvent action on albuminous substances than the gastric juice alone.[‡] The passage of bile into the bowel appears also to be in some way essential to the formation of glycogen by the liver. In a number of experiments recently made upon cats, Dr. Wickham Legg found that the formation of glycogen was always arrested soon after ligature of the bile-duct; in one cat, the diabetic puncture of the brain was made on the sixth day after ligature of the bile-ducts, but no sugar appeared in the urine.[§]

But, lastly, there can be no doubt that bile is in part excrementitious, a portion of it being discharged from the bowel, and serving to rid the system of some of the products of waste of the blood and tissues. The biliary acid salts are decomposed, and, by their decomposition, they furnish the free alkali necessary for the precipitation of peptones and the saponification of the fatty matters; they are believed also to become further split up, the taurin, glycocin, and most of the cholic acid returning to the circulation, while a portion of the cholic acid is discharged with the fæces. The cholesterin is also decomposed in the bowels, and the products of its decomposition are discharged with the fæces. According to Dr. Austin Flint, jun., the cholesterin is converted into a substance, which he has discovered in the fæces and designated stercorin; it appears also to be in some way related to another ingredient of the fæces discovered by Marcet and called excretin, although this contains sulphur. Marcet, at all events, made the observation that, in very young children, cholesterin may take the place of excretin in the stools.[||] The bile-pigment also becomes changed in its passage through the bowel; the bilirubin becoming converted into biliverdin. Lastly, the bile, in its passage through the bowel, stimulates the peristaltic action of the gut; and, in virtue of its antiseptic property, which can be demonstrated out of the body, it prevents putrefactive fermentation of the intestinal contents, and the excessive generation of gas.

From what has been stated, it follows that the functions of the liver may be summed up under three heads; viz.:

1. The formation of glycogen, which contributes to the maintenance of animal heat and to the nutrition of the blood and tissues; and the development of white blood-corpuscles.
2. The destructive metamorphosis of albuminoid matter, and the formation of urea and other nitrogenous products, which are subsequently eliminated by the kidneys, these chemical changes also contributing to the development of animal heat.
3. The secretion of bile, the greater part of which is reabsorbed, assisting in the assimilation of fat and peptones, and probably in those chemical changes which go on in the liver and portal circulation; while part is excrementitious, and, in passing along the bowel, stimulates peristalsis and arrests decomposition.

B. Functional Derangements of the Liver.

Keeping in view the functions of the liver in health, which I have endeavoured thus briefly to sketch, we shall be the better able to discuss the symptoms resulting from derangements of these functions. The few medical writers who have described the functional derangements of the liver have, like the late Dr. Copland, arranged them under the three following heads: 1. Diminished secretion of bile; 2. Increased secretion of bile; 3. Secretion of morbid or altered bile.[¶] But this classification fails to recognise the most important functions of the liver; and, from what has been stated, it follows that the quantity and the quality of the bile discharged from the bowel, upon which the classification is based, are no certain tests of the amount and quality of the bile secreted by the liver. The quantity secreted being the same, the quantity discharged from the bowel will vary with whatever stimulates or impedes absorption. Any substance like calomel or podophyllin, or certain articles of diet, which irritates the commencement of the small intestine, will sweep along the bile before there is time for its absorption, and thus cause an increased flow from the bowel, without the secretion by the liver being necessarily increased. Moreover, it must often be impossible to say whether the morbid or altered appearances of the bile in the fæces be due to a vitiated bile, or to changes which the bile has undergone in its passage through the bowel. For these reasons, I have ventured to suggest another classification of the functional derangements of the liver, based upon what are now believed to be the normal functions of the gland, and upon the symptoms which a disordered liver may excite in the different physiological systems of the body.

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[*] The purging of cholera may result from a stoppage of this intestinal circulation—a diminished power of absorption, rather than an increased exhalation from the bowel. Many facts prove that in cholera the power of absorption by the bowel is greatly impaired or abolished.

[†] *Medical Times and Gazette*, 1855, vol. i, p. 333.

[‡] An account of this case, abstracted by me from Grünewald's Latin memoir, will be found in Beale's *Archives of Medicine*, vol. i, p. 270.—C. M.

[§] It may be thought improbable that the liver should secrete from the blood of the portal vein materials which are afterwards to be absorbed by the branches of the same vessel. But it has, perhaps, been too readily assumed, from the comparatively large size of the vena portæ, that it furnishes the materials for bile. Although when one vessel is diseased, its function may, in part, be performed by the other, it is probable that, under ordinary circumstances, the portal vein ministers chiefly to the assimilating functions of the liver, transporting to it the nutriment absorbed by its branches from the stomach and bowels; while the hepatic artery ministers to its secreting function, the biliary acids and bile-pigment being secreted from arterial blood, like urea and uric acid, which in the kidneys are secreted from the blood of the renal artery. This view is based on such facts as the following.

1. In the *Philosophical Transactions* for 1793, a case is recorded where the portal vein passed direct to the vena cava inferior without entering the liver, and yet bile was found in the gall-bladder and intestines. Similar cases are referred to by Dr. Carpenter. (*Principles of Human Physiology*, 5th edition, p. 372.)
2. Many cases are on record where there has been complete obstruction of the portal vein from disease for some time before death, and yet bile has continued to be secreted. In 1856, Dr. Gintrac of Bordeaux collected thirty-four cases of obliteration of the portal vein in man, in not one of which was the biliary secretion interrupted. (*L'oblitération de la veine porte*, Bordeaux; see also Frerichs, *op. cit.*, vol. i, p. 274; and Dickinson, *Pathological Transactions*, vol. xiv, p. 63.)
3. In animals, the portal vein has been tied by Oré and other experimenters, and yet bile has been secreted. The reduction in the quantity may have been due to the febrile disturbance created by the operation, or to the absence of the fatty ingredients of the bile which may be contributed by the portal vein. (Oré, *Journ. de l'Anat. et Phys.*, 1864, p. 556; Carpenter's *Human Physiology*, 7th edition, p. 433; and *Comparative Physiology*, 4th edition, p. 424.
4. Conversely, Kottmeier and Küthe found that no bile was secreted after ligature of the hepatic artery, although it is right to add that Schiff was unable to detect any diminution in a large dog, upon which he had performed the same operation; and Röhrig observed only a slight diminution in the flow of bile after obstruction of the hepatic artery. (Carpenter, *Human Physiology*, 7th edition, p. 433; and Röhrig in Stricker's *Jahrb.*, 1873, part ii.

[*] *Guy's Hospital Reports*, series i, vol. 1, p. 610.

[†] Sanderson, *op. cit.*, p. 505.

[‡] Budd, *op. cit.*, p. 50.

[§] On the Changes in the Liver which follow Ligature of the Bile-ducts. (*St. Bartholomew's Hospital Reports*, vol. ix, 1873.)

[||] *Journal of the Chemical Society*, October and November, 1862.

[¶] *Medical Dictionary*, vol. ii, p. 723.

Classification of the Functional Derangements of the Liver.

I. Abnormal Nutrition.
II. Abnormal Elimination.
III. Abnormal Disintegration.
IV. Derangements of the Organs of Digestion.
V. Derangements of the Nervous System.
VI. Derangements of the Organs of Circulation.
VII. Derangements of the Organs of Respiration.
VIII. Derangements of the Urinary Organs.
IX. Abnormal Conditions of the Skin.

I. *Abnormal Nutrition.*

Functional derangement of the liver may lead directly to (1) an abnormal deposition of fat, or to (2) the opposite condition of emaciation. Indirectly, also, the nutrition of the body may become seriously impaired from derangements of the disintegrative functions of the liver.

1. *Corpulence*, by which so many persons are inconvenienced, owes its origin to different causes. We know that it is very liable to occur in persons who eat much fat and take little exercise. In this case, the lacteals absorb more fat from the bowel than is sufficient to supply the carbon consumed in respiration, or there is a deficient consumption of fat in the system. Many facts, however, show clearly that the accumulation of fat is not due solely to an increased supply of fatty matter in the food, and its absorption by the lacteals. Thus of two persons consuming the same amount of fat, and taking the same amount of exercise, one will accumulate fat and the other will not; and in many persons the accumulation of fat appears to be one of the characteristics of old age, just as other persons, in growing old, wither and dry up. Again: some persons, with every care as to diet, cannot avoid getting fat, while others consuming much fat, as well as saccharine and starchy matter, remain permanently thin. And, thirdly, it is a fact established by many observations, both in man and in the lower animals, that fat is formed in large quantity from a diet containing much starch and sugar, and, from what has already been stated, it seems probable that the liver is mainly concerned in this transformation. Some of the fattest persons I have met with have been females, who have for a long time eaten little or no fat or oily matter, and who indeed have taken very little solid food, but who have contracted the habit of drinking frequently some mixture of alcohol and sugar, such as we find in beer, champagne, and other wines, and who at the same time have taken little exercise, and have suffered from symptoms of deranged liver. M. Dancel relates the case of a young lady, who, finding herself getting stout, and with the object of preserving her symmetry, fasted, as she thought, four days in the week upon champagne and *marrons glacés*; but with this diet she accumulated fat with frightful rapidity, and it was only after returning to a more rational diet that she regained her normal figure.* The tendency to accumulate fat, or the reverse, appears to be due to some constitutional peculiarity transmissible by parents to their offspring, and, from what we know of the functions of the liver, it is highly probable that it is the organ mainly at fault. Possibly, there may be an abnormal proneness, or the reverse, to the conversion of glycogen into fat, in the manner suggested by Dr. Pavy; or, from some derangement of the liver, a larger proportion of the glucose derived from the food may be directly converted into fat than in health; or, in some instances, obesity may be due to a deficient oxydation of fatty matter. Although we can only as yet speculate as to the precise nature of the morbid process, we know that, in animals eating much farinaceous, saccharine, or oleaginous food, the proportion of fatty particles in the secreting cells of the liver is much greater than in animals moderately fed and taking much exercise.

Persons of a corpulent tendency are very liable to flatulence, constipation, heaviness, and weariness after meals, and other symptoms of hepatic derangement. After a time, they lose all appetite for solid food; they complain of great prostration and of sensations of sinking, which prevent their making much muscular exertion, and often encourage them in habits of tippling.

2. *Emaciation* may be induced by functional derangement of the liver in different ways.

a. In consequence of a deficient formation of bile, or its impeded passage into the bowel, the assimilation of fatty and albuminous matters is interfered with. It is true that cases are occasionally met with in which the common gall-duct has been completely and permanently closed by a gall-stone, so that no bile could flow into the intestine, yet the body has been tolerably well nourished after upwards of twelve months.* There are, however, few exceptions to the rule, that permanent closure of the common bile-duct destroys life in the end—usually in little more than twelve months, if not before—by causing a gradual impairment of nutrition. Most patients with obstruction of the bile-duct dislike fat, and cannot assimilate it, the fatty matters of the ingesta being, as already stated, discharged with the fæces. There are also reasons for thinking that the absence of bile from the bowel interferes with the absorption of peptones; while Dr. Legg's observation that ligature of the hepatic duct in animals arrests the glycogenous function of the liver, makes it probable that, when the flow of bile into the bowel is impeded, the nutrition of the body suffers in other ways than by the deficient absorption of fat and albumen. A deficient secretion or a morbid quality of bile may possibly lead to a similar result, though in a less degree.

b. But, secondly, emaciation may result from derangement of the glycogenetic function of the liver. *Diabetes*, in fact, may be said to be in most instances a functional derangement of the liver. It would be out of place here to consider in detail what are now believed to be the various causes of glycosuria;† but, briefly, they may be said to come under one of the three following heads.

1. *Imperfect glycogenesis* in the liver. One function of the liver in health appears to be to prevent the immediate passage into the blood of the glucose derived from the food by converting it into glycogen. Thus Bernard has shown that, if a ligature be applied to the portal vein in an animal, so that the intestinal blood, rich in glucose, reaches the systemic circulation without passing through the liver, sugar at once appears in large quantity in the urine; and, in man, diabetes has been known to occur when the portal vein has been obliterated.‡ Again, if sugar be injected into the crural vein or into the rectum, it appears in the urine; but, if it be injected slowly into the portal vein, the urine will contain none.§ The capability of the liver to convert sugar into glycogen is not unlimited. When, therefore, sugar is swallowed in excess of a certain quantity, it appears in the urine; and the same thing happens when much sugar or starch is taken after long fasting, owing to the rapidity of intestinal absorption; or when, in consequence of disease, old age, injury of the liver, unsuitable food, or some other cause, the glycogenetic function of the liver is impaired. Glycosuria, often temporary, from some of these causes is not uncommon. According to Bence Jones, in half of the cases of diabetes, the disease consists in an arrest of change in the food-sugar.

2. *An increased conversion of glycogen into sugar*, the destruction of the sugar remaining unaltered. In considering the functions of the liver, it was pointed out that the glycogen formed in it was partly converted into sugar, which disappeared in the lungs and muscles, but was probably mainly destined to support the nutrition of the blood and tissues throughout the body. Whatever, then, favours the reconversion of glycogen into sugar to an extent greater than can be consumed in the lungs and muscles, will lead to an excess of sugar in the blood and its appearance in the urine, and will, to a corresponding extent, interfere with the nutrition of the body. Now, whatever quickens the circulation of blood through the liver, particularly in the hepatic arteries, favours the conversion of glycogen into sugar, possibly by increasing the amount of albuminoid ferment already referred to; and accordingly, whatever paralyses the vaso-motor nerves of the hepatic vessels, either directly or indirectly, dilates these vessels, produces an increased flow of blood through them, and so leads to diabetes. The tendency of glycogen to become converted into sugar appears to be moderated in health by some nervous influence, on the removal of which the blood becomes surcharged with sugar, which enters the urine. Thus it is that diabetes is produced by irritation of the roots of the pneumogastric nerve in Bernard's "diabetic puncture", by certain injuries and diseases of the brain and spinal cord in man, by distress and anxiety of

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* Quoted by Dr. T. K. Chambers (*Clinical Lectures*, 1864, p. 547). I have failed to find the case in the *Traité Théorique et Pratique de l'Obésité*, par F. Dancel; Paris, 1863.

* Budd, *op. cit.*, p. 49.

† These are well given by Dr. T. L. Brunton, in his Lectures in the BRITISH MEDICAL JOURNAL for January and February, 1874.

‡ See abstract of Lectures in *London Medical Record* for October and November, 1873.

§ Pavy, *Nature and Treatment of Diabetes*, 2nd edition, 1869, pp. 142-3; and Bence Jones, *Lectures on Pathology and Therapeutics*, 1867, p. 42.

mind, by poisoning with woorari, and by injuries or lesions of the peripheral extremities of the pneumogastric nerve in the lungs, liver, stomach, or intestines.

3. *Diminished destruction of sugar.* If the sugar into which the glycogen formed in the liver is converted did not disappear from the blood, it would necessarily form one of the normal constituents of the urine. Hence it cannot be denied that the pathological presence of sugar in the urine may possibly depend in some cases upon a failure of the conditions under which the normal transformation of the sugar takes place. We are, however, in a great measure ignorant as to what these conditions are. A number of experiments make it probable that the sugar in the blood, under the influence of a ferment, is converted into lactic acid and glycerine, which undergo combustion, and so maintain the animal heat; and it is believed that, when this ferment is absent, the sugar is not decomposed, but is excreted in the urine. Whether this be the true explanation or not, many facts seem to show that diabetes may result from a morbid state of the blood. Thus the introduction into the blood of ammonia, ether, chloroform, or phosphoric acid, is followed by glycosuria; while the introduction of carbonate of soda will prevent it. Prout long ago observed a saccharine condition of urine as not an uncommon result of gout; and glycosuria has been repeatedly observed in cases of pneumonia, whooping-cough, and phthisis, which lead to deficient oxygenation of the blood.

c. It is not improbable that other wasting diseases are in their origin connected with some functional derangement of the liver. When there is derangement of the disintegrative functions of the liver, the blood and fluid effused from it become loaded with effete matter, as the result of which, the nutrition of the tissues is often impaired, and the body wastes. In *phthisis*, again, long before tubercle is deposited in the lungs, there is evidence of deficient assimilation of nutriment and imperfect sanguification—functions, in which we know that the liver is deeply concerned. Again, the protracted purulent discharge which usually precedes *waxy disease* may entail a hasty and imperfect sanguification, resulting in anæmia and the formation of an albuminous material little capable of organisation.

II. *Abnormal Elimination.*

In discussing the functions of the liver, I stated that bile is, in part, excrementitious, although this is probably far from being its chief use in the economy of digestion. In accordance with the belief, still held by many members of the profession engaged in practice, that the chief function of the liver is to excrete bile, the retention of bile in the blood and tissues is believed to give rise to serious symptoms. For example, when such symptoms as delirium, stupor, muscular tremors, subsultus, carphology, paralysis of the sphincters, coma, convulsions, a dry brown tongue, and other symptoms of the "typhoid state" supervene in any case of jaundice, in acute atrophy of the liver, or in the advanced state of cirrhosis, it is customary to attribute them to poisoning of the blood with retained bile. Experiments, also, have been performed on animals, with the object of showing that bile is a deadly poison. But that dogs should die, after injection into the cellular tissue of the bile of other dogs, admits of another explanation than that of the essential elements of bile being a poison. The injection of decomposing mucus would probably produce a like result. Pure bile, from which all mucus has been removed, has been repeatedly injected into the large veins of dogs by Frerichs and other observers, without any cerebral symptoms or bad results ensuing, except that, in some instances, death was caused by the entrance of air into the veins.* The operation has even been repeatedly performed on the same animal, without any lasting injury. But it is scarcely necessary to have recourse to experimental researches on the lower animals for evidence on the matter, and in all these experiments there are sources of fallacy. Every medical practitioner must be familiar with the fact that the blood and tissues of man may be saturated with bile for months, without cerebral or any other symptoms of blood-poisoning resulting, so long as the glandular tissue of the liver is not destroyed, and the kidneys continue to perform their functions. Bearing such cases in mind, it is difficult to believe that bile is a deadly poison.

Reference has already been made to the views of an American physiologist, Dr. Austin Flint, jun., who has written a work to show that the cerebral symptoms, which occasionally occur in jaundice and in structural diseases of the liver, are due to the retention in the blood of cholesterin, or to what he has designated "*Cholestearæmia*".† Dr. Flint regards cholesterin as an excrementitious product of nervous tissue, the elimination of which from the body he believes to be one of the functions of the liver. Having arrived in the bowel, the cholesterin, according to him, is converted into stercorin, and therefore it is not found in the fæces; but, when retained in the blood and tissues, he believes it to be a virulent poison like urea. But if the non-excretion of all the elements of bile do not give rise to cerebral symptoms, it is difficult to understand how these symptoms can result from the retention of cholesterin alone. In cases, for instance, of permanent closure of the bile-duct, cholesterin is not discharged from the liver into the bowel; it does not accumulate in the biliary passages, nor, if it be present in the blood, does it necessarily give rise to cerebral symptoms.

From what has been stated, I think it must be clear that the cerebral symptoms, which occasionally supervene in certain morbid states of the liver, are independent of the non-excretion of bile, or of any of its component parts. The real cause of these cerebral symptoms will be referred to hereafter.

The symptoms usually associated with a deficient excretion of bile are an irregular, usually costive, state of the bowels, the stools being insufficiently coloured with bile, and of a pale yellow, drab, or whitish colour, loss of appetite, a white or yellowish furred tongue, a disagreeable, often bitter, taste in the mouth, especially in the morning, flatulence, a sallow or muddy tint of skin (indicating, unless there be concurrent hyperæmia of the liver, anæmia rather than jaundice), dingy conjunctivæ, languor and disinclination for exertion, frontal headache, dulness and heaviness, drowsiness after meals, great depression of spirits, and sometimes hypochondriasis, and frequent deposits of lithates in the urine on cooling. These symptoms are very apt to be induced, especially towards middle life, by sedentary or indolent habits, the habitual use of rich or indigestible food, neglect of the bowels, great or protracted anxiety of mind, or by a general want of vigour, consequent upon disease of the heart or some other organ; and the tendency to them is in many cases inherited. They are commonly, and perhaps correctly, ascribed to what is called "torpor of the liver"; but the non-excretion of bile may possibly be merely one of the symptoms, rather than the cause, of the morbid state, the real cause being the retention in the system, not of bile, but of those products of disintegration, which it is the purpose of the kidneys to eliminate. At the same time, it is very probable that engorgement of the liver with bile interferes with the normal processes of disintegration of albumen which take place in the gland.

REMARKS ON A CASE OF AMPUTATION.

By JAMES SEDGWICK, M.R.C.S., Boroughbridge.

I WAS hurriedly called on March 4th, 1874, to a farmer, aged 65, living four miles from me, who had just received such a severe injury to the wrist as to necessitate amputation. With the assistance of my friend Mr. Mitchell, when the patient was under chloroform, and after the application of Esmarch's plan of bandage, I amputated the forearm about three inches below the elbow-joint, and had the very great satisfaction of being able to make the skin-flaps, circularly divide the muscles, and saw through the bones, without the loss of a single drop of blood. But, after the arteries, six in number, were all secured, most troublesome venous and capillary oozing continued for between three and four hours, when it apparently ceased, and we were able to close the wound and apply steady and regular pressure.

The patient had influenza, with very frequent bronchial cough and expectoration. He was thin and very pale, and said that for many years no slight wound ever healed by first intention.

On March 6th, the oozing still continued to saturate the bandages; so much so, that in the evening I found it necessary, with the assistance of my partner, Mr. Leadman, to open and clear out the wound. We then applied styptic colloid freely, which at once stopped the bleeding without any further pressure.

Because a blush was visible along the course of the axillary vessels, tincture of iron was ordered every four hours, with frequent supplies of milk, beef-tea, eggs, etc., in small quantities.

As my object is to draw attention to the very troublesome oozing from the stump, after the adoption of Esmarch's plan for bloodless amputation, I will only add that now, March 21st, all risk of secondary hæmorrhage is past; for two days ago the last ligature separated, and the wound is closing rapidly, though for several early days it looked very unhealthy, and has made much slower progress than any other case that I have had in the country.

As Esmarch's plan is yet in its infancy, I thought it right to add my small quota of experience to the mass required to enable us to judge accurately of its perfection; and it certainly is perfect, as far as the comfort of the operator is concerned when he is using his knife and saw. I report my case especially because it was complicated, but trust that the extensive experience of many other surgeons may prove that the hæmorrhage was due to the condition of my patient, and not in any way to Esmarch's plan of bandage.

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* *Diseases of Liver*, Sydenham Society's Translation, vol. i, p. 395.

† *Op. cit.*

THE PUBLIC HEALTH ACT, 1872: ITS DEFECTS AND SUGGESTED AMENDMENTS.*

By W. H. MICHAEL, M.R.C.S.Eng., F.C.S.,
Barrister-at-Law.

THE Towns Improvement Act, the Towns Police Clauses Act, and the Markets and Fairs Clauses Acts were passed in 1847; but general sanitary legislation may be said to have begun with the passing of the Public Health Act in 1848, and the appointment of the first General Board of Health thereunder. This Act was further extended by the Local Government Act of 1858, and subsequently modified by the Amendment Acts of 1861 and 1863. Under these Statutes, Local Boards of Health were established either by order of the General Board of Health, or by adoption of the Acts by inhabitants of various districts, and a large number of local authorities were thus created for the purpose of supervising and improving the public health.

Such was their ostensible purpose, but many were created with the intention not only of doing nothing under the Health Acts, but of avoiding liabilities incident to their districts under other Statutes. This led to a restriction on the adoption of the Local Government Act by any district having less than three thousand inhabitants, and subsequently caused the passing of the 49th Section of the Sanitary Act of 1866, lodging in the Secretary of State for the Home Department, who was then head of the Local Government Act Office, power to compel works of drainage and water-supply to be executed under his order in default of their construction by the Sanitary Authority in any district, where, after due inquiry, it was shown that these works were deficient. But this power extended, patched up, and improved by successive Acts of Parliament in 1867, 1868, 1869, and 1870, was found to be practically inoperative, owing to inherent difficulties in putting it into force, these difficulties being specially administrative and financial. In the meantime, while urban populations were more or less brought under the operation of sanitary law, either by Local Improvement Acts or the establishment of Local Boards of Health, the rural parts of the country were dependent on the provisions of the Nuisances Removal Acts and Diseases Prevention Acts passed in 1855, worked either by Highway Boards as the local authority when such board appointed an inspector of nuisances, or by a committee of inhabitants, or subsequently by Boards of Guardians as the nuisance authority under the altered, it can hardly be said amended, Act of 1860. The provisions of these Acts were so notoriously inefficient, even when aided by the old common law powers of removing nuisances vested in the Courts Leet of Manors, that in 1865 the first of a series of Acts, called respectively either Sewage Utilisation or Sanitary Acts, was passed for the purpose of creating new sewer authorities in every part of the kingdom where the Local Government Acts were not in force. Up to this time, sanitary legislation was, to a very large extent, permissive; and it was only by the Sanitary Act of 1866 that any attempt at compulsion, except as to abatement of nuisances, was enacted by general Statute.

The powers of these newly constituted authorities as to sewage and water-supply were placed in the hands of the vestry of each parish, while the Board of Guardians continued to be the nuisance authority and the authority to execute the Diseases Prevention Acts. The parish became the unit of area, except when a most disastrous power afforded by these Acts was exercised, that of carving out of the parish what was called a special drainage-district. By this legislation, three bodies were constituted to do the work which had before been discharged by one. Thus, the care of highways was left to the Highway Board, the duty of attending to sewers, etc., was given to the vestry, and the supervision of nuisances was transferred to the Board of Guardians. It will not be too much to say that these Acts were a failure. The amount of money expended by local boards and by sewer authorities, if a reliable return could be obtained, would show how immensely short of the requirements of public service has been the expenditure of money, and the result is seen in the high death-rate still prevailing in many parts of the country. Nor is this parsimony to be wondered at. Joined to very imperfect knowledge, in many cases joined to a profound disbelief, of the value of sanitary work, and a not unnatural impatience of taxation, was the fact that the persons who were to administer the Acts would have to pay the cost, and these were the persons who were the most adverse to expenditure of money for such purposes. Is it, therefore, any matter for marvel that, wherever it was possible to avoid spending money, money was not spent? The history of the seven years from 1865 to 1872 would show that inaction was the great rule of the newly constituted sanitary authorities. They excused themselves by the constant reiteration of the cry, that it was the duty of the Government to point out how all difficulties in sanitary matters could be avoided; and, in reply to every incitement to action, it was always insisted that in the next Session of Parliament some wonderful Bill was to be introduced by the Government and carried through by the Legislature, which would solve all questions of dispute and make all matters straight for hesitating sanitary authorities in the future.

There are no means available by which it can be determined how much money has been expended by Local Authorities; but the following table gives an abstract of moneys sanctioned to be expended by Local Authorities under the provision of the Public Health Act (1848), the Local Government Act (1858), the Sanitary and Sewage Utilisation Acts, and the Public Health Act (1872).

Borrowed by Local Boards of Health under the Public Health Act (1848) from 1848 to 1858				£2,956,178	0	0
Sanctioned to be expended by Local Boards under the Local Government Act (1858) and the Public Health Act (1872).						
1859	£266,905	13	6			
1860	280,259	16	4			
1861	367,214	0	0			
1862	314,568	5	6			
1863	236,792	0	0			
1864	496,513	6	0			
1865	528,446	10	10			
1866	870,355	10	0			
1867	668,488	8	0			
1868	588,394	0	0			
1869	648,286	2	11			
1870	736,225	17	8			
1871	1,212,890	0	0			
1872	572,721	0	0			
1873	966,622	0	0	8,748,682	10	9
Sanctioned to be expended by Sewer Authorities under the Sanitary and Sewage Utilisation Acts.						
1867	24,000	0	0			
1868	35,028	0	0			
1869	17,220	0	0			
1870	48,920	0	0			
1871	53,691	0	0	178,859	0	0
Sanctioned to be expended by Rural Sanitary Authorities under the Public Health Act (1872).						
1872	29,950	0	0			
1873	20,350	0	0	50,300	0	0
				£11,934,019	10	9

It will be seen by these figures that, during the whole period of five years, during which the sanitary organisation of the country districts was in the hands of the vestries, only £178,000 was expended by them for permanent works.

Strongly urged by this and a kindred association, the Government of Lord Derby, in 1867, appointed a Royal Sanitary Commission to inquire into the working of the sanitary laws. And this Commission, having taken evidence, presented to Parliament a very valuable report as the result of its labours, and, following some of its recommendations, the Public Health Act of 1872 became law. Before this, and during the sitting of the Commission, it was impressed on the then Government that no inquiry could be satisfactory which did not take evidence locally as to the operation of the Sanitary Acts in various parts of the country, in order specially to determine what were the deficiencies under the existing system most urgently calling for remedy. Besides this, testimony of impartial witnesses was much needed as to what should be the area of administration, how boundaries at present existing should be either maintained, extended, or curtailed, what would be the most fit body for administering the law, and how a staff of officers might best be organised and maintained, which would be independent in action and yet subject to control, and how such a general supervision of health authorities might be secured as would ensure efficiency without unduly taxing the ratepayers or owners who would have to bear the costs of the various sanitary measures deemed necessary in any district, and this without injuring the exercise of local action. Besides these, were questions of the equalisation of local taxation, intermediate authorities, and the protection of rivers from pollution, all of first importance to the future of public health legislation.

Upon one matter lying at the basis of successful action, there appeared to be a general consensus of opinion on the part of all who had given attention to the subject, namely, that a consolidation of the sanitary laws was of primary necessity. The Public Health Act, 1848, incorporated provisions of the Towns Improvement Clauses Act and Towns Police Clauses Act; then came an Act of 1849, with some provisions affecting Local Boards, the Nuisances Removal Act, 1855, and

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* Read before the Metropolitan Counties Branch.

Diseases Prevention Acts of the same year, altered and extended by the Acts of 1860, 1863, and 1866, and with some provisions entirely subverted. The Local Government Act of 1858 repealed 29 Sections of the Public Health Act, 1848, and retained 123 Sections besides the portions of Incorporated Acts, and itself incorporated portions of several other Acts; then came the Amending Acts of 1861 and 1863, and finally the Sanitary Acts, beginning in 1865 and going down to 1872, making in the whole, at the present time, no fewer than 81 Acts directly bearing on the administration of sanitary law. This jumble of statutes containing Sections of Acts crossing and recrossing each other, and making it impossible even for the most learned members of the judicial bench to read them harmoniously, constitutes a mass of matter which, it is not too much to say, is a disgrace to our Statute Book. To reduce this within a moderate compass, in order to simplify and help forward the action of local authorities, was considered by all as the first requisite of any measure professing to deal with sanitary law. Occurrences of national moment had prominently directed public attention to the question, and in consequence something, it was clear, was to be done—but premature legislation was strongly deprecated by those who had given long and careful consideration to the condition of the people, and with imperfect data it was evidently impossible to construct a measure that would work satisfactorily. When the Public Health Bill came before Parliament in 1872, there existed Local Boards and Local Boards of Health in districts constituted under the Acts of 1848 and 1858, sewer authorities and nuisance authorities under the Sanitary Acts, and Improvement Commissioners under Local Acts; and, owing to the anomalous provisions of the so-called Sanitary Acts, there were some places where Local Improvement Acts were in force in boroughs, Local Commissioners to provide sewers and drains, and a Municipal Corporation constituted a sewer authority to do the same work; local boards with full powers over roads, lighting, water-supply, and drainage; and sewer authorities having no power over roads, or over the drains which had been constructed in them by highway authorities acting under the Nuisances Acts; towns which had become surrounded by great outlying populations, chiefly formed for the express purpose of avoiding sanitary restrictions, and who had expressly located themselves outside sanitary control, and beyond the reach of sanitary taxation; districts which, sometimes to the number of four, met in the centre of the most densely populated portion of a town, subject to different authorities with different powers, carrying out different Acts, and with widely diverse views as to the obligations of sanitary law; streets in which one side, and even in some cases where parts of houses, were within the district of a Local Board, and the other without the district, and also without supervision or control; whole parishes so surrounded with other districts or parishes, and so situated, as to make drainage impossible, except through the subjacent parish or district, and others where efficient drainage was alone possible by judicious combination and united action; rivers and streams passing through carefully kept districts, carrying on with them in their course the poisonous filth accumulated in other towns or villages through which the stream had previously passed, where it was used as the common carrier to get rid of troublesome and dangerous accumulations. It is important to ask what was done by the Act of 1872 to meet these and many other matters calling urgently for relief. The Act gave no new powers; it merely redistributed those already existing, and enacted changes in the mode of their administration. A doubtful and halting policy may fairly be expected where adequate information is not forthcoming on which to rear a solid superstructure. It is true that abundant information was at hand on every side as to the results of sanitary legislation, so far as these were disappointing and unsatisfactory; but no steps were taken adequately and efficiently to probe to their depths the causes of failure. It is said that the Act shows on its surface, by its limit of appointments under it to five years, that it was merely intended by its promoters to be temporary and tentative; but this is not so—at least for the reason given—for the limitation of appointments of medical officers of health to five years was carried at the suggestion of a private member, in deference to the expressed feeling of unwillingness to give up the country to the control of medical sanitary enthusiasts to be ridden over rough-shod. The Act contented its promoters by destroying the whole current of legislation of the seven years immediately preceding, taking the power given to vestries out of their hands and relodging it in the hands of boards of guardians, whose very inefficiency had caused them in 1865 to be superseded; and this transference, it would appear, was made for no better reason than that they were a body already in existence, and elected for purposes at least not alien, if not alike, to those sanitary functions with which they were to be clothed by the Act of 1872. Here, then, was the new local authority—already the destitution authority, and already amply occupied in discharging duties appertaining to that office—suddenly called on to superintend the whole of the sanitary regulations of the rural portions of the empire. They had failed under the Nuisances Acts to be efficient. How could it be expected that they would be more adequate under the new statutes? Time can alone give a correct answer to this question.

The general principles of sanitary legislation, it is conceived, should be:—

1. Simple and concise laws.
2. Uniform authorities, with uniform powers in town and country.
3. Convenient areas of administration.
4. Reasonable taxation.
5. Regulated systematic supervision, with central control.

1. The Act of 1872 added another to the long list of Acts impossible to construe satisfactorily with antecedent legislation, and did nothing towards simplifying the great existing mass of statute law, undigested and crude, made up from time to time to meet various contingencies, and amended and re-amended as experience proved its want of applicability or inapplicability to existing circumstances, until at last, to quote the words of Mr. Justice Crompton, when delivering the judgment of the Court in a case under the Burial Acts, "it is impossible to come to anything like a decision which is satisfactory to our minds amid such confusions as exist in the provisions of the different Burial and Church Building Acts"; and even stronger language has been repeatedly used by the most astute judges on the bench with respect to the various enactments under the eighty-one Sanitary Acts before mentioned. Before laws can be effectually carried out, the very first requisite is a clear comprehension of the powers lodged by them in the local authority for execution. And, if judges of the greatest learning and experience cannot explain these laws, how is it possible that they can be properly enforced by the farmers composing a Board of Guardians, or by the tradesmen constituting a Local Board of Health?

2. The Public Health Act of 1872 is also extremely deficient in the absence of uniformity in the constitution of the local authority, and the functions it has to discharge. In urban districts, the sanitary authority is separate from the destitution authority; in rural districts, from the road authority. Why should this be? If it be true that health-preservation and relief of destitution are closely connected, are they less so in the town than in the country? And, if the care of highways be essential to urban authorities, are they not also properly within the ambit of authority to be exercised by a rural authority? So long as water-carriage is an essential of our system of getting rid of the sulliage of our houses, villages, and towns, all sewers and drains, whether for this purpose or for surface-drainage, should be under the care of one authority; and, so long as medical officers of health have to discharge functions under both destitution and sanitary authorities, it is most desirable that there should be such a welding of authorities as would ensure to these officers the possibility of harmonious action and efficient discharge of duty. Under existing circumstances, this is impossible. In towns, the guardians have only such powers in sanitary matters as they are clothed with by the Diseases Prevention Acts—the superintendence of the registration of deaths, births, etc., and the carrying out of the provisions of the Vaccination Acts; but these are important items, and, when joined to registration of sickness, make the Poor-law medical officer the mainstay upon whom the medical officer of health must depend for information and assistance—when such a plan of action shall be adopted as will set him free from private practice, and relieve him from the well-founded fear, jealousy, and dislike of interference by those whose practice he will supervise, and whose interests he may possibly compromise in the discharge of his duties. Besides these considerations, the present organisation is essentially faulty in delegating to a body the discharge of duties in which they have no interest and concern; an illustration will at once show this. Let us take an union composed of parishes A, B, C, D, E, and F, of which A and F are town parishes, and therefore excluded from the Board, so far as sanitary matters are concerned; this leaves the union for sanitary purposes with B, C, D, and E parishes, as parts of a rural district, say, each with three guardians. Now, out of these twelve guardians, nine are in no way concerned, and care nothing for B, C, and D; nine care nothing for C, D, and E, and nine care nothing for B, D, and E. Practically, the sanitary business of these parishes is to be managed by persons whose own private business is sufficiently pressing, and who merely join Boards of Guardians to look after their own interests, that is, the interests of their own parish; by persons, three-fourths of whom have no care for, or concern in, the business brought before them. Can we wonder, then, at stories of inefficiency and delay, of weariness in looking for sanitary progress and amendment, and is it not putting a premium on the continuance of the do-nothing system so long in vogue? It would be idle to expect otherwise from these compound Boards; and experience has justified the *à priori* conclusion that Boards so constituted, from the

very nature of things, could not work satisfactorily; moreover, it is often essential for efficiency that there should be between two or more districts unity of action and union of districts. While this is amply recognised by the Act of 1872, there is no adequate provision for its securement, and no guarantee for its accomplishment or continuance. The hard and fast line of parishes and unions, with their arbitrary divisions, established quite irrespectively of sanitary requirements and conditions, renders it often a matter of impossibility to carry them out in their entirety within an area either too circumscribed, too wide, or too varied in its constitution or condition, and too dependent on other surrounding districts, to be possibly well governed as an entity *per se*. These difficult circumstances tend to inevitable disappointment and delay. It ought not to be passed over that power is given in the Act to appoint parochial committees to help the local authority; but these committees have no power to act, or, at least, if they have, do not exercise it. They consider their functions exhausted when they recommend to the sanitary authority. Their recommendations are considered by their representatives; they are reconsidered by the whole Board of Guardians; and it may be well imagined that these various bodies do not, in their various deliberative action, much expedite sanitary measures. This has led many of these rural districts to ask for urban powers, in order to avoid these difficulties and delays. The body chosen is unfit for its work, unequal to its accomplishment, adverse to the exercise of its powers, uncertain as to their extent, and willing to wait until some better time shall come when the task will be simplified, or the doing of it will devolve on other shoulders.

3. Existing deficiencies in the definitions of areas have been already pointed out; but what should be the principle upon which the unit is to be determined is a matter of great importance, and at present unsolved. It must be at once evident that, in the consideration of this aspect of local organisation, many factors must be noted and estimated. But the governing principle of determination, apart from population, physical configuration of the land, and rateable value, should be the power to appoint and pay a proper staff of officers devoting their time exclusively to the work of the district or districts to which they are appointed. However good may be the constitution of boards of health, whether in urban or rural districts, the main direction, the true execution of sanitary work must devolve upon and be carried out by paid officials—the clerk, the surveyor, and the medical officer of health; and these should be of such high standing, and so far removed from temptations to inefficiency, as to secure thorough and competent action. But the Act of 1872 makes no provision for the appointment of such officers. It is true that, when paying any portion of their salaries, the Local Government Board may exercise control over their appointment and duties; but there is no obligation on any sanitary authority to subject itself to such control, or any power by which any sanitary authority, so disposed, may be prevented from appointing medical officers of health, or other officers, at nominal salaries, to fulfil the obligation of the Act of 1872 in letter, while purposely departing from its spirit.

4. The question of payment for sanitary work is at the root of most of the difficulties surrounding the practical operation of the law. Private improvement expenses press so heavily on owners of property, and especially on owners of cottage property, who, in most cases, have really no interest and derive no benefit from the improvements, that much opposition, even to the most perfect law, must be looked for; but, when glaring inequalities in taxation are also present, the opposition and difficulty are necessarily much increased. The exemption of Government property where its presence entails heavy burdens on local rates, exemptions in one district, and their absence in another district adjoining, the heavy pressure on real and the entire escape of personal property from taxation, urgently require readjustment before any truly successful measure can be at work. By the Act of 1872, in urban districts, railways, lands, etc., under Local Boards are exempted from three-fourths of the general district rates, while it often happens that, in an adjoining borough where the sanitary laws have hitherto been administered by a sewer-authority, the same kind of property pays the whole amount; this is the continuance of an inequality so glaring as of necessity to provoke complaint. Either all exemptions should be removed, or they should be made general. In addition to this, there are many purposes fulfilled by a sanitary authority which may be considered imperial rather than local, and, in so far as they affect and benefit the whole kingdom, should be borne by moneys raised by Parliament rather than by rates levied in the district where the money has to be raised and expended. The spirit of the Sanitary Acts, however unfortunate in action, is to spread the payments for works over long periods, so that those for whom the works are executed shall pay their quota in proportion to the benefit received. It is the occupier who reaps the advantage, and owners have comparatively little interest in private improvement works. They have, perhaps, leased their property, and to call on them to pay in one sum for improvements, when they have no power to increase their rent, is to give the benefit to one class of the community and to make the burden to be borne by another. The money question must be the subject of very careful attention in any future legislation, and a readjustment of local taxation is the key to the whole position.

5. The underlying spirit of the Act of 1872 was largely to increase the power lodged in the central authority, the Local Government Board, now the head of all the destitution and sanitary authorities in the country; this power of control extending to the authorisation of all expenditure, the rectification of boundaries, the sanctioning of bye-laws, the alteration of local Acts, the adoption of urban rules in rural sanitary districts, and the general supervision of the working of the Sanitary Acts, by means of visiting inspectors who examine into the condition of the various districts, and into the organisation of their service, and the practical carrying into effect of the provisions of the various Acts. But there has been no unity in the action of these officials, no special aptitude or training for their duties, and their recommendations have been as diverse in spirit as the varying enactments they have striven, each in his own way, to explain and determine. The greatest uncertainty has, therefore, prevailed as to large or small districts for general medical supervision, and the action of the various authorities has differed as much as the suggestions of their various advisers. It is not imperative that the smallest tie should exist between the Local Government Board and the officials of any local authority, and no control can, either directly or indirectly, be exercised over their action, except where moneys raised by Parliament are used for the payment of portions of their salaries. No provision is made in the Act of 1872 by which a constant, active, and yet judicious supervision should be exercised over local authorities. The Act of 1866 and the forty-ninth section remain, but no further powers than those proved to be inoperative were granted by the Act of 1872. The difficulty consists in developing local action, and yet directing it. The too stringent exercise of a central authority would destroy that which it should be the most earnest endeavour of every statesman to encourage. Unless the character and status of local sanitary authorities be much raised, some power must be lodged in a superior body to influence their action. Permissive laws are useless; compulsory ones may be worse. If the local authority fail to carry out works supposed by its officers to be imperatively necessary, who is to be the arbiter? A board in London, only acting through the report of an inspector, cannot itself execute works, and, having executed them, so act as to prevent undue pressure from falling on the body of ratepayers by collecting for thirty, or it may be fifty years, by means of rates, the sums necessary to repay principal and interest of the moneys borrowed. To aggregate in an intermediate authority the representatives of all the boards in a county, joined to an equal number of magistrates elected at Quarter Sessions, and annually re-elected, would, it is suggested, act as a buffer between the ulterior action of the central authority and the local board, and prove itself a court of appeal of no mean use, power, and authority. There are, beyond this, great questions appertaining to our rivers that urgently require some settlement, but which, owing to the mighty array of interests raised up against interference, have still, ever and anon, been defeated when attempted to be treated by Act of Parliament. Watershed authorities, to prevent pollution of rivers, and a board of high standing to recommend, if not themselves to determine, questions of boundaries of areas and union of districts, are essential to perfect action. But it must not be assumed from what is here written, that immediate legislative action is urged or even desired at the present time. There is nothing which every friend of sanitary progress should so much deprecate, as hasty further legislation on what must be confessed to be imperfect data. Various writers of authority in the public prints, most anxious to overcome certain difficulties of detail, to amend certain evils supposed to be pressing, advocate passing a measure which is, in so many words, to provide pure water, to prevent adulteration of food and of milk, and to render dwellings healthful, their subsoil dry, and their surroundings perfect; but it is suggested that these powers already exist, if adequately used; if not existing in present legislation in their entirety, it is asserted that they can never be successfully used, however at hand, if the instruments of right action be wanting. And it would not only now be unjust to the authors of the Act of 1872 to supersede its enactments, but extremely unwise to remove the present authorities until ample time had been afforded to judge of their merits and shortcomings. We shall equally be benefited by this experience, to whatever it may tend; for, if it should be found that the present constitution of authorities be incapable of securing thorough action, then we are right in urging the advisability of change; and, if inquiry furnish us with the points of weakness in our arms, we shall the better be able to provide ourselves for the fight by reconstitution or amendment. In this matter, exaggeration of the ills to be fought against, and of the benefits to be

obtained, is equally destructive to that better educated public opinion on sanitary matters we should anxiously cultivate.

There is at the present time not a day in which good sound sanitary work is not being done; and throughout the country thoughtful and active men are striving to promote the public weal. Our houses were never so healthful as at the present; our average life so long; never were we so free from devastating and shocking visitations of diseases; never before had we prevented so much of that which is preventable; and never was there so little of the inevitable.

To do well in the future, is better than, for the sake of action, to do imperfectly in the present, for every day we are growing up into the higher and brighter light of exact knowledge; and it is out of this alone that perfect action can be hoped for.

The writer is in favour of a ministry of health and justice, and hopes yet to see the inauguration of a system by which skilful and specially trained scientific men will be set apart as a class devoted to Public Medicine, including the prevention of disease and the whole practical aspect of Forensic Medicine.

There is in many senses a science of medical police; and the detection of crime and its exposure are not far from the detection and prevention of disease and the causes of disease; and the two form branches of the same tree loaded with beneficent fruits.

When in courts of justice, either civil or criminal, there shall be always at hand an expert whose whole life and power are used to acquire knowledge which can give the brightest and best aid to help judges and juries to a true decision in questions, to the uninstructed, obscure and impossible of solution, there will be the hope to see a complete system of correlative and mutual interdependence between the whole of the public and private medical service of the country.

It is the want of this bond of union, and a recognition of its need by creating a branch of the public service to secure controlled and systematic action, which renders the present public health medical system so imperfect, uncertain, and varied: in one district activity guided by earnest and painstaking inquiry; in the next, the festering quiescence of apathy and neglect. Under any system which is to be successful, the co-operation of the whole medical profession must be able to be calculated upon and secured. Returns of deaths are comparatively useless. They furnish valuable statistics of results; but the earliest intimation of sickness is necessary for the realisation of the aims of preventive medicine, the tracing to their cause, and suggesting means for the removal of insidious elements of danger. Effective service should have adequate reward; and this, on the part of every officer employed under a sanitary authority, should be secure against tyrannical control or unmerited dismissal.

But there is a larger constituency to be satisfied than the mere officials of a sanitary authority, and that body is the whole mass of the population, who must, to secure the result, be aiders in sanitary action through being convinced of its efficiency. It would be invaluable to have in every household a body of workers, officials paid not in cash, but in the benefits they would secure for themselves. It is no easy task to convince such a body that the action of a sanitary authority is governed by perfect impartiality when such action may press upon both their liberty and their pockets. A high-class board of appeal would be a most valuable means towards the securement of this confidence, and the constant deference of every official to personal wishes, or it may be to prejudices, so far as these did not interfere with efficient sanitary work, should be the uniform rule of action. The object should not be to defeat opposition, but to remove it.

We may fairly hope that simplified laws, greater knowledge, and more cultured administration will bring about an increase of a nation's health—a nation's wealth.

This is an object worthy of the highest and best efforts of every well-wisher to his country and his time.

LEAVES FROM MY DIARY DURING THE ASHANTEE WAR.

By ALBERT A. GORE, M.D., Surgeon-Major.
Late Surgeon 34th (Cumberland) Regiment.

II.—En Route.

The voyage to Western Africa, as usually performed in one of the Liverpool steamers, presents many points of interest to the venturesome individual who trusts himself for the first time into these distant and unhealthy regions. He has some vague idea that they were discovered by Prince Henry's navigators once upon a time, and, if especially innocent, he may perhaps have visions of gold and lovely scenery, only too soon to be dispelled by the actual reality. Early in August last, a very pleasant company assembled on board the Royal mail steamer *Volta*—Captain Glover, Her Majesty's Commissioner to the eastern tribes on the Gold Coast; his lieutenants, Sartorius (Bengal Cavalry), Cameron (19th Regiment), Larcom (Royal Navy); Mr. Irving, Collector of Customs, Cape Coast; two African traders; Dr. Grabham, the well-known English physician of Madeira; three invalids; and the writer. We were additionally fortunate in a very pleasant companion and courteous commander, Captain French; so that everything promised favourably for our voyage. The morning was fine but dull, the hygrometer reading 62 deg. and 66 deg., at 9 A.M., in the shade. At the expiration of our journey of 4100 miles, the temperature of the air and evaporation had risen to 76 deg. and 78 deg., fourteen and twelve degrees respectively, in twenty-two days, at the same hour, showing at the same time an increase of the relative humidity from 78 to 89, or eleven degrees, saturation being 100, but a difference in the atmospheric surroundings, and also in the feelings of the individuals, which no figures can adequately describe. From a mild, healthy, August afternoon, we passed to a climate described in my notes of September 11th as "calm, hot, muggy, steamy, breezeless, and 92 deg. under the awning at noon."

We had scarcely commenced our journey, when our floating home was met with a nasty choppy sea, making many of our number look most cadaverous and miserable from the first qualms of that most abominable of illnesses, *mal de mer*, for which the only effectual remedy is the recumbent position, if possible, in the air. This affection, because it is so common, is looked upon, as a rule, as a mere little disagreeable interlude *pour passer le temps;* but it really sometimes becomes a far more serious affair, particularly if continuous, as most lowering to the system, thus placing the unhappy sufferer in the worst possible position to resist the first advent of the many morbific influences he meets upon his arrival in Africa. A distinguished medical writer has advised that, before even the vessel moves, those who are prone to attacks of sea-sickness should at once take to their cabin, lying with the head towards the bows, until they become accustomed to the new motion, not forgetting the while a due attention to the wants of the stomach. After trying every method ineffectually, I can bear testimony to the excellence of this very simple advice, based upon physiological principles; the author arguing, with much plausibility, that the series of concussions of blood upon the brain, caused by the up-and-down motion of the steamer, act as would a severe blow, which causes emesis by reflex action. As an indirect proof of the correctness of this theory, it is well known that the rolling motion at sea is, comparatively speaking, innocuous.

On the 26th, seven days after leaving the Mersey, we sighted the gem of the Portuguese Crown, the beautiful island of Madeira, wrapped in that peculiar bank of clouds which for so long hid it from the earlier *voyageurs.* The temperature had gradually become milder, rising from 66 deg. to 74 deg. Fah. Passing the "Deserters", or Islands of Porto Santo, on our port quarter, we closed up to the bay of Funchal as the shades of evening were rapidly falling, the homeward-bound steamer *Congo* steaming by on our starboard bow most provokingly—the only opportunity of sending letters home for some time to come.

Anchoring at 8 P.M., we were just too late to obtain *pratique* that evening, the regulations of the port being as inexorable as the laws of the Medes and Persians. The Portuguese bugles could be heard sounding in the distance, and the lights in the various villas, twinkling from the sea high up the mountains, gradually faded away, one by one, as the night advanced, when the occasional splash of the wave against the guard-boat was all that disturbed the stillness of the night. A first peep at Madeira in the early morning discloses to view a most lovely island, studded with charming villas, varied here and there by one of the numerous churches or convents—that of "Our Lady", high up on a hill to the right, is a most prominent object. Our first visitors next day were the coal-lighters, followed shortly afterwards by numerous green-painted boats, with their peculiar prolonged bows, to which is attached a long rope when it is found necessary to drag them over the shingly beach, and their dark-featured crews, whose peculiar voices, ending at the termination of each sentence in a prolonged and high-noted drawl, are anything but agreeable to the ear. At 8 A.M., the health-officer arrived; and, immediately after he had given us *pratique,* a nondescript crowd of boats rushed at the gangway, the first to board us being the consul, agents of the vessel, and proprietors of the two principal hotels, Messrs. Reid and Miles. The news from the Coast brought by the *Congo* was anything but pleasant—both field-officers of the 2nd West India Regiment going home invalided, the adjutant dead, and poor Hopkins, promoted for his gallant conduct, also, just as he reached Funchal; the eighty Marines invalided to England being magnified to two hundred. Faces lengthened visibly for a moment on the quarter-deck, but only for a moment, while the countenances of our fellow-passengers expressed the greatest commiseration for those whom they looked upon as doomed to certain destruction.

As the beams of the rising sun gradually brightened the prospect, a fairy-like scene opened to view, terraces of perpetual verdure rising one above the other, and losing their beauty in the distance; while the perfume of the many lovely flowers was faintly perceptible to us in the bay. No written description can adequately convey to the mind an idea of the many beauties of this picturesque island. Around the steamer were crowds of boats containing vendors of the specialities for which Funchal is famed—crochet-work of all kinds, delicately made lace shawls, excellent photos, baskets, Madeira chairs, workboxes of many-coloured woods, boots of soft light-brown leather, straw hats, canary birds in pretty and fantastically shaped yellow cane cages, feather-flowers, gold rings, little goldfinches with curious tricks, piles of oranges, grapes, apples, and apricots, besides other *curios* too numerous to mention; while not the least singular were the inhabitants themselves, the more youthful of whom were quite content to visit "the mermaid at the bottom of the sea" for a small silver coin. As these Portuguese colonies close up to the coast of Africa, the race inhabiting them becomes darker and darker, until at last the distinctive characteristics of the two races become almost blended into one—a dark mottled brown, almost black skin, being all remaining to denote the former intermixture of Iberian blood.

Captain Glover was most anxious to obtain a supply of horses here to carry with him to Accra. Through the consul, he obtained six very tolerable Lisbon steeds, one only of which afterwards turned out a screw—a martyr to the "rheumatics". Bales of compressed hay were ordered, and two grooms, one of whom, it turned out subsequently, had been in the Portuguese cavalry, and flogged for his misdemeanours on more than one occasion, went into delirium tremens a few hours after we had started. He was treated successfully with large doses of opium and porter by the surgeon of the ship, *sub tegmine cœli;* and was left subsequently at Sierra Leone. Travellers who wish to carry horses with them to Africa from Madeira must be most careful in making their purchases, as on such occasions every old screw found to be useless on shore is foisted upon the newcomer as being in possession of every possible virtue, although perhaps at the same moment hopelessly spavined or otherwise blemished. Spavin is usually the prevailing disease, owing to the constant exertion thrown upon the houghs in ascending the steep heights all over the place. To the uninitiated, this does not of course show, as a little previous exercise temporarily removes the lameness. Many of these horses are old troopers, marked on the flanks with the crown and royal initials. The cattle are imported from Lisbon, between which port and Madeira small steamers ply monthly. For a dollar, the equestrian can have his full of this healthy and agreeable exercise, without which the *ennui* of a tropical or semi-tropical life is almost unbearable.

Next to its equable climate, Madeira owes much of its importance to its being a convenient place of call for steamers in want of coal and fresh supplies. Here can be obtained very excellent beef, vegetables, and fruit of all kinds—those invaluable esculents, potatoes and onions, growing in abundance, large quantities of which last are exported to the Western African ports at an increase of price rarely under one hundred per cent. On the return voyage from Africa, when the system has become much below par, and scorbutic, from the poor quality of the African food and watery nature of the vegetables there obtainable, one feels as if he could scarcely ever cease feeding upon the new food so agreeable to the palate.

After a *petit déjeuner* on board, we landed and breakfasted on shore, half of our party going to Miles's, the remainder to Reid's Hotel, from which last can be seen the shipping in harbour. The hotels here are models of quietness and comfort, the *cuisine* excellent, and the proprietors most obliging; while the very excellent wine obtainable is not the least of the recommendations. The arrangements are something on the pension system, villas in the mountains being attached to each establishment in Funchal, thus permitting the inmates to enjoy the purer and less heated air of the higher regions, and finer prospects; for nothing can exceed the loveliness of the view from one of these elevated terraces—the harbour far below, with its numerous vessels, fishing boats, and its peculiar rocky islet, with its ancient fort and battlements. The ascent is generally made on horseback; the return journey, by the more venturesome spirits, in a sledge, which, guided by a couple of natives, whirls one to the bottom with amazing rapidity. Upon these wooden sledges, shod with iron and drawn by bullocks, are conveyed from one portion of the town to the other all heavy articles of merchandise; while in others, made in the form of a covered-in carriage, the Portuguese senhoras move about in stately dignity.

The streets of Funchal, as in all other Portuguese towns, are narrow, and paved with large round boulders. The nearness of the houses to each other effectively shades the roadways, and thus renders them, except where the sun is vertical, cool to walk in. At the date of our visit, the whole place was being furbished up, in view of the coming celebration of an important event—the completion of the laying of the telegraph cable between Funchal and Lisbon. Upon ascending the mountain roads, one passes through a series of vineries, patches of Indian corn, sugar-cane, and geraniums, cherished in England in costly greenhouses, but here growing in the open, and sweetly scenting the air all round; apricots, figs, and other fruit, hang temptingly over the narrow roadways. In the evening, a band plays upon the esplanade, when all the fashion and beauty promenade beneath the fine trees planted along its borders. In the town, there are several very excellent mercantile establishments, two or three of which are those of apothecaries, said to be the centres of all local gossip; also an English club and reading-room. Ices can be obtained surreptitiously, so that here an invalid can obtain all that can be desired.

Madeira is 1587 miles from Liverpool, and the climate is mild and equable during the English winter months. The usual frequenters generally commence to arrive in October, leaving in April or May for England. On the northern side of the island are several small towns, where the climate is more bracing, being more fully exposed to the westerly breezes. As a quiet winter residence for the delicate-chested, the climate would appear to be all that can be desired, as there are no exciting causes to those intercurrent inflammatory attacks frequently associated with fresh tubercular deposits. The voyage is certainly a great drawback, but not so much as supposed, for its disagreeabilities are confined, as a rule, to the first three days, after which the steamer rolls along with only that side-to-side motion, so little provocative of sea-sickness.

Since the failure of the crops, some years since, the vine has been gradually becoming more healthy and prolific, driving out again the cultivation of the sugar cane, which, for the moment, took its place, and from which the brandy, used in fortifying the wine for foreign consumption, is made. These wines are of two kinds—ordinary Madeira, and another, something of the nature of Constantia, and said to be effective in bowel and dysenteric affections. Both are agreeable and harmless, leaving none of the after-effects so common when ordinary sherry has been taken in any quantity. A very fair table-wine can be obtained on the island for thirty shillings a dozen, the price increasing with the age, or amount of intermixture of the older with the newer vintage. The wines of five or six years back are much darker, and possess more of that peculiar flavour characteristic of good Madeira.

While here, the traveller to Africa should provide himself with some the products or works of the island—a few dozens of the wine, some baskets of potatoes and onions, a straw hat, Madeira chair and sofa, and some pairs of the soft leather boots, all of which will be found most useful on the Coast, where such things are not only expensive, but most difficult to obtain. If he be wise, he will also make arrangements with one of the company's agents for a periodical supply of these very necessary articles, which will add much to the comfort of his temporary home in West Africa.

We bad adieu to Madeira at 4 P.M. on the 26th, not catching the stiff breeze which blows usually between there and Teneriffe for some hours, being until then under the influence of the land. Shoals of bream were swimming about us as the anchor was being catted, the waters abounding in fish, one of which, the bonita, is largely used by the inhabitants of Funchal. The flesh is not unlike freshly cut salmon, and sells for three halfpence the *kilogramme*. Forty-eight hours generally suffice to bring in view the far-famed Peak of Teneriffe, which may be seen from fifty to one hundred and twenty miles off, according to the state of the weather. Running along a ledge of volcanic rocks, having a few little villages along the water-line in the valleys between the mountains, the steamer arrives at Santa Cruz, the capital of the Canary Islands, two hundred and sixty miles distant from Madeira—a name ever to be remembered in English naval history as the scene of Lord Nelson's gallant attempt in 1795. A flag captured on the occasion is still retained in the cathedral, carefully guarded from intrusion in a glass-case. Grand Canary, at which the packets sometimes call, is nearer the African coast, which is here only fifty miles distant. Las Palmas, the capital, has long been the rival of Santa Cruz. Teneriffe has altogether a different appearance from Madeira; it is flatter round the capital, which is guarded by most formidable batteries, and has much more of the tropical look about it—flat-topped houses with green jalousies, the same narrow streets, and two very peculiar square-shaped, many-storied cathedral-steeples, whose bells appear to be ever chiming to prayers. Until the mole becomes thronged towards evening, one scarcely sees a soul about. Here the camel first appears as a beast of burden, and the cactus and Indian corn largely replace the vine. Upon the first, the cochineal insect feeds in great numbers, furnishing one of the staple articles of trade. Oratava, high up at the other side of the island, is said to be an agreeable place of residence; but Santa Cruz is far behind Funchal in civilisation; the inhabitants are surly, the hotel indifferent and expensive, the food not so nutritious, and the quarantine regulations are so absurdly ridiculous, that a rumour of an epidemic of any kind having occurred at the Antipodes is quite sufficient as an excuse for not giving *pratique*. The climate is said to be drier, and more favourable for consumptives, than that of Madeira, but these several drawbacks place it practically beyond the reach of invalids. Cigars, cigarettes, made from inferior Havanna tobacco, sandal-wood fans, gloves, woollen sashes, and white poodle dogs seem to be all that are obtainable. Canary wine is made here in considerable quantities from a rather rich green grape. The wine is not nearly so palatable as Madeira, having quite a different flavour—more like a Marsala than a sherry, being not unlike this latter wine in its after-effects. The cheaper qualities are quite undrinkable, causing headache, acidity of the stomach, and dyspepsia. We bade adieu to this famed island at 10 P.M., when a strong land-wind was blowing down the mountains. A few drops of rain had fallen just before. Since passing Finisterre, the weather gradually became warmer, necessitating the putting up of the awning the day previous to our arrival at Madeira, at which the hygrometer at noon in the cabin, port open, read 74 degs. and 69 degs. The difference in time being one hour and five minutes. I might have mentioned that the Madeira winter is cold; it may be also interesting to know that the population numbers about 120,000, of whom some three hundred are English or foreign invalids. The island is about thirty miles long by twelve broad, its highest peak rising to a height of six thousand feet. It is covered in many parts with fine timber and coloured woods. The people have no idea of free trade, charging a heavy import duty of from 50 to 100 per cent. on all articles brought into the Custom House, where they must be lodged in the first instance. The hire of houses varies, according to size, from £20 to £100 for the season; the women servants are slovenly, the men excellent and cleanly, working for six dollars a month, and living on very simple food—chiefly on the sweet potato and tunny fish, of both of which they are very fond. Six thousand or seven thousand pipes of wine are exported annually. The journey to the northern end of the island is rugged and toilsome. The garrison is composed of a militia regiment brought from Lisbon. They are good troops, well clothed, armed, and fed, having sixpence *per diem* to spend, free of all stoppages. They are clothed in dark brown jackets with green facings; the corps is frequently changed. The men appear cleanly, and of fair *physique*. When sick, they are treated regimentally in a hospital attached to their barracks. In Funchal, a Contagious Diseases Act is in force, the women being periodically examined and confined to certain houses and localities. The effect of the regulation is said to be excellent, the women never making any objection to its operations—taking them as quite a matter of course—while some of the outer world are sufficiently absurd to be shocked by such an excellent measure of hygiene.

ON THE PASSAGE OF RENAL CALCULI DOWN THE URETERS.*

By EDWIN MORRIS, M.D., F.R.C.S.E.

BUT few writers on Practical Medicine even allude to the passage of a calculus from the kidney down the ureters to the bladder, and those who do notice it give a meagre description of the symptoms. One writer states that "the greatest difficulty will arise in distinguishing this disease from colic". (Dr. Barlow, *Practice of Medicine*, p. 475.) He says also, in respect of distinguishing between diseases of the colon and irritation of the ureters, "the diagnosis is one that can be made only by minute investigation of each individual case, and of which it is impossible to include the whole details under any general rules".

Such, then, being our position relative to the recorded history of this truly painful complaint, it becomes the bounden duty of every practitioner who meets with well developed cases to record them for the guidance and instruction of others.

I have myself met with three well developed cases; in each instance, the passage of the calculus from the bladder was followed by an immediate subsidence of the distressing symptoms. I secured the calculi, and shall have the pleasure of showing them to you. But, before detailing the cases, you will bear with me whilst I give a cursory glance at the structures implicated in this disease. The ureters commence at the lower border of the kidneys, extending to the posterior and inferior part of the bladder, into which both ureters open. Their structure consists of an external fibrous tunic lined by a thin mucous membrane. Their average length is about eighteen inches, and their calibre about the size of a quill. The ureters are supplied with nerves from the renal plexus and splanchnic nerves. We have, therefore, a part involved which has its peculiar function to perform, and which is composed of those living tissues which are highly susceptible of an undue stimulus produced by local irritation. We cannot, therefore, be surprised at the violence of the symptoms caused by the forced passage of a calculus through the ureters, and which are principally shown in the nervous system. The irritation and consequent pain of an organ is much more severe in those persons who are possessed of a greater irritability than in others. It is well known that some persons are able to bear pain with much greater calmness than others; hence we have in different individuals an infinite degree of modification of symptoms. The laceration of muscular structures by any detached substance which acts as a direct irritant is severely felt through the whole of the nervous system.

The calculi which pass with such formidable severity down the ureters are calcareous deposits from the urine, within the pelvis of the kidney, and occasionally assume such a size as to be unable to leave that cavity, producing the most agonising and disastrous results.

When a small calculus, or a piece broken off from a large one, once enters within the tube of the ureter, a violent spasmodic action is set up in its fibrous tunic, with a view of pressing on the offending extraneous irritant; and, as a rule, after hours of suffering, nature is capable of ridding herself of the obnoxious substance, as the following cases will show.

We are told that "the most valuable diagnostic sign in such cases is sickness. When the pain proceeds from irritation of the kidneys, it will rarely be wanting".

CASE I. The subject of the complaint was a very healthy man between 50 and 60 years of age—a total abstainer from intoxicating drinks for years—a coach-builder by trade. W. W. informed me that, on Thursday, October 15th, 1863, he was in the enjoyment of excellent health, and had spent the evening in the company of some friends, took his supper as usual, and retired to bed at his usual time. He slept well until about 3.30 A.M., when he was awakened with a severe pain in his left side; in a few minutes, he aroused his wife and informed her of his suffering: she gave him a glass of hot water and peppermint, from which he derived no relief. He assured his wife something serious was the matter, and requested I might be sent for. I saw him very shortly afterwards. He was then perfectly calm and free from pain, and was afraid to move or even speak, fearing it might bring on the "dreadful pain". He said the pain came on in paroxysms, and was of an indescribable character, extending from the left iliac region down to, and causing a most "agonising painful nipping up of the left testicle". Upon examining the side, no tenderness could be detected, notwithstanding that he complained of much pain. A paroxysm of pain came on which caused him to draw his knees up. His face gave evidence of severe pain of an expulsive character, similar to that seen in the face of a parturient woman. The perspiration ran down his face; he prayed that I would relieve him as quickly as possible; he was continually trying to micturate, and his whole frame was in a state of the utmost excitement. Notwithstanding the absence of sickness, I told my patient he was passing a "small stone" from the kidneys to the bladder, and a sharp look-out must be kept for it. I gave him two grains of calomel and one of opium, with a mixture containing henbane, liquor potassæ, and mucilage, and ordered plenty of barley-water to be taken. After three hours of continuous suffering, he passed a small calculus, numbered No. 1 upon the card which I will send round to you; all his symptoms immediately abated; he fell into a profound sleep, lasting over two hours, waking up quite well, complaining only of a feeling of soreness about his loins and body. I saw him only a few days ago, and he tells me he has remained free from the complaint ever since.

CASE II is that of T. C., aged 58 years, and one of great severity; and, when you notice the size of the calculus passed, you will not marvel at it. As in the first case, the symptoms came on about 3 A.M., the pain extending along the right side into the right testicle, coming on in paroxysms, between which a dull aching pain always remained. As soon as ever a paroxysm came on, violent sickness was produced, which lasted as long as the paroxysm of pain. I kept a look out for the stone, and was rewarded for my assiduity by finding the calculus No. 2 passed, and had the satisfaction of witnessing a subsidence of the symptoms and a rapid restoration to health. In this, as in the first case, I gave grain doses of opium until the calculus was passed.

CASE III. All the leading symptoms attending the two cases I have already given were present in this instance, the sickness, I think, being more severe. R. M. was a robust, healthy man, and as a rule had excellent health. The attack came on soon after retiring to bed. He informed me that the pain was so severe as to cause him to be very sick. I administered calomel and opium, as in the former cases. Several hours elapsed before relief was obtained. The symptoms suddenly left him, and he was soon sleeping, forgetful of his troubles. Upon examining the urine passed, the small serrated calculus No. 3 was discovered.

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* Read at the annual meeting of the Midland Branch.

As a rule, there is no difficulty in accurately diagnosing these cases. The only affection, in my opinion, which could possibly be taken for this complaint is a severe attack of colic. This error may be avoided by noticing the sympathetic irritation which is set up in the testicle of the affected side, the appearance occasionally of blood in the urine, and the frequent attempts at micturition.

The best treatment is that of opium in grain-doses every hour until there is a mitigation of the symptoms, with a plentiful supply of potash-water in a state of effervescence. Hot baths will also be found very useful.

ON THE TREATMENT OF VASCULAR GROWTHS OF THE URETHRA WITHOUT OPERATION.*

By ARTHUR W. EDIS, M.D.,
Assistant-Physician to the Hospital for Women, Soho Square.

CONSIDERING the frequency and amount of suffering and inconvenience caused by vascular growths of the urethra, it seems strange that so little attention has been given to the subject in many of the recent works on diseases of women. One of our best treatises does not even mention them; another, although it recognises them as an "exceedingly important affection", dismisses them with a single page. Scanzoni accords them but little more. Dr. Barnes enters fully into their consideration; but, as far as I have been able to ascertain, nearly all authors are agreed in stating that their removal by operation, if not the only thing to be resorted to, is at least the only thing that can be relied upon for effecting a cure.

Now, it is familiar to all who study gynæcology how much patients dread anything of the nature of an operation; and, even when it is resolved upon, it necessitates the administration of chloroform and other preliminary arrangements; and when, as frequently happens, patients present themselves in the consulting-room who come up from a distance, the mere fact of announcing the necessity of an operation is equivalent to frightening them into "rather bearing the ills they have" than submitting to operative interference.

The application of the pernitrate of mercury is attended by much pain and inconvenience, and cannot always be resorted to. Nitrate of silver, in my experience, is not sufficiently potent; it produces too much irritation, and does not sufficiently destroy the vascular growth—in many cases seeming to increase rather than diminish it. The actual cautery cannot well be applied unless the patient be at home; and the various other agents, such as potassa fusa, nitric acid, etc., are too painful to be of general application.

To obviate this difficulty, I was induced to try the effects of *chromic acid*, and was surprised to find how little inconvenience it occasioned, and at the same time how efficacious it was in destroying the growth. I have in numerous instances applied a saturated solution, and with the most marked benefit. My usual plan is to roll a little cotton-wool round the end of a small piece of wood (an ordinary match will do); to soak it for a quarter of an inch in the acid solution; and then to carefully yet firmly press it upon the vascular growth until the surface becomes distinctly shrivelled; the surrounding parts being guarded by cotton-wool soaked in solution of carbonate of soda, which is also applied to the growth subsequently, to neutralise any excess of the acid. Slight burning pain is produced, but seldom sufficient to need any employment of morphia, either hypodermically or as a local application.

The sensitiveness of the tumour is almost completely destroyed, some soreness being all that is complained of. In about a week's time, a second application should be made; and, depending upon the size of the growth, two or more subsequent applications, at a week's interval, will generally be sufficient to complete the cure, which, as far as I have been able to observe hitherto, is permanent. *Carbolic acid* in the solid form, or as a saturated solution, also serves to mummify these growths, and causes far less inconvenience than many of the numerous agents recommended. My experience with this is not yet sufficiently great to enable me to speak more positively, but I believe it will be found to be a very useful addition to our list of remedies in these cases. I append a few cases where the chromic acid had been employed.

CASE I. J. C., aged 37, married sixteen years, without children, was first seen on October 16th, 1873. She complained of smarting pain on micturition, was obliged to get up several times in the night to pass urine, experienced much pain on walking or exertion, had a slight discharge, occasionally tinged with blood, and suffered much inconvenience *in coitu*. On examination, a vascular growth was discovered bulging from the urethra; it was sessile, being attached to about two-thirds of the circumference of the passage; it was exquisitely sensitive, and bled readily when touched. A saturated solution of chromic acid was carefully, but thoroughly, applied, the pencil being pressed firmly on the surface. Some slight inconvenience was caused at the time, but this passed off after a few hours. A mixture of bicarbonate of potash and tincture of belladonna was prescribed, together with a soothing lotion.

On October 23rd, she reported that the pain on micturition was less; the urethra being still vascular, the chromic acid was reapplied. Bromide of potassium was given in place of the other mixture.

On November 6th, the chromic acid was again resorted to, and caused little or no inconvenience.

On November 20th, the urethra being still somewhat vascular, a strong solution of carbolic acid was applied, after which no further local means were resorted to.

CASE II. A. H., aged 63, married forty years, without children, on admission, September 18th, 1873, complained of scalding pain on micturition, which had been present two years. She had a constant discharge, and the linen was often stained with blood; she lost a good deal a week since; she thought she had "a gathering in the womb". On examination, a vascular growth was detected at the orifice of the urethra, very sensitive. Chromic acid was applied; very little inconvenience was caused by it, and, when seen on October 3rd, she stated that she had been better ever since her first visit. The growth was much smaller. The acid was again applied.

On October 16th, she had no pain at all on micturition, and felt better in every respect. The urethra was still somewhat vascular, but as there were no symptoms, nothing further was done; and, up to January 1874, she had had no relapse.

CASE III. E. R., aged 47, married sixteen years, the mother of three children, was admitted July 3rd, 1873, complaining of pains in the womb and lower part of the back, pain in micturition and also difficulty, and leucorrhœa. The uterus was found to be normal, but the urethra was very vascular and sensitive. There was no distinct growth projecting, but a general injected condition for about two-thirds of the circumference of the urethra. Chromic acid was applied, and again on the 17th, when she stated that the pain on micturition was very much less than it had been before she came.

On the 31st, she had very slight inconvenience on micturition, and, as the vascularity had greatly diminished, no further application was made.

When seen in September, she had no pain whatever on passing urine. She was suffering from a threatened miscarriage.

On October 2nd, the urethra was found to be perfectly normal. She is now nearly six months advanced in pregnancy.

CASE IV. A. J., aged 63, widow, mother of eight children, on admission on April 24th, 1873, complained of smarting pain on passing urine and difficulty in doing so, bearing down pains, and discharge. She has had "pressure and cutting pain with the water for the last five or six months, disturbing her very much at night". The urethra was found to be very vascular, the mucous membrane much hypertrophied. A zinc point was inserted on two occasions, and left in the urethra for some minutes. This caused some pain at the time, but afforded relief afterwards. However, as the vascularity still continued, on June 12th, the pernitrate of mercury was applied.

On July 12th, the burning and smarting pain in micturition still continuing, chromic acid was applied, and produced much less inconvenience than the pernitrate had done.

On July 24th, she stated that she had experienced little or no pain after the former application, and had been much better since. The urethra was much less vascular, but not quite healthy. The acid was reapplied, since when she has had no further symptoms.

CASE V. M. S., aged 66, widow, when admitted in October 1872, complained of "pain in her privates", desire to micturate every ten minutes, the act being accompanied by much smarting pain. There was a discharge purulent in character, and other symptoms referable to the uterus. On examination, a large vascular tumour, sessile on the posterior wall of the urethra, was discovered; it bled readily when touched, and was very sensitive.

An operation being deemed requisite, no local application was made. Belladonna with an alkali was prescribed internally, and chloral and morphia at night. No bed being obtainable, the pernitrate of mercury was applied on two occasions, at a week's interval.

On November 15th, chromic acid was resorted to in place of the pernitrate, as the pain from the latter lasted several hours after its employment. It was repeated at the end of a fortnight, again on December 12th, and on January 9th, 1873, and February 11th. After this, the growth disappeared entirely, and required no further application, though the frequency of micturition was still more than natural during the night. She was seen in May 1873, and was very much improved, there being very little irritation now.

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* Read before the Obstetrical Society.

Possibly this may be nothing new to some present; but as it seems to be a very effectual mode of dealing with these troublesome little growths, I thought it not unworthy of the attention of the Society, as I am convinced it is not generally known, and it deserves a more extended trial.

The cases I have selected are only a few of those in which I have employed it; in many instances, the patients have attended some few times and then ceased to do so; it is, therefore, fair to conclude that they were relieved from their sufferings, otherwise they would have again presented themselves.

CASE OF TRAUMATIC TETANUS SUCCESSFULLY TREATED BY CALABAR BEAN.

By JOHN CUNNINGHAM, M.B., Campbeltown.

As the uses of the Calabar bean in the treatment of tetanus are at present engaging the attention of some of the members of our profession, I may be pardoned for giving the following notes of an interesting case which lately occurred in my practice.

Alexander C., aged 7, was on a visit to his grandfather, when he met with an accident on July 31st last. When I went to see him, I found a lacerated wound of the left foot. The tissues covering the great toe and first and second metatarsal bones were bruised, as was also the union between these bones, almost as far as their tarsal articulations. I cleaned the wound, and dressed it with a weak watery solution of carbolic acid. The injury proceeded, without an adverse symptom, towards recovery, until August 11th, when his friends told me that he had caught a cold in being carried from one room to the other. The patient complained that his throat was sore. There was nothing abnormal to be found about the throat; and I ordered that it should be kept warm, and that the patient must not be removed from his bedroom.

August 11th, 8 P.M. The patient could not open his mouth sufficiently wide. The muscles on the back of the neck were stiffer than normal. The patient was fretful and peevish, and refused food. As I had no confidence in the ability of those attending to carry out my instructions, I telegraphed for the little boy's mother to come with all speed. I left a mixture of bromide of potassium and hydrate of chloral. On the patient refusing it, the friends said "there is no use in tormenting him".

August 12th. I saw the patient in the forenoon and evening. He was very much worse; he took neither food nor medicine.

August 13th, 11 A.M. The patient's mother had come, and was determined that my directions would be strictly carried out. I left a bottle containing a grain of fresh extract of Calabar bean to an ounce of water, and a small graduated measure. I ordered twenty drops (*i.e.*, 1-24th of a grain) to be given every hour and a-half, unless symptoms of faintness should supervene, also sherry wine, milk, and chicken soup frequently.

August 13th, 8 P.M. He was much worse. The jaws were completely closed. The whole body was rigid. Clonic spasms occurred every fifteen or twenty minutes, and were almost immediately preceded by severe pain at the sternum. After every such attack, there were profuse perspiration and rapid pulse. The patient always cried to be lifted when he felt the clonic spasms coming. He lay in his mother's arms in a state of opisthotonos until the spasm relaxed. I ordered twenty-five drops of the medicine to be taken every hour.

August 14th, forenoon. The patient was slightly worse. He had taken wine, milk and soup abundantly. In the evening, he was slightly worse. Thirty drops were given every hour.

August 15th, forenoon. The symptoms were gradually becoming worse. I ordered thirty drops to be taken every hour. In the evening there was slight improvement. The clonic spasms did not occur every three or four minutes as this forenoon. A little sleep had been got, during which "he looked", the mother said, "as if nothing ailed him".

August 16th. There was slight relaxation of the masseters in the forenoon. In the afternoon there was no improvement. I ordered thirty-five drops every hour.

August 17th. There was no improvement. Forty drops of the mixture were given every hour.

August 18th. The clonic spasms of the body were not so severe; the tendons of the ham-strings were like bands of iron (the forearms and fingers had remained free throughout). He had had a short but refreshing sleep during the day.

August 19th. Improvement was not marked. Fifty drops were given every hour. In the evening, as he had had no motion from the bowels for two days, a simple turpentine enema was given. The bowels had been perfectly regular previously, and I attributed the necessity for the enema to the use of brandy instead of sherry wine for the past few days, owing to the patient's desire.

August 20th. From this date the improvement was rapid and permanent. Day by day the relaxation increased, the spasms became fewer and less violent, the pulse lower, and the perspiration less. The dose was reduced by degrees (the effect of the reduction being noticed) to fifty drops every hour and a half on August 23rd, the same dose every two hours on the next day, and so on. The symptoms gradually diminished in severity, until I considered the patient so far recovered as to permit his removal home on September 2nd. At that date, he could stand with a little assistance. I have since heard that he is quite well.

It would be illogical to deduce that a cure resulted in this case from the medicine employed; but so many cases have been successfully treated within these few years by means of the Calabar bean, that I think it should be preferred in the treatment of this dangerous malady to any of those empirical remedies formerly recommended. If the Calabar bean exercised any beneficial influence in this case, I think that it was by means of constantly increasing doses as long as the symptoms shewed no abatement in severity. Large quantities of warmed milk, wine, and soups were, I have no doubt, powerful adjuvants.

I may mention, as adverse to the theory of the entozoic origin of all cases of tetanus, that the stools were carefully watched for worms, but none were found, and that not a single symptom of their presence was present before the accident occurred or during the convalescence.

ACUTE TETANUS ENDING IN COMPLETE RECOVERY.

By CHARLES D. ALLEN, M.B., Glenarm.

ON June 11th, 1872, I was called to see a boy, aged 11, who had met with an accident in a flax-scutching mill, his left hand having been caught between two cogged-wheels, which crushed and lacerated to a great extent the fingers and palmar surface of the hand. I found it necessary at once to amputate the second, third and fourth fingers, the former at the first phalangeal, and the latter two at the metacarpo-phalangeal articulation. On visiting the boy each day, I found all going on most satisfactorily.

On the seventeenth day after the operation, the wound was nearly healed. On the eighteenth evening (June 29th), the child's father came in haste to say his son was very ill, had rested badly the previous night, refused his food, and all that day had been unwilling to leave his bed, although hitherto he had been going about enjoying perfect health and strength; indeed, he was a peculiarly robust lad. He now complained of severe pain and stiffness along the back and side of the neck, and experienced slight difficulty in opening and shutting his mouth; and before I left the house that evening, his jaws were firmly clenched upon a piece of wood inserted by myself to guard against the complete closure of the teeth. The patient apparently had caught no cold, nor was he exposed in any way that could account for these symptoms—they appear to have been the result directly of the injury. The wound at this time was healthy looking, and had almost completely cicatrised. These tetanic warnings came on late on the evening of June 29th, and the following morning, at ten o'clock, he was violently affected with general tetanus; the trismus was excessive, and opisthotonos very marked. The pulse now was 120; temperature, 100.2 deg.; respirations, 30. The face had the tetanic grin, and the abdominal and flexor muscles of the lower extremities were most violently affected under spasm. The treatment noted below was at once commenced, and with apparent utility. There was no intermission of the tonic contractions, and every ten or fifteen minutes these were increased by fits of painful spasmodic action of entire frame, the face assuming a terrific aspect and the jaws almost breaking the wedge of wood. The most trivial noise or movement in the room brought about a renewal of the worst symptoms, the approach of them being indicated by the boy crying out in fear. The body during the severest moments rested on the back of the head, the elbows, and the heels. He made it to be understood that he must be lifted out of bed and brought to the door for air. On these occasions, the dyspnœa was great, and the lividity of countenance showed that the struggle for breath was intense. Night and day this was the routine. I could not persuade the boy to remain in bed.

On July 2nd, the symptoms became aggravated. The pulse rose to 140; temperature, 103.2 deg.; respirations, 40. Abundant perspiration broke out over the entire body, and the urine passed two or three times involuntarily. On July 3rd, the pulse came down to 134; temperature, 102 deg.; respirations, 34.

For some days, things remained in much the same fearful condition, it being still necessary to hurry him to the door—the same noise bringing on a fit. All this time the bowels acted very sluggishly, but the urine was passed generally regularly. The intelligence throughout was perfectly good, and he took his food well, which consisted entirely of milk and brandy—sometimes drinking two quarts of fresh milk in the twenty-four hours. He appeared always better for an hour or so after food. The brandy, which at one time was given pretty freely, was quite tolerated.

It was not till July 14th that there appeared for the first time a change for the better. From this day there was gradual improvement, chiefly indicated by a longer interval between fits of spasms. On July 22nd, he sat up. On the 23rd, he walked across the room with the aid of his mother. On the 24th, the wedge was taken away; he was induced only with the greatest difficulty to allow this to be done. He now took solid food, and each succeeding day gained strength and advanced to convalescence rapidly. The treatment throughout was muriate of morphia, with tincture of cannabis Indica.

On the evening of June 29th, when the first symptoms appeared, a draught with solution of muriate of morphia and tincture of cannabis Indica (a drachm of each) was administered. This was repeated every second hour; and the wound was dressed with a bread and water poultice, with half-an-ounce of opium in it. Next morning, his mother said he had got ease after each dose. For two or three days these draughts were pretty regularly given. Having waited myself on more than one occasion after medicine was given, I did perceive relief—there appeared some slight indication of sleep, and the fits that came soon after were less violent and painful. After a few days, when he became extremely ill and his parents lost all hope, it was with the greatest difficulty that I got the medicine given. I always found on my visiting the following day that there had been much neglect. On the fourth day, two drachms of each of the above drugs were given; and this was adhered to, as well as could be done, for nearly three days. Each day got over was in itself most material to the hope of final recovery. I did not further increase the doses, as I feared the stomach might refuse food. The bowels were kept open by enemata.

There are many points of interest in this case. The child, though young, appeared to tolerate the morphia and cannabis Indica without the semblance of any physiological effect. The illness was very prolonged, from the 29th June till 14th July, with very few remissions from the violent spasms under which he laboured. The digestive powers remained intact, and the appetite was good throughout, and, contrary to all expectation, the boy recovered.

The case must be looked upon as acute; the almost uninterrupted and violent spasmodic state of the whole frame, accompanied by the most intense agony, both mental and bodily, prevent us from even considering a subacute attack. It is difficult to know what value to put upon the morphia or cannabis Indica. I believe that some good was gained, for I watched the effects on several occasions. I considered a combination of these remedies safer than larger doses of either alone; but I look upon the liberal supply of nourishment taken as the one great and happy feature, and of more use than we are justified in assigning to any drug. Throughout, the lad drank with avidity, and the urine was passed in regular quantities. The left side was the most violently contracted under spasm. The pulse was very irregular during the fits. It was interesting to note that no advance in the healing of the wound was gained during the period of tetanus. The boy has since regained his natural strength and robustness, although for some considerable time he had a markedly contracted look about the neck and shoulders—the latter were drawn much forward and upward. The numbers noted with reference to temperature, respiration, and pulse refer to periods intervening between the fits.

Query: Would amputation on the evening of June 29th have been advisable?

THE CAUSES OF THE CONTAGION OF TYPHOID FEVER.

By M. K. ROBINSON, M.R.C.S.,
Medical Officer of Health for East Kent.

It is generally admitted that enteric fever is a communicable disease, and that its specific virus is cast off along with the fæces by the bowels. Concerning the physical characters of the poison, however, ignorance has yet to be pleaded. The microzymes or particles are so minute and subtle as to defy our present powers of penetration into the mystery of their existence; and this cannot be wondered at, supposing their size to be but one-twenty-thousandth of an inch in diameter, and that they do not differ in their power of transmitting light from the media in which they are suspended. Dr. Burdon Sanderson has adduced considerable evidence in proof of contagion being neither soluble in watery fluids nor yet capable of assuming the form of vapour without losing its properties, and thus has shewn, that this indiffusibility and particulate character offer a ready explanation of the escape at one time, and affection at another, of those exposed to the incidence of contagious particles under similar circumstances, dilution in fluid matter or distribution through the atmosphere not diminishing the potency of the particles, but rendering their chance of impinging on a given surface more or less probable, according to the extent of such dilution or distribution.

Cast off from the diseased body, enteric virus finds its way into cesspools and sewers. The etiology of enteric fever has been so intimately associated with sewer-gases and sewage-polluted water, that some have inferred that the disease may arise, *de novo*, from the products of fæcal fermentation. Leaving, however, the question of spontaneous generation, exertion of disease-force through dead matter or living cells, in the hands of those who are devoting their special talents and attention to those recondite questions, I will proceed to the consideration of the vehicles by which the poison of enteric fever is conveyed. Three such vehicles or "carriers" have, from time to time, been recognised, viz., air, water, and milk. Innumerable instances of sewage-polluted air have been noticed in connection with outbursts of enteric fever. Dr. Murchison, in his valuable monograph, recites remarkable instances of this mode of conveyance (notably the Croydon and Windsor outbreaks); of which examples he remarks "that the poison appeared to be conveyed in the volatile emanations from drains, cesspools, etc. During the time I held the post of medical officer of health for Leeds, about five thousand cases of enteric fever (*i.e.*, including sickness and death) came under observation; and of these seventy-five per cent. occurred in houses where either the house-drainage was defective, or otherwise those attacked dwelt in an atmosphere intensely charged with fæcal matter. The water supplied to the fever-stricken houses was identical with that consumed by the healthy inhabitants, and the prominent non-sanitary difference of circumstances in the two classes (affected and exempt) was the atmospheric impurity attending the condition of the former.

That water is another vehicle by which the poison is often conveyed has been clearly demonstrated. I have seen many examples of such conveyance. One striking instance I well remember, where about sixteen persons were attacked, who preferred to draw their water from an open well, instead of availing themselves, like their neighbours, of the public service; into the well a drain overflowed, which communicated with a house where the first case (an imported one) occurred in the village.

But, perhaps, the most interesting carrier, because the one to which public attention has been most prominently directed of late, is that of milk. Dr. Michael Taylor of Penrith recorded, in 1858, an outbreak of enteric fever in that town, which he traced to fever-poisoned milk. He accounted for the conveyance of the virus to the milk in one of two ways: first, either by deposit from the hands of the woman who performed the double duty of nursing the sick and milking; or, second, by absorption of the poison during the exposure of the milk in an atmosphere of fever-miasms. The addition of foul water to the milk, either by accident or design, Dr. Taylor considered impossible, as the only available supply was derived from the public service of pure water from Ullswater.

Dr. Ballard, in an admirable essay, described a localised outbreak of enteric fever at Islington, in the year 1870, which he had traced to the use of milk polluted, through the agency of water, by enteric dejecta.

During the summer and autumn of last year, it fell to my lot to be engaged in the investigation of two epidemics of enteric fever associated with milk-conveyance. One of these has been specially reported on by Dr. Ballard; and his deduction was that, as in the Islington outbreak, water acted as the conductor to the milk. In the second example, reported by myself, the coincidence of communication between the infected farm whence the supply of milk was drawn and the fever cases was strikingly manifest, the fever marking with unerring certainty the trail of the milk-purveyor. In streets where only one, two, three, or four houses were invaded, these were the only houses in the same streets supplied by the milkman in question. Altogether eighty persons, who obtained their milk from the infected source, where six cases of fever had occurred, contracted the disease, fourteen of whom died. The water-supply of the infected farm (which was the source of the milk in question) was derived from a spring having its origin and delivery, not only removed away from, but above the level of the ground on which the house and outbuildings were situated; consequently, pollution of the water by percolation or gravitation from the sewage of the premises was physically impossible. The water itself yielded no evidence of pollution, and the milk, from its reputed character and other evidence, was totally unsuspected of dilution? How, then, did the milk become contaminated? I could only account for this on the supposition of absorption by the milk of fever-particles from the atmosphere of the premises. The privy and house-drainage flowed on to the surface to join a semiliquid manure-heap close to the stable where the cows were kept and milked; and probably the warm fresh-drawn milk proved an attractive pabulum for the fever-particles, which, it could be easily conceived, might be given off from the reeking mass of filth already described. Against this theory, doubtless, may be advanced the argument, that enteric fever is not, like typhus and relapsing fevers, often conveyed from the sick to the healthy by atmospheric influence; but may not this arise from the fact of the poison being contained chiefly in the fæces, the offensive character of which causes their quick removal from the sick room?

I remember, amongst other instances, the case of a fruiterer's girl who had been strictly kept to attend the shop, whilst her mother tended a fever-afflicted boy segregated in an upper room of the house. The girl remained perfectly well until one day, on an emergency, she went to the sick room to assist the boy from a night-commode. The offensive odour brought on vomiting, and from that time she sickened and went through a well-marked course of the disease. Both the mother and girl emphatically dated the commencement of the illness from the time she entered once, and only once, the sick room as above narrated. The period of incubation was here of the shortest possible duration, but not, I believe, without parallel.

If, however, the particles of enteric fever poison can thus be conveyed as air-borne particles, if they can accompany sewer-gases in a like manner, what difficulty is there in assuming that milk (an article most susceptible of atmospheric influences, such as electrical disturbance, possessing, moreover, the property of becoming rapidly impregnated with the characteristic taints of surrounding substances) should attract and form a genial soil for the floating virus of this fever?

If this point be conceded, water, as an intermediate vehicle, need not always be considered such an essential element in the connecting chain of propagation as some appear to imagine, and the question may fairly be raised, which of the two media acts most frequently the part of a carrier between enteric fever evacuations and milk—air or water?

EMBOLISM OF CENTRAL ARTERY OF RETINA.

By PRIESTLEY SMITH, Esq., Birmingham.

THE subject of the following case was, at the time of the occurrence, an out-patient of the Birmingham General Hospital on account of disease of the heart, under the care of Dr. Russell. Through Dr. Russell's permission, I had the opportunity of keeping the case long under observation, and of examining the eye after death.

Charles T., aged 58, coach-builder, came to the Eye Hospital on June 4th, 1873, complaining of blindness of the right eye. The following is extracted from the notes of the case. Seven days previously, while sitting quietly in his chair, he felt, as he believed, the right eyelid close over the eye. Putting his finger to it, he found, to his astonishment, the eyelids open. The sight of the eye was entirely gone. He felt no pain, headache, or giddiness, either at the time or since. The loss of sight was, he says, quite instantaneous. The eye had no perception of light since. The movements of the globe, and the external appearance were normal. The pupil was of medium size; it did not respond to light; it acted in association with its fellow. Vision was absolutely lost in all parts of the retina. The media were clear. The disc, especially its margin, was much obscured by a white hazy halo. The retina was rather hazy throughout, but much more so around the disc than at the equator, where the choroidal plexus was just discernible. The situation of the macula lutea was marked by a dark reddish dot, surrounded by a white hazy halo, which shaded off gradually into the red of the surrounding region. The retinal arteries were pale, and reduced to very fine lines, visible only on careful examination. The retinal veins were somewhat below the normal size, and presented the following appearance. Each of the two primary trunks, as it emerged from the disc, was of about half the natural size; passing outwards, it increased considerably up to its first bifurcation; each of the branches arising here began as a very fine trunk, and then, in like manner, gradually increased in size up to the next point of division. The next branches did the same, and so on throughout; so that the whole venous system of the retina, instead of gradually lessening in diameter from the disc towards the equator, as in the natural state, presented a series of reversed enlargements and sudden diminutions. The point of maximum size was, in every instance, just on the discal side of a bifurcation. Upon the white halo around the macula lutea, the ultimate venous ramifications stood out in a striking manner. The left eye appeared sound in every way. The patient had a loud double aortic murmur, the systolic portion being almost musical in character. He had rheumatic fever a year ago, and believed he had had previous attacks also.

On June 23rd (twenty-six days after the occurrence), but little effusion remained in the fundus. The retina was clear; the choroidal plexus was everywhere clearly seen. The disc was whiter than at first; still rather ill defined, though much clearer than before. Some whiteness still remained around the macula lutea in the form of a double zone, the inner closely surrounding the central dot, the outer separated from this first by an almost complete ring of clear red. The veins were smaller than before at the disc, but a little larger than the arteries; at the equator rather larger than at the disc. There was no appearance of collateral circulation. He had no perception of light.

On August 12th (eleven weeks after the occurrence), the disc was very white, the fibrous stroma clearly seen. The arteries were very fine, but distinctly visible; the veins rather larger than the arteries, especially at the equator. The macula lutea was hardly to be distinguished. He had no perception of light.

Just four months after the loss of sight, the patient died in the General Hospital. The aortic valves were found to be the seat of very extensive disease. Two of the valves were fused together into a thick unyielding warty mass. The third valve retained some mobility, but was also much thickened and studded with excrescences. The right optic nerve was found to be somewhat shrunken throughout the whole of its length. A transverse section of the nerve, immediately behind the globe, showed, under the microscope, that the central vessels had undergone marked changes. The vein was patent, but much smaller than that found in the average healthy nerve. Unfortunately, I had not thought of removing both nerves for the purpose of comparison until too late. The artery, as a tube, was no longer in existence; its former position was, however, clearly indicated by a well defined circular mass of concentrically arranged fibrous tissue adjacent to the vein.

OBSTETRIC MEMORANDA.

TREATMENT OF *POST PARTUM* HÆMORRHAGE.

XVI.

THE means of suppressing *post partum* hæmorrhage have been most ably discussed in the pages of the JOURNAL; but I think scarcely enough attention has been paid to the means for its prevention.

Although I never had a fatal case, yet, in my early practice, it was my lot to meet with two very alarming ones. Subsequently, I noticed that, although there might be no large loss of blood, the sudden evacuation of the contents of the uterus, especially when there was a large quantity of liquor amnii, was often followed by death-like faintness. Even in tapping for ascites, it is always laid down as a rule to apply a bandage, which is gradually tightened as the fluid escapes, to assist the abdominal muscles, and to compensate in some measure for the loss of pressure sustained by the large vessels and viscera of the abdomen. If, then, such precautions are necessary in a case where the evacuation of the fluid is entirely under control, why should not similar precautions be taken in the emptying of the uterus? Most practitioners, no doubt, apply a binder, but not till the uterus has emptied itself, and the large blood-vessels of the abdomen have become turgid with blood from want of that support to which they have for months been accustomed. I was led by such considerations to adopt the plan of using the binder, not only after, but during labour; and, as since then I have not had a single case of *post partum* hæmorrhage, or even of that sudden exhaustion which I had before so often witnessed, I am induced to describe the plan which I adopt uniformly in all labours, and which I have found successful.

I select some stout material, wide enough when doubled to reach from the fundus of the uterus to two or three inches below the crista ilii. This, as soon as the woman is confined to her bed, is pinned as tightly round her as can be borne, thus giving support to the abdominal muscles, and keeping the child in the axis of the pelvis. As soon as true expulsive pains commence, the binder is unpinned, and the upper fold given into the hands of the nurse, with the directions that, during each pain, she should draw it as smoothly and tightly as possible across the patient's abdomen. There is no fear of the lower fold slipping, as it is kept in position by the weight of the woman's body, and therefore should be left quite alone. As soon as the head begins to emerge beneath the pubes, the pressure should be continuous and as strong as possible, and never relaxed for a single instant till after the child is born and the placenta expelled, when the binder should be pinned as tightly as possible by the surgeon himself, and not left, as is too often done, to the nurse.

I venture to think that, if some such uniform plan were adopted in all cases of labour, we should hear much less of *post partum* hæmorrhage, and be often spared the using the many hazardous, if not dangerous, expedients suggested for its suppression.

Alfred Godrich, M.A., M.R.C.S., etc., Fulham Road.

XVII.

I am constrained, by the importance of the subject of the treatment of *post partum* hæmorrhage, and the controversy which has arisen concerning the use of perchloride of iron injection, to relate a fact which seems to me to have an important bearing on it. Sometime before being obliged to relinquish my practice in Clonakilty, I saw, in consultation with Dr. Garde of Timoleague, a case in which, from extreme narrowing of the pelvic outlet, we were obliged to decide on practising the Cæsarean section. Our patient was removed to the Union Hospital, where the operation was performed in the usual way. On the removal of the child and placenta, severe *post partum* hæmorrhage set in; here there was no difficulty in the fullest application of the hand to the interior of the womb, nor even in grasping the organ in both hands, and firmly compressing it; but neither this, the application of cold, nor any other means, was of the smallest avail in controlling the hæmorrhage, or in stimulating the organ to contract and close the gaping orifice which my incision had made, till I resorted to the diluted solution of perchloride of iron, when immediately the exact appearances, as described by Dr. Barnes, were patent to the eye. "When no known power can compel the uterine muscle to contract, and thus to close its bleeding vessels, styptics, which act chemically, will still seal up the mouths of those vessels and corrugate the inner surface of the uterus". It does not affect the question at issue, that the poor woman only survived the shock of the operation (coming, as it did, after many days of exhausting labour), about seventeen or eighteen hours, though it was moderated, as far as possible, by the use of chloroform and a warm temperature during the operation, and the free use of stimulants and opium afterwards.

H. R. Hadden, M.D., F.R.C.S.I., Rathmines.

XVIII.

Case i.—N., a feeble woman, aged 40, pluripara, was delivered at six months of a fœtus, which had been dead a few days. There was adherent placenta within the fundal zone, which was removed carefully and entirely, the uterus being supported over the abdomen during the operation, and made to expel hand and placenta together. Excessive hæmorrhage at once came on. Pressure, cold, air and water, ergot, were unavailing. The woman, ill able to bear the loss of blood, was rapidly sinking; there were sighing respiration, jactitation, etc. I injected perchloride of iron in solution (one part in four), which was followed instantly by firm contraction, very different to the weak, flabby contractions which were felt before, and a complete arrest of the hæmorrhage. No pain was experienced at the time, or afterwards. Only one single untoward symptom arose ere perfect recovery resulted—that was, that catheterism was required four days subsequently to delivery.

Case ii.—M., aged 30, was a fresh-looking handsome woman, in comfortable circumstances, the mother of three children. Her last two confinements were attended with severe flooding, the last but one especially. As I was absent from home, a friend attended her last time for me. I controlled the bleeding at the last but one, after incessant bipolar pressure on the uterus for about an hour and a half, and the frequent administration of ergot, but she was almost lost. She had now approached the term of her fourth pregnancy. I saw her on November 17th, 1873. She had slight pain; there had been an escape of liquor amnii, and the os was as large as a half-crown. For four days things remained in this condition. During the night of the 21st I was sent for, and I went prepared. She had good pains, and the labour was completed naturally. I gave a dose of ergot ten minutes before the child was born; followed up the uterus myself with the left hand, leaving the nurse to divide the cord, etc., and confined my attention entirely to the uterus. The placenta was expelled in five minutes, deliberately, and by the spontaneous contraction of the uterus. My hand never left the uterus for three-quarters of an hour, during which time alternate contractions and relaxations were felt, each contraction being followed by the expulsion of more or less clot. After the expiration of that time, I relaxed the pressure. In a few minutes the uterus swelled up. I removed the contained clots, reapplied my hand over the abdomen, first dipping it in cold water, and gave a second dose of ergot in some brandy and water. Still, no persistent contraction would take place. A considerable quantity of blood had already been lost. There was a pulse of 120, a degree of rapidity which had been persistent. The patient was becoming exhausted, and the means in use appeared insufficient; therefore I injected a pint of a solution of perchloride of iron (one part in eight). Firm contraction immediately followed, and bleeding ceased, the solution flowing back untinged. Still having my hand on the uterus, I felt it enlarge, after five or ten minutes' time, and suddenly a copious hæmorrhage took place. I immediately injected another pint, but stronger—one part in four—of the solution. After this, no more flooding took place. There was no complaint of pain at the time of injection, but a feeling of relief and safety was experienced by the woman. For several days subsequently there were general pain over the abdomen, a rather quick pulse, and some pyrexia. Linseed poultices, small doses of Dover's powder, a mixture of liquor ammoniæ acetatis, abstinence from solids, and afterwards good living and bark, were the treatment.

Marsh Jackson, M.R.C.S., Smethwick.

CLINICAL MEMORANDA.

MOVABLE KIDNEY.

Mrs. H., aged 27, of good figure, and the mother of two healthy children, the youngest six months old, consulted me on March 13th. She strained herself in trying to open a window about a month ago. Since then she has had pain, more or less, in the abdomen, below the right costal margin. She thought she felt a swelling. When young, she was subject "to violent attacks of pain in the bowels". I found a hard tumour reaching from the umbilicus, upwards and outwards, nearly to the ends of the last two right ribs. The fingers could easily be passed between the costal margin and the tumour. The mass, slightly painful when handled, felt exactly like the kidney, the convex border of which was the lower edge of the swelling. The tumour, which was covered by intestine, moved downwards about an inch and a half on inspiration, and upwards on expiration. It was also freely movable in all directions by the hand. Beyond the fact that the urine had been scanty, and loaded with urates, since the strain, there was no other symptom. My diagnosis was movable kidney, and my advice was, that the patient should wear an abdominal support, with a pad to keep the kidney in its place as much as possible. I may add, the bowels were thoroughly evacuated before my decision.

Thomas Cole, M.D.Lond., M.R.C.P., Bath.

REPORTS OF MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

CASE OF STRANGULATED INGUINAL HERNIA, COMPLICATED WITH SLOUGHING OF THE SCROTUM AND SUPRAPUBIC ABSCESS: OPERATION: REMARKS.

(Under the care of Mr. W. W. Wagstaffe.

A man (T. A., aged 42) was brought into hospital on the night of the heavy fall of snow, February 2nd, 1873, with symptoms of severely strangulated hernia. He had had a rupture for thirteen years, the original lesion being attributed to the blow of a gun while he was serving in the army abroad. For the last eight or nine years, the hernia had not been reducible, but it had varied in size. Occasionally, it had been troublesome and painful, and there had been some difficulty in reducing it to its usual dimensions.

When he was taken in, the size of the hernia was larger than that of a cricket-ball, and extended into the upper part of the right side of the scrotum. It had been down for about seven hours, no cause being known for its becoming strangulated. It was at first only painful, and gave rise to sickness; it then gradually increased in size. His sickness and pain continued with increasing severity until he was brought in. Reduction had been attempted by taxis, a hot bath had been used, ice applied over the tumour, and while he was under chloroform taxis was again tried.

Operation.—As attempts at reduction failed, and the symptoms were very acute, Mr. Wagstaffe proceeded to operate, with the sanction of Mr. Croft, into one of whose beds the man had been received. The skin was transfixed, and the tissues found very much congested. The sac was opened by means of a director at the upper end of the tumour, and immediately the intestine protruded without any escape of fluid. The intestine was acutely congested, and there was a coil of small intestine about eight to ten inches in length, with a large piece of omentum which was adherent at the lower end of the sac. In the lower part of the sac there were about two ounces of fluid, clear and straw-coloured. The stricture was felt by the finger to be at the neck of the sac, about the normal position of the interior ring, and the fibres of the external oblique aponeurosis were excessively tense. Division of the external oblique fibres was insufficient, but division of the neck of the sac allowed the finger to pass into the abdomen. The intestine was then drawn down and examined; and one end of the included portion was found to be indented by the pressure of the stricture, and the neighbouring part acutely congested and distended with gas. The other and less congested end was returned into the abdomen; and, after considerable difficulty and rather long manipulation and exposure, the whole of the intestine was reduced. The difficulty was caused by the great distension of the gut. The omentum was now torn away from its attachment to the scrotum, and immediately a most troublesome hæmorrhage occurred from every point that had been torn through, and from every fresh tear or touch while trying to check the primary oozing. As no cautery was at hand, a ligature of catgut was passed through the omentum and the lower end tied in two pieces, and, therefore, deprived of all vascular connections. The omentum was now returned into the wound, but not into the abdomen, and the wound was closed by silver wire. A piece of oiled lint was placed in the lower angle of the incision, and another over the wound, and a small sandbag was laid upon the upper part.

Two days afterwards (Feb. 4th), the abdomen became distended, and the patient was constantly sick in the evening. His aspect during the day, too, had become very sallow, so that, fearing the occurrence of peritonitis, ice was ordered to be applied to the surface of the abdomen, and small doses of opium were given internally.

Next day (February 5th), the abdomen was less distended, but the bowels were opened very freely, the fæces being very offensive, but not bloody. He had a rigor, and during the day the scrotum became enormously swollen, red, dusky, shining, and gradually black as far back as the perinæum. Mr. Wagstaffe, therefore, had the patient put under chloroform, reopened the wound, laid open the sac in its whole length again, found very little fluid in it, and that not purulent, and showed that the omentum, even beyond the ligature, was quite healthy and adherent, so that the cause of the complication in the scrotum was not traceable to any suppuration in the sac. The sloughing scrotum was now freely incised on both sides, and a quantity of serous fluid oozed out gradually. The urethra was examined, but no cause could be found there to explain what appeared to resemble urinary extravasation. The urine was not albuminous, but loaded with lithates. Hiccup continued for two hours after operation, and sickness occurred every ten minutes during the day, giving rise to great depression, and preventing any sleep. The hiccup seemed to be checked by soda-water, a teaspoonful every five minutes; and for the sickness he had one minim of kreasote every two hours, upon the ground that its cause was septic poisoning.

February 6th. Sickness stopped this morning, and the man's appearance was improved; his lips were more coloured, and his skin less sallow. The wounds in the scrotum were extended in length and depth, so that the scrotum was now incised from the root of the penis to the perinæum on both sides. It was evident that the whole of the scrotum would slough.

February 10th. The bowels were still loose, and had been so ever since the 5th. The slough of the scrotum had nearly all separated.

February 21st. The wounds had cleaned; nearly the whole of the scrotum had gone, leaving only a fringe on each side towards the thigh. The hernial wound had been kept open, and was now skinning over. A secondary abscess had formed behind and above the pubes, which was opened, and a large collection of old pus evacuated. Both testicles and cords were lying fully exposed.

April 21st. The scrotum had been left to close as much as it would, assisted by the support of daily strapping; and it was curious to notice how much more had been gained by the contraction of the cicatrising process than at first sight seemed possible. There was now only a broad line of wound extending from the right inguinal region to below the penis on the remains of the scrotum. The edges of this wound were thick and inverted. These were to-day raised by Mr. Wagstaffe, and brought up so as to cover over the granulating surface underneath, which was scarified.

June 3rd. The wound having been healed for some time, the patient went to a convalescent hospital.

REMARKS.—One looks with some interest to the primary cause of hernia now, since Roser's views have been made public in England, for we have so long, perhaps blindly, accepted the mechanical theory of the causation of hernia, that it is at first difficult to receive others. Roser attributes all herniæ to one of two causes—pre-existing patency of those fœtal connections between the abdomen and scrotum, the processus vaginalis and canal of Nuck, or growth and moving downwards of a lobule or lobules of fat, which, by their gradual alteration in position, leave an actual space behind them after having distended and weakened the tissues closing the various canals. And he gives as his grounds for these views, his observation that congenital patency in these canals is much more common than is generally supposed, the impossibility of distending the peritoneum even when the abdominal walls are injured, and his having frequently observed the occurrence of peculiar fat-masses which are partly occupying the canals or other situations of a hernia. These fat-masses, he insists, exist at first as small lobules between the meshes of the tissue; then, by their increase, they force themselves out of the meshes and drag peritoneum or connective tissue after them, and the more they are developed, the more they displace these tissues and leave cavities into which a hernia may, by small exercise of force, pass down. Now, in the present case, the hernia followed immediately upon an injury in the first instance; and Professor Roser would say that there existed a predisposition in the shape of a cavity along the course of the cord. This hypothesis cannot, of course, be gainsaid, but, at the same time, it cannot be proved. Mr. Wagstaffe thinks we are compelled to admit that Roser's view must be correct in a large number of cases, for the fact of the congenital abnormality occurring in so many *post mortem* examinations is convincing, and the fat theory is, to say the least, an ingenious one. But is it impossible, or even improbable, that hernia should be the result of injury without the predisposition of which Roser speaks?

Mr. Wagstaffe thinks that experiments upon dead subjects, or even living animals, cannot be of much value in determining the question, for the conditions are essentially different from those which exist in man at the time when a rupture occurs. Under no circumstances are the abdominal walls of the dead body made so firm and unyielding as during the act of coughing or straining; and, therefore, one of the most important conditions is omitted. Professor Roser says that the peritoneum cannot possibly be distended to the extent requisite for the capacity of a hernia, but that the cavity exists, ready for the gut as soon as it has slipped by the barrier at the neck of the sac. But is this borne out by experience? Does not one see the pleura, a similar structure, sometimes protruded? And is the peritoneum really so inelastic? Must not the difficulty of distending the peritoneum be rather attributed to an inequality in the pressure used during the experiment? Such experiments are often fallacious, and too much stress should not be laid upon them; and the observations here referred to cannot be said to prove the impossibility, or even improbability, of hernia occurring without a predisposing vacancy.

Further, in the case now under observation, the hernia became strangulated without any sudden cause—without any coughing or straining or violence. The conditions were favourable to the descent of a piece of intestine, there being a large piece of omentum constantly in the canal and adherent at the bottom of the sac. It frequently happens that strangulation occurs when the omentum is adherent. The piece of omentum lying in the sac in the present instance was so large, that it could not possibly be returned into the abdomen through the opening made to relieve the strangulation. And this seems to be readily accounted for. For, would not such a local hypertrophy of omentum naturally occur with so chronic a local congestion? If it be granted that a piece of omentum has been originally forced down through a narrow opening and retained there mechanically, or by subsequent adhesions occurring, what is more probable than that the omentum, being constantly congested and liable to frequent still more acute attacks of congestion, should grow, and at length become too large to return through the original aperture.

The time the hernia had been strangulated was comparatively short—not more than about seven hours; nevertheless, the symptoms were acute, and the strangulation acute. In fact, the case showed in a very marked manner what is often observed, that the acuteness of the symptoms may be an indication of the acuteness of the strangulation, and, therefore, of the urgency of relief by operation. The intestine was so much more congested and indented at one extremity of the coil than towards the other, that it is probable the former was kept in position (and possibly this was the lower part of the included gut), while more and more of the intestine was forced into the sac. This view is of practical importance, for, if borne in mind, it leads the operator to a systematic attempt at reduction; it suggests to him the advisability of reducing the least strangulated portion first, upon the principle that what has come down last will best go up first. Of course, in many cases, after a stricture has been divided, the reduction of a knuckle of intestine is a simple matter; but when, as in this case, the coil is a large one and much distended by flatus, reduction is often difficult, particularly as the operator is anxious not to leave a large aperture through which a still more troublesome hernia may afterwards descend.

Upon one important point in operating for hernia, Mr. Wagstaffe considers that sufficient stress has not usually been laid. Whenever the sac is opened, it is advisable to examine the constricted portion of gut thoroughly by pulling it down into view after relieving the stricture. It is not uncommon to see the stricture divided and the gut immediately returned by manipulation after an inspection only of the projecting portion of the knuckle of intestine; but it is the safest plan to withdraw the gut so as to get the constricted parts fully into view. It can do no harm, and it gives the operator a fuller knowledge of the condition of the gut at the points where the mischief is likely to have occurred, and it may save him from putting back a portion of intestine too far injured to recover itself. Mr. Wagstaffe has seen three instances in which this precaution was not taken, and in which there was an immediate escape of the contents of the bowel into the peritoneum, with a fatal result. It may be argued that such a proceeding is only necessary when the gut has been strangulated for some time, but the length of time of strangulation is no true indication of the extent of injury to the intestine. Frequently, the pulling down of the gut greatly facilitates reduction, apparently by straightening or untwisting the part at which obstruction has occurred. This rule applies just as much to strangulated hernia before operation is resorted to, but with this proviso, that traction must not be made with any force where the symptoms are such as to render it probable that much injury has occurred to the intestine. In recent strangulated herniæ, Mr. Wagstaffe always adopts the plan of trying to pull down the intestine before attempting to return it, and with marked success.

The complication which occurred in this case, namely, that of sloughing of the scrotum, was peculiar, and its cause obscure. Here, for two days after operation, the patient's symptoms pointed to peritonitis. He had constant sickness, was very sallow, and his abdomen was tympanitic; but by the third day, sloughing of the whole of the scrotum became evident. The questions arise, what was the cause of this? and what connection there was, if any, between this sloughing and the strangulation? In one of two other cases in which sloughing occurred, this was traced to direct injury from the violence used during taxis, and the patient died; in the other, no great violence had been used, but the patient was suffering from albuminuria, and recovered; in neither case was the omentum adherent. Spontaneous sloughing of the scrotum, after an erysipelatous form of inflammation, is occasionally seen, ending fatally, and associated with a gouty condition of kidneys. But, in the present case, there was no history of violent manipulation, and no disease of the kidneys was detected, and there was no special history of general or local disease, apart from the hernia, which could throw light upon the cause of the sloughing. Sometimes, in cases where the sac has not been laid open thoroughly, troublesome inflammation of the tissues of the scrotum has followed. In this case, however, the sac was laid open to the very bottom, and free drainage secured.

One must recollect, that here the omentum was firmly adherent at the lower end of the sac, and that large vessels passed freely from the omentum into the scrotum, as seen during the operation while separating the adhesions. One must also remember that a quantity of acute inflammatory fluid lay in the bottom of the sac, the case being one of peculiarly acute strangulation. Is it not possible that these inflammatory products had been previously absorbed into the scrotum and disseminated there, since the fluid could not well return through the tightly compressed omentum? No other way of explaining the occurrence of the gangrene is apparent. Manipulation may possibly have helped to produce the results, and the exposure of these products to the external air by the incision of the operation must also be taken into account. Mr. Wagstaffe was prepared to find the sac and the lower part of the ligatured omentum acutely inflamed; yet, curiously, when the sac and omentum were again exposed (on the third day after operation), there were no signs of acute inflammatory action in those parts. In fact, the portion of omentum below the catgut appeared healthy, and only adherent by soft adhesions to the wall of the sac.

Another point worthy of notice, in passing, is the extent to which the testicles became covered naturally, assisted only by care in dressing. It seemed as if nothing could have been obtained to cover these organs; but the contraction of the skin during cicatrisation was almost enough to give a good covering, although apparently the whole of the scrotum had sloughed. A small plastic operation, in which little more than the inverted edges of the nearly healed wound were dissected back, was enough to complete the covering of the testicles.

The local treatment adopted at first was that which is generally to be preferred in cases where the wound of operation is large—to ensure free drainage from the bottom of the wound by means of a pledget of oiled lint in its lower angle, and to lay another piece of oiled lint over the whole length of the wound. A small sandbag, as suggested by Mr. Le Gros Clark, placed over the abdominal ring, prevents the descent of the gut, and the patient or nurse is directed to use gentle pressure with the hand over this if the patient strain. When the wound is small, it may usually be left without any dressing, the surface being smeared with blood; all washing of the wound is thereby avoided.

WORKHOUSE HOSPITAL, MANCHESTER.

CASE OF APOPLEXY SIMULATING DRUNKENNESS.

(Under the care of Mr. W. Berry.)

The following particulars of a case of apoplexy, admitted into the Workhouse Hospital, Manchester, under the care of Mr. Berry, may prove interesting to many, owing to the symptoms simulating in a great measure those of drunkenness, with the exception that there was no perceptible smell of drink (which, no doubt, is a very important sign). It shows how careful medical men should be when called to such cases, lest they should mistake a case of apoplexy for intoxication; for, had the man in this case unfortunately had a small quantity of spirit, and the odour had been detected in his breath, he would in all probability have been taken to the police-station instead of to the hospital.

Robert H., aged 40, a painter, married, was admitted on February 5th, at 8.40 A.M. He was brought by the police, having been found by them "reeling about in the street", and unable to give any account of himself. On admission, he presented all the appearances of a man under the influence of drink. He had walked in between two policemen, and, when Mr. Berry saw him, was sitting on a form, with his head down and eyes closed, face pale, and extremities rather cold; pulse 84, regular. When in bed, he lay with his knees drawn up and his head bent on his chest, with the clothes pulled closely around his neck. Respiration was free and natural; the pupils were normal, and acted slightly to the stimulus of light. On being aroused by shouting and pulling at the lobe of his ear, he told Mr. Berry to desist and leave him alone. Thinking that the man might be under the influence of drink, and not having any previous history of the case, Mr. Berry applied the battery (continuous current) for a few seconds. This aroused him a little more; and he gave his name and address, also stating that he was a painter. At the same time, he pulled the bedclothes closely around his neck. He again sank into the same unconscious state, from which he never rallied, but died the next morning at 3.55 A.M., nineteen hours after admission.

Necropsy, twelve hours after death.—The body was fairly nourished; there were no external marks of violence or signs of deformity. Rigor mortis was perfect. There was no effusion beneath the scalp. The calvarium was slightly adherent to the dura mater. On removing the dura mater, a clot of blood was perceptible in the sulci of the convolutions on the right side; this was connected with the larger one in the interior. On slicing down the brain-substance, there was found a clot in the interior of the middle lobe of the right cerebral hemisphere, occupying the fissure of Sylvius and a portion of the anterior lobe, and extending into the posterior cornu of the lateral ventricle (as well as the middle lobe). This had apparently arisen from rupture of the middle cerebral artery on that side. The coats of the arteries of the brain were attenuated, otherwise appeared healthy. The clot did not appear to encroach on the great nerve-centres, and the lateral ventricles contained very little serum. The pleuræ were slightly adherent. There was hypostatic congestion of both lungs, especially of the lower lobe of the right lung. The heart was slightly hypertrophied; the ventricles were firmly contracted; their cavities contained a little fluid blood. The valves were healthy. The coronary arteries were healthy. The stomach and intestines were healthy, and contained a moderate quantity of semi-digested food. The liver and spleen were normal. The kidneys were both in a state of granular degeneration; the right was smaller and more contracted than the left. The bladder contained some urine, which was found, on testing, to be albuminous.

Remarks by Mr. Berry.—It is remarkable that the symptoms should have been so slight, considering the extensive brain-lesion; but this is, of course, due to the clot not pressing on any of the great nerve-centres. Hence we have no paralysis, no stertorous breathing, and no dilated pupils. Had some urine been withdrawn from the bladder and tested on his admission, the symptoms would have led one to suppose that uræmia was the cause. I afterwards ascertained from his wife that he had always been a temperate and what she considered a healthy man, only occasionally complaining of indigestion and headache. He had not complained of feeling unwell before leaving the house that morning.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, APRIL 4TH, 1874.

THE SOHO HOSPITAL FOR WOMEN.

WE regret to learn that the threatened disorganisation of the medical arrangements of the Soho Hospital for Women has at length occurred. Our recent comments were intended to avert it, and had, we believe, the effect of postponing it. We have, however, now received a pamphlet —prefaced by a statement signed by Dr. Alfred Meadows, Mr. John Scott, Mr. Christopher Heath, Mr. Edgelow, Dr. Arthur Edis, and Dr. Squarey—setting forth the reasons which have driven them to final resignation. This statement goes into many details concerning abuses in the internal management of the hospital, which we need not discuss. There are other abuses in the out-patient department, which were referred to at the public meeting of the Out-Patient Reform Association last week, which are not here referred to. The main question of professional and public interest is the great one, that the Committee of this Hospital have established a form of government which is so liable to abuse that it was and is sure to become the parent of evil; and that they have brought about the present scandal by an endeavour to strain to the utmost a power which is in itself intolerable, under a form of irresponsible despotism which is, in our opinion, not less mischievous to those who seek to exercise it than degrading to those who can be persuaded to submit to it.

The General Committee of this Hospital, it appears, is self-elected, so that the Governors have no voice in the matter. Being thus irresponsible to an extent which is, we believe, without precedent, they have proceeded to claim for themselves the right of getting rid of members of the medical staff without reason assigned, or for any reason which may seem good to themselves. They had voluntarily, it appears, limited their own powers, till recently, by assigning to their staff a biennial term of office; even this limitation, however, appearing distasteful to them, according to the printed statement before us, the General Committee, "in order to secure the speedy removal of one or more members of the staff who had become obnoxious to them", passed a new bye-law, which they sent down to the Medical Committee on the 19th of December, informing them that in twelve days' time they must offer themselves for re-election, and that henceforth they must do so annually. This was not only despotic, but illegal; for, however irresponsible and autocratic, the Committee had at least made a formal contract for two years' tenure of office with their staff. At this juncture, the resignations of the gentlemen whose names we have recited was tendered; and we thought it advisable to urge upon the Committee the propriety of reconsidering a constitution which is in itself open to objection, which had shown itself liable to bring about personal collision between the staff and the Committee, who should work harmoniously for a common public end, and which obviously had in it the seeds of maladministration. Some negotiations followed, which led to the proposition by the General Committee that the present staff should revert to their former biennial tenure of office, but that all future medical officers should annually apply to the General Committee for reappointment. This offer was accompanied, however, by an intimation that the members in question of the honorary medical staff had "subordinated the interests of the charity and the welfare of the patients committed to their charge to secondary and entirely personal considerations". Such a charge did not serve to convince the staff that they might safely trust their professional status and reputation, at the end of another year, to the hands of those who officially preferred it. At present, it finds its appropriate answer in the well-founded declaration of the honorary staff that "nothing in the record of their past services to the Hospital can be found to justify these offensive imputations"; and in their refusal to continue to act as medical officers of a hospital governed by a Committee whose minutes are not public, whose acts are beyond appeal, and who claim and possess apparently the right of electing themselves to govern the Hospital according to their own pleasure, and of displacing at short intervals, without remedy, men who have given years of gratuitous labour to the service of the patients. The scientific future, and personal and professional position of medical men, cannot but be more or less bound up with their hospital career, and they may be irretrievably injured by their sudden, unjust, and unqualified expulsion from a field of work which they have chosen as their sphere of professional exertion and study. It is at no time easy for a physician to shift from one hospital appointment to another; and, after a certain lapse of years, it often becomes impossible. In most hospitals, the term of service begins with the tenure of office as assistant-physician; and from this post the course of years brings the incumbent to that of full physician; the claims of seniority are recognised in such promotions; and, as it is impossible for a physician to accept junior posts (or that they should be entrusted to him) after a certain age, arbitrary dismissal from a hospital appointment may readily throw a man out of the professional groove, and rob him of part of the fruit of the toil of the best years of his life. Something of this fate may, we believe, be traced in the history of a former physician of this Hospital.

It will, we think, be clear that the constitution of the government of the Women's Hospital is essentially at fault. No small body of men should desire to exercise the irresponsible power of governing that which is the property of others, which this General Committee claim. No body of men exercising a public trust should desire to free themselves from the usual condition of restoring their trust from time to time to the first sources of it, and submitting their acts to scrutiny, discussion, and control. It is a form of power which is almost without precedent, and which can have no public objects to recommend it. The absolute irresponsibility and uncontrolled power over the property and the destiny of others, which the General Committee claim, contrast strongly with their desire to reduce the honorary medical staff to a position in which they should have only duties and no privileges, and only a darkened and uncertain fate, over which they should have no control, and from which they should have no appeal.

The medical staff were not even represented on the General Committee, except by the founder of the hospital, Dr. Protheroe Smith; and they complain, in their final letter of March 23rd, that Dr. Protheroe Smith not only separated himself from his colleagues on the questions at issue, but also refused to attend their medical meetings, and to fill his place on the General Committee as the representative of the staff, where he might have stated the views which they entertained.

It seems clear that the medical staff have not severed their connection with the hospital a day too soon. It was unwise ever to have accepted office under a constitution so intolerable; but the fact was, we believe, that its nature was not known fully and had not been fully considered by most of them, and only recent circumstances have fully developed the mischievous character of the powers vested in the Committee. Under the circumstances, the profession will, we believe, tender a hearty moral support to men who have vindicated an important principle at the cost of their own comfort, and by the sacrifice of posts which were to them the objects of legitimate ambition. It is strongly to be hoped that no greed of office will tempt others to step forward to fill the vacancies. These vacancies are protests against misrule; they testify to the conscientious vindication of professional honour and dignity; they cannot be prudently or honourably filled by any one till the just causes of complaint which we have indicated be removed. It may be hoped that the General Committee will not refuse to abdicate a power which is unseemly, and which brings to them no glory, while its determined exercise has robbed them and the hospital they administer of their chief capacity for usefulness. A hospital without medical officers, or with only a small remnant of a staff, and a Hospital Committee without professional instruments to forward the humane objects of the charity, are in a very poor plight. That is the present plight of the Soho Hospital for Women and its General Committee; and, until they have done something to help themselves by reforming their pretensions and establishing a suitable and safe constitution, we hope that no medical man will be found to sacrifice his self-respect so far as to mount the scaffold and put his neck in the noose which they dangle, in the hope that they will always refrain from dropping the trap. If he do, he must not be surprised if he should one day find that he has unwittingly committed professional suicide.

THE ACTION OF ALCOHOL.

FROM the extent to which alcohol is used as a food and as a medicine —to say nothing of its employment in intoxicating people, which, as we too often forget, means poisoning them—one would imagine that its place and power would have already been tolerably well settled, and its mode of action pretty well ascertained. Every-day experience shows us, however, that this is not the case; and very few, even among those who have paid most attention to the subject, are quite sure how much alcohol may be taken either by a healthy or by a sick man without injury, or what effect it will have when used in moderate quantities. We therefore gladly welcome the publication of such experiments as those which Dr. Parkes has lately communicated to the Royal Society.

The object which he had in view was to ascertain the influence of ordinary or ethyl alcohol on the temperature, pulse, and respirations of a healthy man. He obliged a healthy young soldier to take exactly the same amount of food and exercise every day for several days together, and carefully noted the temperature, pulse, and respirations. For the first six days, no alcohol was given; but on the following five days the soldier took a certain quantity of raw brandy every day. As his diet and exercise remained the same as before, any change in the temperature, pulse, or respiration, must be attributed to the action of the alcohol. He finished breakfast every day at 7 A.M., and then lay in bed till 2 P.M., when he rose and took exercise. At 9 P.M., he went to bed. The brandy was given at 11 A.M., four hours after breakfast. The first day, he took one fluid-ounce of undiluted brandy (equal to half an ounce of alcohol); on the second day, two ounces; on the third day, four ounces; on the fourth day, six ounces; and on the fifth day also, six ounces.

The results of these experiments, and of others previously communicated to the Royal Society, showed that the temperature of the axilla and rectum was hardly altered by the alcohol. It certainly was never increased; and, though it seemed to be slightly lowered, this was not quite certain; and, if any lowering did occur, it did not exceed 0.35 deg. Fahr., and may not have been more than 0.07 deg. Fahr. In these experiments, the temperature had been raised by the food taken at breakfast-time, and had again begun to fall, the process of digestion being nearly finished. When alcohol was given during fasting and rest, it lessened the temperature much more distinctly, though still only slightly, the diminution never exceeding half a degree Fahrenheit. It was greatest one or two hours after the dose had been taken, and was evidently passing off after three hours. If given with food and either usual or increased exercise, alcohol produced no effect whatever on the temperature, even when the quantity amounted to so much as from four to eight ounces of absolute alcohol, equal to sixteen ounces of brandy, in twenty-four hours. In no case did it raise the temperature. When the man experimented on was at rest, the pulse was quickened from five to ten beats per minute after the alcohol had been swallowed, and remained quick for some time. When exercise was taken, the increase in rapidity was still greater. After the effect of alcohol had passed off, the pulse-rate fell even below the normal, so that the number of beats in twenty-four hours was not increased unless the amount of alcohol had been large and repeated. The pulse became fuller and softer to the touch; and it was evident, both from sphygmographic tracings and from the redness of the skin, that the radial artery and the cutaneous capillaries were relaxed and dilated. The respirations were not increased in number; in some experiments, indeed, they were lessened and became deeper, but the effect was not very marked. Alcohol, then, according to Dr. Parkes's exact experiments, has almost no action on respiration, and very little on temperature, which it slightly diminishes, but never increases. Its effect on the heart may be said to be stimulating, but not strengthening, and may reasonably be compared to that of a spur applied to a horse, quickening its movements for a time, but not actually increasing its strength as a feed of corn would do.

Such being the case, Dr. Parkes's results must induce physicians to consider most carefully to what extent stimulants are to be administered in disease; for every one knows that many a horse which might have reached its journey's end—at a snail's pace, it is true, but still safely—has utterly broken down on the road, in consequence of too frequent an application of the spur; and it is just possible that many a heart, which might have kept up the circulation feebly and languidly till the crisis of the disease was past, may have become exhausted and ceased to beat because it had been kept working beyond its strength for days or hours under the stimulus of alcohol. Whenever the circulation is becoming so weak as to be insufficient to sustain life, alcohol must at once be employed, and its beneficial powers will immediately become manifest; but the benefits to be derived from its administration while the power of the heart is still sufficient are rendered somewhat doubtful by Dr. Parkes's observations. It is, however, very difficult to apply the results of physiological investigations correctly to the treatment of disease; and the problems with which we have to deal are so complicated, that all our deductions must be checked by actual experience at the bedside. The slight effect of alcohol upon the temperature of the body in Dr. Parkes's experiments seems at first sight very extraordinary, especially when we remember the widely spread custom of men drinking spirits in cold weather to warm, and in hot weather to cool them. The conditions under which the experiments were made, however, afford a ready explanation of the result. The subjects of them were lying in bed both before and after they swallowed the brandy, and loss of heat from the surface of their bodies was, in all probability, prevented by the bedclothes. Any change in the temperature of the body depends on a disturbance of the relation between the heat produced by it and that given off from it. If more heat be produced, the temperature will rise; and if less be produced, it will fall, supposing the heat radiated off or conducted away from the surface to remain the same. And, on the other hand, the amount of heat produced may remain unaltered, and yet the temperature will fall if heat be abstracted more rapidly from the skin, and it will rise if heat be given off more slowly. The condition of the cutaneous vessels forms one of the most important parts of the great regulating mechanism by which the balance between loss and gain of heat is preserved in the organism. Whenever the temperature rises, these dilate, as we see in the flush of fever or after active exercise, and, by exposing the warm blood over a large surface to the influence of the air, with only a thin layer of tissue between, quickly cool it down, in somewhat the same way as we cool tea quickly by pouring it into a saucer. Cold has exactly the opposite effect; it causes the cutaneous vessels to contract, and thus drives the blood from the surface into the interior of the body, and prevents its temperature from becoming lower. The skin may thus become as cold as ice, but the vital organs are preserved from chill. Over the regulating mechanism just mentioned, alcohol exercises a most important influence. As Dr. Parkes has observed, it dilates the arteries and capillaries, allowing the blood to stream freely through the cutaneous vessels, and imparting a ruddy tint to the surface. The consequence of this is, that a glass of spirits on a cold day allows the warm blood from the interior of the body to circulate over the surface, and imparts a temporary glow to the numbed extremities. But it only warms the outside at the expense of the inside; and the cooled blood, returning to the vitals, quickly causes a depressing chill to succeed the first feelings of comfort. So notably is this the case, that the gillies on a Highland moor will refuse a "nip" of whiskey, on the plea that it is too cold; and Arctic travellers unanimously denounce the use of spirits while exposure to cold continues. But the case is different after shelter has been reached, the wet clothes removed, and the individual once more seated by a warm fireside. The cutaneous vessels are slow to dilate after their long contraction, and so the blood cannot readily reach the surface, although warmth instead of cold is now applied to it. Consequently, it is a long time before the heat is conveyed to the interior; or, in other words, it is long before one becomes warmed through. If a little alcohol be taken at this stage, it materially hastens the process; it dilates the vessels; and the blood, no longer pent up in the interior of the body, circulates freely over the surface, and carries the warmth of the fire back with it on its return. At the same time, the extra pressure of blood on the internal organs is relieved, and the danger of congestion taking place in them, and leading to inflammations and catarrhs, is diminished; so that a dose of alcohol, under the conditions just mentioned, is popularly employed to prevent persons from catching cold. At the same time that the cutaneous vessels dilate, the activity of the sudoriparous glands is frequently increased, so that the surface of the skin may become covered with sweat, though previously dry. By the evaporation of moisture, warmth is rapidly abstracted; and, the blood being thus cooled, we can readily see why men drink on a warm day to cool them, as well as on a cold day to warm them. It is obvious that, when a person is neither exposed to cold nor heat, but is simply wrapped up in blankets, alcohol may alter the distribution of heat within the body, and cause the surface to become warmer by dilating the vessels. But, loss from the surface being almost entirely prevented by the woollen coverings, the temperature of the body as a whole cannot be much reduced by this means; and, as Dr. Parkes noticed a distinct reduction, we must look in some other direction for its cause. Besides, the fall did not attain its maximum till one or two hours after the alcohol had been swallowed; while dilatation of the vessels usually begins before many minutes have elapsed. Moreover, the fall was greater in persons fasting than in those whose temperature had been somewhat raised by food—the very reverse of what we would expect if it were simply due to more rapid cooling. These three circumstances point to diminished production of heat, rather than increased loss, as the cause of the fall in temperature. Professor Binz of Bonn has found that alcohol lessens oxidation in the organism, thus diminishing its calorific powers; and to this we must probably ascribe the results observed by Dr. Parkes. As alcohol lowers the temperature more during fasting than during digestion, it appears not improbable that it retards the oxidation of tissues more than that of the products of digestion. Should this be substantiated by further experiments, it will be of considerable importance with reference to the use of alcohol as a paratriptic. There are, however, many other points regarding the action and use of alcohol which require further elucidation; and, until they also are determined, we can hardly expect that the proper use of alcohol will be thoroughly understood. We therefore hope that Dr. Parkes will continue his observations, and examine the effects of alcohol on the digestive and nervous systems in the same careful, elaborate, and scientific manner in which he has already investigated its action on the circulation, respiration, and temperature.

We have intimation of a movement which is in progress for the extension of the British Medical Association in the Channel Islands.

Dr. James Cumming has been appointed Extra-Physician to the Edinburgh Royal Sick Children's Hospital.

At the annual general meeting of the Royal College of Physicians of London, held on Monday, March 30th, Sir George Burrows, Bart., M.D., F.R.S., was re-elected President of the College.

Dr. Alfred Meadows has been elected a corresponding member of the Society of Physicians of St. Petersburgh.

We understand that for the vacant offices at Middlesex Hospital, the candidates are Dr. Evans for the post of assistant-physician, Dr. Edis for that of obstetric assistant-physician, and Mr. Turner for that of dental surgeon.

CREMATION.

Sir Henry Thompson's papers on Cremation are now reprinted from the *Contemporary Review*, and appear in the form of a shilling pamphlet, issued by Henry S. King and Co. They are republished "at the request of many who desire to promote the views advocated therein relating to the substitution of cremation for burial of the body". It will, no doubt, form the manifesto of the newly founded Cremation Society which has arisen out of the publication of those papers, and of which we last week published the declaration of approval, for which signatures are to be addressed to W. Eassie, Esq., C.E., 1, Great Winchester Buildings. With reference to the experiments on the mode of cremation recently made by Sir Henry Thompson, we believe that he has practically carried them out by his own sole exertions. Mr. Siemens kindly lent the use of a furnace.

THE MEDICAL OFFICERS OF THE ASHANTEE EXPEDITION.

The following medical officers of the Ashantee expedition had the honour of receiving invitations to dinner with Her Majesty on Monday last: Deputy Surgeon-General A. D. Home, V.C., Principal Medical Officer; Surgeon-Major W. A. Mackinnon, C.B.; Surgeon-Major J. A. Woolfreys; and Surgeon-Major R. W. Jackson.—At the banquet given by the Lord Mayor, Surgeons-major Mackinnon, Fox, Jackson, Woolfreys, Turton, and Gore, Staff-surgeons Lowe and Conyers, and Surgeons Williamson, Moore, Hughes, McRobin, Samuels, and McNalty, were among the guests. Sir Garnet Wolseley, in his after-dinner speech, said—"I cannot sit down without acknowledging the valuable services performed by the medical officers of the expeditionary forces. The arrangements made for the care of the sick and wounded were perfect, and the manner in which they were carried out by the whole medical department was beyond all praise".

INDISPOSITION OF M. THIERS.

Our Paris correspondent writes: On Saturday last, a report got about in Paris that M. Thiers was seriously ill, and even that he was dead. On inquiry, I learned that the ex-President of the French Republic was merely fatigued after a long speech he had made at the Assembly the day before. This was followed by a slight cramp in the stomach, which was soon relieved by a cordial draught, and the "illustre homme d'état" is doing as well as can be expected for his years.

SIR WILLIAM FERGUSSON ON CLEFT PALATE.

The extremely interesting paper by Sir William Fergusson which we publish this week will be read with peculiar interest, not only as the work of an eminent master in a field which he has made peculiarly his own, but as showing that, even in those departments of surgery which have been most elaborately studied, there is still room for achievements of striking originality and simplicity.

CREMATION.

The cause of cremation (one of our German correspondents writes) appears to be rapidly gaining ground. The merits of the new system of disposing of dead bodies are shortly to be tested by practical experiment in Saxony, the two principal towns of which, Dresden and Leipzig, have offered to legalise it, as an optional course, supposing its advocates can practically make good their assertions in its favour. A furnace for cremation is now actually in process of construction by Herr Friedrich Siemens, a civil engineer. Its cost is estimated at 5,000 marks, or £250; and it is calculated that the complete combustion of a human corpse will take about an hour.—The number of persons who have enrolled themselves as members of the Cremation Society in Zürich amounts to at least 400. Professor Weith has gone to Italy, to consult with the professors there who are engaged in studying the practical methods of burning the body.

HOSPITAL SHIPS FROM ASHANTEE.

THE *Thames* hospital ship arrived from Cape Coast Castle on Saturday, the 28th ult., having eleven invalid officers on board, among whom were Captain Butler, the author of the *Great Lone Land*, forty seamen and marines of the Naval Brigade, and ten men of the Rifle Brigade. They were suffering chiefly from fever, dysentery, and gunshot wounds. No death occurred during the passage, and most of them had become convalescent on arrival. The ship was under charge of Dr. Hunter, Staff-Surgeon R.N. We are glad to learn from some of those who have arrived, that the medical arrangements are spoken of by all in the warmest terms. Commodore Hewitt and the principal medical officers of the army and navy have warmly commended the care exercised for the comfort of the sick. The medical history of the *Thames* in the expedition is free from the record of any death, or from any complaint, and reflects credit on the Medical Department of the Admiralty and on the medical officer in charge. The *Victor Emmanuel* left St. Vincent on March 21st. She is expected to arrive early this month at Plymouth. She has on board all military invalids, including Captain North, who is seriously wounded in the elbow.

THE HEALTH OF THE ASHANTEE TROOPS.

IT is fortunate for the Ashantee troops that the weather has been so exceptionally mild since their arrival in this country, and that their temporarily diminished power of withstanding cold has, therefore, not been largely put to the test. The men looked vigorous and active at Windsor on Monday, and seemed keenly to appreciate her Majesty's condescension and hospitality; but we regret to learn that several of the officers are suffering seriously in health. Even some of those who seemed fairly well on their arrival in this country, have since been prostrated by relapses of fever, and the peculiarly treacherous nature of the epidemic diseases common to the African coast will render frequent recurrence of symptoms almost inevitable for some time to come. Acting on the advice of their medical attendants, most of these sufferers will shortly proceed to the Continent for change of air, and we most sincerely hope to welcome them back with renovated constitutions. We are glad to be able to state that Sir Archibald Alison, who was unfortunately unable to be present at Windsor, has escaped all feverish attacks, but has, however, been suffering from a troublesome succession of whitlows on his hand.

THE DWELLINGS OF THE POOR.

THE following memorial has been addressed by the Royal College of Physicians of London to the Right Hon. B. Disraeli, M.P., First Lord of the Treasury.

This memorial sheweth,—That your memorialists, in the daily exercise of their profession as physicians, are brought much into contact with the poorer classes of the population, and are deeply interested in everything that concerns the welfare of those classes, not only on account of the poor themselves, but also because the evils engendered among them often affect the whole of society.

That it is well known to your memorialists that overcrowding, especially in unwholesome and ill constructed habitations, originates disease, leads to drunkenness and immorality, and is likely to produce discontent among the poorer portion of the population.

That it is within the knowledge of your memorialists, that the wholesale demolition of the houses inhabited by the poor, which has been carried on of late years, under various Railway and Improvement Acts, while it has been serviceable in removing many very bad streets and dwellings, has incidentally caused much distress to the persons displaced, and has almost uniformly driven them to crowd into neighbouring quarters which were already as full as, or fuller than, was consistent with healthiness.

That private enterprise is powerless to provide the fresh and improved house-accommodation which is required for those who have been expelled from their former habitations, in addition to that which is called for by the constant increase of the population, by reason of the impossibility of securing suitable sites for building. Even so rich and powerful a body as the Trustees of the Peabody Fund has been repeatedly foiled in particular attempts to obtain land to build upon.

That your memorialists believe that the mere enabling powers, which are at present entrusted to various authorities, have proved, and must prove, insufficient to effect the desired object.

That, in the opinion of your memorialists, a remedy for these evils is urgently required. They therefore venture to express the hope that you will favour them by holding out some prospect that this question of the dwellings of the London poor, upon which the health and morality of the people so much depend, will be taken up by Government in the present session of Parliament.

And your memorialists will ever pray, etc.

DEATH OF DR. EDWARD RAYNER.

WE regret to have to announce the death of Dr. Rayner, which took place on the 24th March, at his residence in Paris. The deceased gentleman was the oldest English practitioner of that city. He was a member of the Royal College of Surgeons of England, and took his French degree in August 1839.

POISONING BY PICROTOXIN.

A DANISH medical practitioner, Dr. Bœttern, of Faaborg, relates in the *Hospitals Tidende* a case of poisoning by picrotoxin or colchicin in which he himself was one of the sufferers. He says that he and three other gentlemen had supper on February 25th at a friend's house, and drank some "English ale". About a quarter of an hour after the meal, they were all attacked with pain in the stomach and frontal headache; soon afterwards, three of them had violent vomiting, which recurred frequently during the evening, and, in the narrator's case, was accompanied by profuse watery diarrhœa. The servant had similar symptoms; and she said that she had taken nothing all the evening but a little of the ale that was left. The vomiting continued through the night in one of the guests; the others slept well. The next morning, they all had epigastric oppression, a feeling of burning heat in the head, thirst, and rigors; one had severe rheumatic pains in the back and loins. In Dr. Bœttern himself, there appeared an abundant lichenous eruption on the face, which spread over the entire body, and began to disappear after five days under the use of warm-baths and mineral acids. The ale was imported in an anker from England, and bottled in the town where it was used. The four guests, Dr. Bœttern says, had each drunk not more than a small ale-glass (size not stated), and the servant had taken what remained in the glasses. The ale was rather thick, and had a somewhat flat taste; it was probably some of the last in the barrel. The host and a lady, who had frequently drunk small quantities of ale from the same barrel, had now and then suffered from frontal headache, cardialgia, and nausea, without being able to ascertain the cause. On examination, colchicin was found in the ale remaining in the bottle from which the guests had drunk, and also in several other bottles of the same ale. No details as to quantity are given; but Dr. Bœttern says that the makers of the analysis will publish a report in a pharmaceutical journal.

THE SIAMESE TWINS.

THE *Philadelphia Medical Times*, of February 28th, says that in *Lippincott's Magazine* for March is an account of a visit to the original home and to the parents of the Siamese Twins. The latter, it appears, were born some thirty miles south-west of Bangkok; their father being a Chinaman, their mother a native of Siam, bred by a Chinese father. The twins were, therefore, three-fourths Chinese, and were known in their native home as the "*Chinese* Twins". They were the first-born sons of their parents; but their mother has presented her husband with four other pairs of twins and four children born at single births—all of them normal and healthy. Their mother, during their infancy, entirely recognised their separate individuality, and also the fact that there existed a common sensibility in the centre of the band. She stated, what is undoubtedly true, that at first the ligament was so short that the boys were compelled always to be face to face; even in the bed they could not turn without being lifted up and placed in the desired position. As they grew, the ligament seemed gradually to stretch, until they were able to stand side by side, and even back to back, and to turn themselves in bed by rolling one over the other. The father being a fisherman of the labouring class, the boys lived in one of the floating houses of the country, and soon became famous swimmers, spending much of their time in the river. It was the peculiarity of their movements in the water which first attracted the attention of a Scotch merchant, Mr. Robert Hunter, and finally led to their leaving their native country in quest of fortune.

THE ASHANTEE GAZETTE.

IT will be seen by the *Gazette* of March 31st that, as we announced a fortnight ago, Deputy Surgeon-General Home is to be made a K.C.B., whilst Surgeon-Major Mackinnon attains a step of special promotion. In addition to this, Surgeon-Major Woolfreys has been raised to the rank of Deputy Surgeon-General, and Surgeon McNalty to that of Surgeon-Major; whilst Staff-Surgeon Irwin, R.N., Surgeon-Major Bleckley, Staff-Surgeon Fegan, R.N., and Surgeon-Major Jackson and Surgeon-Major Mosse (of the African Medical Service), have attained the C.B. In congratulating these officers on their well-won honours, we note with great satisfaction the desire of the authorities to confer a share of substantial reward on the Army Medical Department. The well-timed claim for recognition of their services by Dr. Lush in the House of Commons will earn for him the thanks of the profession. It was gracefully endorsed by Colonel North, and handsomely met by Mr. Secretary Hardy.

A DESIRABLE CHARITY.

MR. HOLLOWAY, who has already, it is announced, begun to build a couple of large lunatic asylums in the neighbourhood of Virginia Water, is stated, says the *Spectator*, to be intending to devote at least half a million to found some institution for the sick in the immediate neighbourhood of London, only wavering as to the best application of his munificent endowment. We hold that no class of sick people needs such a hospital so much as patients dying of some incurable disease not likely to last long (for there are already one or two hospitals for incurables sick of chronic, though hopeless maladies), such as cancer, dropsy, or consumption. These are the sufferers whose last weeks or months of life might be greatly alleviated by the appliances of so handsome an endowment, and for whose sad position there is at present the least provision among the London hospitals. Not unnaturally, the medical profession are apt to be less interested in cases for which there is no reasonable hope of relief than in cases where medical acuteness may still discover a cure. Yet the former class of cases is the one which appeals most profoundly to our compassion, and for the expression of that compassion the bestowing of comforts procurable by large means seems to be the most natural instrument. Indeed, by drafting off such sufferers into a separate hospital generously endowed, where the great study is to cheer and soften to the poor the blackness of hopeless pain and rapid decay, the inventiveness of medical skill would be economised, and a very important classification of medical labour effected. Mr. Holloway, we are persuaded, could not do better than devote his munificent gift to the task of relieving the gloom and sustaining the weakness of those who suffer from poverty as none others suffer, through inability to procure the stimulus which alone enables men to fight with failing breath, and the anæsthetic or narcotic which dulls the pangs of continuous agony.

MORISONIAN LECTURES ON INSANITY.

DR. J. BATTY TUKE brought this course of lectures to a close on April 2nd. In the concluding part of the course, the lecturer dwelt in considerable detail on the morbid anatomy of the brains of the insane. Amongst many important lesions, attention was directed to the condition of the cerebral vessels in syphilitic lunatics. Sections taken from such subjects were submitted to the criticism of those present. Dr. Tuke said: "You will notice that the arteries are more or less thickened as to their muscular coat, and more especially as to their outer fibrous coat, the latter surrounding the vessels in concentric rings for a very considerable extent; it appears also to be cemented, as it were, by a viscid gummatous material in which amyloid bodies are occasionally seen. The effect of this thickening is to occlude completely the vessel in many instances, and in all materially to modify their calibre. This obliterative thickening of the arteries of the brain is most interesting when viewed by the light of the observations of Oedmansson and Fränkel on the condition of the arteries of the villi of the syphilitic placenta."

IRELAND.

VICE-REGAL APPOINTMENTS.

THE following appointments appear in the *Dublin Gazette*. *Physician in Ordinary:* George W. Hatchell, M.D. *Surgeon in Ordinary:* Philip Crampton Smyly, F.R.C.S.I. *Physician to the Household:* J. Stannus Hughes, F.R.C.S.I.

PRESENTATION.

AN illuminated address, handsome timepiece, and a purse containing three hundred sovereigns, was lately presented to Dr. George M. O'Connor of Ballycastle, by his numerous friends in that neighbourhood, as a mark of esteem and in appreciation of his high professional attainments. On the same evening, a costly gold bracelet was presented to Mrs. O'Connor.

THE DUBLIN HOSPITALS.

FROM the annual report of the Board of Superintendence of the Dublin Hospitals, which has lately been published, we find that the total number of patients under treatment last year was 10,105 being 2,190 less than the previous year. The total income amounted to £30,119 1s. 10d., which includes £15,722 15s. 9d. granted by Government, and £1,460 assessed in the city and county, with £722 10s. 4d. obtained from charity sermons. Stimulants, it may be mentioned, cost £1,301 14s. 3d. The Commissioners state that the building connected with the Cork Street Fever Hospital, which has been used for small-pox patients, is not satisfactory, the wards not being sufficiently spacious nor well ventilated, and they suggest that better accommodation should be made should another epidemic occur.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

IT was confidently expected that the examination by thirds would have been abolished as we lately stated, but the only change that has now taken place is the omission of "Dislocations and Fractures", which was previously a portion of the new curriculum. These continual changes of the Council have done the College itself an injury, and have been a considerable source of annoyance to the students and medical tutors of the various schools in Dublin. Indeed, several of the latter have refused to allow any of their pupils to go up for the first examination under the new scheme, which it is arranged at present will take place on April 21, as they are afraid that before that time arrives other omissions or additions may take place in the subjects for examination.

CONVERSAZIONE AT DR. STEEVENS' HOSPITAL.

THE Medical Committee of Dr. Steevens' Hospital gave its annual entertainment to the students and old pupils; many guests were invited, chiefly governors and members of the profession. The prizes, honorary certificates, and Cusack medals, were distributed to the successful candidates by the President of the College of Surgeons. The entertainment wanted some of its usual spirit, owing to the absence of a considerable number of the students who had been struck down by a remarkable outbreak of scarlatina among the class. Dr. Bookey, the senior demonstrator of anatomy, was absent also from the same cause, as also one of the physicians whose family had been invaded by the epidemic. The Cusack medals were won by Messrs. R. McVittie, John McClung, and William H. Phibbs, for the third, second, and first years respectively; and honorary certificates were awarded to Messrs.

Anderson, Delahoyde, J. Emerson, Kearney, Knox, Lawless, C. Maturin, Mitchell, Moore, Wardock, and Leaurake. Mr. McCluny's prize was won under peculiarly heroic circumstances; on the second day of the examination he was attacked by what proved to be scarlatina, but nevertheless sat for three hours writing answers to printed questions, after which he quietly turned into bed in one of the fever-wards of the hospital, where he now lies seriously ill. Such heroism and determination merited the hard-earned prize, and augur well for the future career of a member of our profession.

REPORT

ON

THE NURSING ARRANGEMENTS OF THE LONDON HOSPITALS.

BY OUR SPECIAL COMMISSIONER.

III.

In previous papers, we have shown that the various systems of nursing in operation at the principal London hospitals may be roughly divided into three classes, viz.:

1. Where the nursing is under the direction of a professional matron or housekeeper, assisted by head nurses promoted from the ranks, as at St. Mary's;
2. Where a lady-superintendent is assisted by head nurses superior in education to the majority of the nurses, the latter being only rarely promoted, as at St. George's and several other hospitals;
3. Where a lady-superintendent is assisted by lady-sisters, as at King's College, University College, and St. Thomas's Hospitals.

We have also considered briefly some of the chief arguments for and against each plan, so far as the welfare of the patients and the internal discipline of the hospital are concerned; we have now to inquire whether there is any marked difference between them in the matter of cost.

But, first, we must say a few words respecting St. Thomas's. We have placed it in the third division, because ladies are employed as ward-sisters, and the nurses are not promoted; but, in other respects, the system in operation there differs entirely from that of the other hospitals with which we have classed it. The latter are nursed by religious societies on the "contract system", to which we have already referred; while at St. Thomas's the sisters and nurses are under the immediate control of the Hospital Committee. The Nightingale probationers also, when in the hospital, are required to obey the sisters; but, when in their home, are subject to the regulations of the Nightingale Committee. One matron is head of both establishments, and is responsible to both the governing bodies. The system is also quite free from any sectarian bias.

To ascertain, even approximately, the cost of the nursing staff of the various London hospitals is by no means an easy task. From very few of the published reports can much information be obtained; the cost of the nurses' board is generally included with that of the patients', and their wages with those of the household servants and porters. We have, however, met with the greatest courtesy from the house-governors and secretaries to whom we have applied for particulars, and we must take this opportunity of expressing our thanks to those gentlemen, who, often at no little trouble to themselves, enabled us to prosecute our inquiries; we are only sorry that we cannot make fuller use of the carefully compiled tables of figures with which they have supplied us. We are especially indebted to Mrs. Wardroper of St. Thomas's, to Mr. J. Nixon of the London, Dr. Steele of Guy's, Mr. Cross of St. Bartholomew's, Mr. Evans of the Middlesex Hospital, etc.

But, when we had obtained our data, another difficulty arose. In comparing the expense of the nursing at different hospitals, which should be taken as the basis of the calculation—the total number of beds which the hospital contains, or the average number occupied daily throughout the year? As a rule, the proportion of beds constantly occupied is smaller at the large hospitals than at the little ones. Thus at Guy's, with 700 beds, the average number occupied daily is 529, and at the Middlesex, with 320 beds, the daily average of patients is 239—in each case, about three-fourths of the total number of beds; whilst at University College Hospital, out of 150 beds, 133, or eight-ninths, are occupied constantly throughout the year. We have taken the total number of beds as the standard of comparison; for, although during the summer and autumn the larger hospitals are more than half empty, they are all pretty nearly filled from November till March or April, and, as the nursing staff cannot be easily reduced or added to, it must be kept at such a strength as to be equal to any strain which is likely to be thrown upon it: at the London Hospital, for instance, last winter, 615 out of 640 beds were occupied at one time.

The subjoined table shows, together with other particulars, the total cost of the nursing per bed during the year 1873 at ten of the principal London hospitals.

	No. of available Beds.	No. of Nurses.	No. of Sisters or Head-Nurses.	Cost of Board, and Wages of Matron, Sisters, and Nurses.	Cost of Scrubbers or Ward-women.	Total cost of Nursing and Ward-cleaning.	Proportion of Nurses to Beds (Head-Nurses included).	Total cost of Nursing for each available Bed.
				£	£			£ s. d.
St. Bartholomew's ..	676	81	25	5878*	533	6411	1 to 6.37	9 9 8
Guy's	715	86	20	4934	286†	5220	1 to 6.7	7 6 0
London	640	94	16	5418‡	574	5992	1 to 5.8	9 7 0
St. Thomas's	400	45§	13	3960	540	4500	See note §	11 5 0
St. George's	353	54	14	3200‖	450¶	3650	1 to 5.2	10 6 0
Middlesex	320	42	10	3250**	400	3650	1 to 6.15	11 8 0
King's College ..	172	42	8	2000	260	2260	1 to 3.44	13 2 9
St. Mary's	165	19	7	1520		1520	1 to 6	9 13 6
Charing Cross ..	150	22	5	1014		1014	1 to 5.5	6 15 0
University College ..	150	30	5	1500††		1500	1 to 4.28	10 0††

* Will be about £500 more this year, owing to increase of wages.

† The small amount of this item is due to the fact, that a good deal of the ward-cleaning is still done by the under-nurses.

‡ Will be somewhat increased this year by changes in progress, independently of the enlargement of the hospital.

§ Supplemented by about thirty probationers, who are maintained chiefly at the expense of the Nightingale Fund.

‖ As no separate account is kept of the cost of the nurses' board, this has been estimated at an average cost of £22 each, including tea and sugar.

¶ Estimate only: not official.

** Includes all the cost of maintaining a detached nurses' home, with separate cooking, staff of servants, etc.

†† Includes all the female servants of the establishment, for kitchen, laundry, etc.

It will be noticed that the proportion of nurses to beds varies considerably at different hospitals; viz., from 1 to 3½ to 1 to 6½, and that the cost varies in about the same proportion, though it is a little less at the large hospitals than at the small, on account of the proportionally smaller cost of management. The difference in the cost of the nursing at Guy's and at St. Bartholomew's is curious, and is partly due to the wasteful system of board-wages which is in operation at the latter hospital, and partly to the fact that the cost of the nurses' board at Guy's is exceptionally moderate. But the most remarkable fact is, that the two hospitals which are respectively the highest and the lowest on the list as regards the cost per bed—King's College and Charing Cross—are both nursed by the same institution—St. John's House. The difference in cost is due solely to the difference in the number of nurses which have to be provided; this was settled in each case by the Hospital Committee, and the authorities of St. John's House made their estimate accordingly. At King's College Hospital, there is a nurse to every four *beds*, not patients; at Charing Cross one to 6.8 beds: the wards at the former hospital are of convenient size, and we are at a loss to explain why such a large staff should be necessary.

We see, then, that the cost of the nursing at different hospitals varies according to the proportional number of the staff employed rather than according to the system in operation, and that, when the proportion of nurses to patients is considered, the nursing associations cannot be accused of extravagant charges.

But there is another question to be considered before we decide definitely that all three systems of nursing are equal in point of expense; viz., what is the total cost of maintenance per bed under each system? Mr. Wilkinson, in his "Report on Hospital Expenditure", 1870, was the first to call general attention to the fact, that the total cost per bed was unusually high at those hospitals where nursing by contract was in operation; and Mr. Fowke, in his "Report to the Committee of the Birmingham Hospital", showed that the introduction of lady-sisters at a hospital had been immediately followed, in several instances, by a considerable increase in the general expenses.

Thus at University College Hospital, the expenditure rose 67 per cent. the first year after the All Saints' Sisters took charge, and continued to increase steadily until, in 1869, it was about three times the amount at which it stood ten years before. Whilst the expenditure had thus increased 300 per cent., the number of patients relieved had only increased about 20 per cent. The general rise in prices during the same period accounts for about 33 per cent. of this increase. During the last few years, the ordinary expenditure has been somewhat reduced, so that the cost per bed occupied throughout the year, which in 1868 had reached the astonishing sum of £77 5*s*., is now £74 15*s*.

TABLE II.—*University College Hospital.*

Year.	No. of In-patients.	No. of Out-patients.	Total Expenditure.	
1858	1292	20,936	£5395	Last years under old system of nursing.
1859	1285	19,381	£4511	
1860	1291	19,760	£7082	First year of the Sisters.
1869	1535	25,791	£14,015	

At Charing Cross Hospital, a similar increase occurred; the expenditure in 1865, before the St. John's Sisters took possession, was £4653, whilst in 1868 it was £7423—a difference of £2770, or about 67½ per cent.. The number of in-patients during this period had increased about 2 per cent.; the out-patients had decreased 4 per cent.

At the Middlesex Hospital, in 1866, under the old nurses, the expenditure was £14,973, and the cost "per bed occupied" £57 10*s*.; in 1868, when the majority of the old head nurses had been replaced by lady sisters, the expenditure was £17,937, and the cost per bed £62 6*s*.

The pre-eminence in point of expenditure of the hospitals nursed by contract, which was pointed out by Mr. Wilkinson in 1868, still exists. The cost per bed occupied was, in 1873, at University College Hospital, £74 15*s*., at King's College Hospital about £66, and at Charing Cross £69 13*s*.; whilst at St. Mary's and the Westminster Hospitals, which are about equal to the preceding both as regards the total number of beds and the daily average of patients, the cost per bed was respectively £60 10*s*. and £57 7*s*. We have seen that there is no excess in the cost of the nursing itself, except, perhaps, in the case of King's College Hospital. How, then, is this difference to be explained?

A careful comparison of the accounts of different institutions shows that the excess is spread over several items. A lady-sister's standard of neatness and cleanliness is generally higher than that of a promoted nurse, and this involves more frequent scrubbing of wards, changing of bed-linen, etc., with increased charges for wear and tear and washing. Another explanation will be found in the cost of the patients' diet. From one of Dr. Steele's interesting papers on hospital statistics (*Guy's Hospital Reports*, 1873, vol. xviii), we learn that the expenditure on articles of diet in 1871 averaged for each patient at King's College Hospital, 7*s*. 1¾*d*. per week; University College, 6*s*. 11*d*.; St. Mary's, 6*s*. 9½*d*.; Westminster, 5*s*. 10*d*. From the weekly cost at St. Mary's Hospital, about a shilling must be deducted for the cost of tea, sugar, and butter, which, at the other hospitals named, are paid for by the patients themselves, or from a Samaritan Fund. Or, to look at it in another light, the cost *for diet only* of each patient treated in King's College Hospital was £1 10*s*. 9*d*., and for each patient at the Westminster Hospital £1 5*s*., the average period of residence being the same in both cases, viz., thirty days.

To a lady, the ordinary diet of a hospital looks plain and uninviting; she forgets that it is probably luxurious in comparison to that which the patient has previously been accustomed; if the latter show any want of appetite, the sister is only too fertile in suggesting delicacies, and, when once "extras" are introduced, it needs the most constant watchfulness to prevent their becoming general. The poor are so well acquainted with the ill effects of a deficiency of food, that they over-estimate the therapeutic advantages of plenty; and the amount of suffering due to dyspepsia from over-eating, to which a surgical patient, backed by a zealous sister, will uncomplainingly submit, under the idea that he is doing himself good, is truly surprising.

We have now finished our task, and must leave those who are interested to make their own deductions from the facts we have stated. As we said at first, hospital-nursing is a large and complicated subject to deal with; our difficulty has been to confine our explanations within the limited space at our disposal, and to avoid entering into details which would be uninteresting to the bulk of our readers. The publication of these papers at this time was in part suggested by the recent unfortunate misunderstanding at King's College Hospital, now we trust in fair prospect of amicable settlement, and we have accordingly given special attention to the elucidation of the chief points involved in that dispute.

To combine cheapness with efficiency, is the great difficulty in all departments of domestic economy. It is for hospital managers to decide at what point increased efficiency may be purchased too dearly, or whether some means cannot be devised to remedy the disadvantages we have pointed out in what is, in the main, decidedly the best system of nursing yet introduced.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Freemason's Tavern, Great Queen Street, Lincoln's Inn Fields, London, on Friday, the 17th day of April next, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

37, Great Queen Street, London, March 31st, 1874.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE next meeting of the above Branch will be held at Newport, Monmouthshire, on Friday, April 10th, 1874.

Gentlemen intending to bring forward communications are requested to send the headings to the Secretary by the 24th instant.

ALFRED SHEEN, M.D., *Hon. Sec.*

BATH AND BRISTOL BRANCH.

THE next meeting of the session will be held at the York House, Bath, on Thursday evening, April 16th, at 7 o'clock; E. L. Fox, M.D., President, in the Chair.

R. S. FOWLER,
EDMUND C. BOARD, } *Honorary Secretaries.*

Bath, March 26th, 1874.

NORTHERN BRANCH.

THE spring meeting of the Northern Branch will be held at Bishop Cosin's Library, Durham, on Thursday, April 30th, at 2.45 P.M.

The President, Dr. Heath, will deliver an address, entitled "Reminiscences of a Visit to Vienna and Zurich."

The following papers have been promised.

1. On a Rare Form of Dislocation of the Hip-Joint. By Dr. Heath.
2. Notes of a Case of Injury to the Knee-Joint. By W. L. Emmerson, Esq.
3. Report of a Case of Paracentesis Thoracis. By Dr. Philipson.

Gentlemen who are desirous of reading papers or exhibiting specimens are requested to communicate with the Secretary at their earliest convenience.

G. H. PHILIPSON, M.D., *Hon. Sec.*

Newcastle-upon-Tyne, March 30th, 1874.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THERE will be only one meeting this spring, which will be held at Gravesend, on Friday, May 29th (D.V.); A. SHEWEN, M.B.Lond., in the Chair.

FREDERICK JAMES BROWN, M.D., *Hon. Sec.*

Rochester, March 30th, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

THE fourth meeting of the session was held on Friday, February 27th, 1874; Present, J. MANLEY, Esq., in the chair, and twenty members.

New Member.—One member of the Branch was elected a member of the Section.

Communications.—1. Mr. LAWSON TAIT showed a Dermoid Cyst of the Ovary, the fifth he had removed, containing abundance of skin and hair, an upper jaw, and some mucous membrane.

2. Mr. JOLLY showed a large Encysted Cartilaginous Tumour, of ten years' growth, occurring in the neck of a young subject, and removed without difficulty. The wound healed rapidly and well, and the patient returned to her own home within six weeks, with her appearance greatly improved.

3. Dr. BALTHAZAR FOSTER exhibited an Aneurism of the Aorta.

4. Mr. GEORGE YATES exhibited specimens of Intrauterine Amputation caused by the Funis.

5. Dr. POPE showed a specimen of Spinal Exostosis.

SOUTH-EASTERN BRANCH: EAST SUSSEX AND WEST KENT DISTRICTS.

A CONJOINT meeting of the above districts was held at the Infirmary, Tunbridge Wells, on Wednesday, March 18th, at 3 P.M.; Dr. WARDELL in the chair. Nearly forty members and visitors were present.

Communications.—1. Dr. Wardell read a very able and practical address on the Progress of Medicine. It was the subject of warm approval by all present.

2. Mr. Hodgson (Brighton) narrated several cases illustrative of the value of Yearsley's Artificial Membrana Tympani. He described eight ears, all so deaf as seriously to interfere with their owners following their vocations, in which the other pathological conditions varied from a small perforation in the membrana tympani to its entire loss, or in addition also the loss of one or more of the ossicles, besides other changes in the cavity of the tympanum or Eustachian tube and otorrhœa. In each case, after such obstructions in the outer or Eustachian passages or tympanic cavity, as required it, had been removed, Yearsley's plan of applying the cotton-wool substitute for the membrana tympani was adopted; and in seven instances out of the eight it improved the hearing to such a remarkable extent that now the patients, having learned to prepare and apply the cotton-wool themselves, can follow their occupations without the least difficulty. Their ages varied from twenty to fifty; and the deafness, nearly all of which had been caused by scarlatina, had existed during periods varying from eight to forty years.

3. Mr. Manser (Tunbridge Wells) read notes of a case of Delirium Tremens, in which a rapid cure followed the administration of half-ounce doses of tincture of digitalis, thrice repeated. The case was complicated by the occurrence of an epileptic fit soon after the first dose was taken.

4. Mr. M. A. Adams (Maidstone) delivered some practical remarks on Gastric Ophthalmia. He advised that the term "strumous" ophthalmia, which was that usually applied to the disease in question, should be abolished. Out of twelve hundred or thirteen hundred cases which had come under his notice at the Maidstone Eye Hospital, not more than two hundred could be said to have anything to do with struma. He found that in all cases the diet was in fault, and that the very careful regulation of this, with the use of a simple stomachic tonic and mild anodyne applications to the eye, was amply sufficient to cure nearly all his cases.

Other papers, which had been promised by Mr. Sanger of Alfreston, by Dr. Joyce of Cranbrook, and Dr. H. Harmer, were postponed for want of time.

Dinner took place at Terry's Restaurant; twenty-eight sitting down, under the presidency of Dr. Wardell.

The Next Meeting will be held in the month of May, at Hastings; Dr. G. B. Turner to be invited to take the chair. Notice of intended communications is requested by the Secretary, Dr. Trollope, St. Leonard's-on-Sea.

METROPOLITAN COUNTIES BRANCH: ORDINARY MEETING.

An ordinary meeting of this Branch was held at 11, Chandos Street, Cavendish Square, on Friday, January 30th, at 8 P.M.; Richard Quain, M.D., F.R.S., President, in the chair.

The Annual Meeting of the Association.—The President read a communication from Mr. Fowke, General Secretary of the Association, enclosing a copy of a vote of thanks to the President and Members of the Branch for their hospitable reception of the members of the Association at the annual meeting in August. The communication was ordered to be entered on the minutes.

Paper.—Mr. W. H. Michael read a paper on the Public Health Act (1872): its Defects and Suggested Improvements. [The paper is published at page 443.]—The President thanked Mr. Michael for his paper, which, he said, set forth facts that could not fail to be of great value to the cause of sanitary science. It would be infinitely better if there were some great central authority which would be free from the local disturbing influences, and by which all sanitary measure should be supervised. The laws regarding property were thoroughly organised and efficient, and so should be the laws relating to the preservation of life. Life was surely more valuable than property; for property is only valuable with the health to enjoy it.—Mr. Lord remarked that the preservation of health was a matter of the first consideration, and insisted on the importance of the registration of cases of disease, and not merely of death.—Dr. Crisp did not find sufficient indication in the paper to what Parliament could do, or what it should do. If Mr. Michael would mention the important points, it would add much to the value of his paper.—Dr. Fothergill asked where were we to get pure water from if we used it to get rid of our fæces. This was one of the most difficult problems.—Dr. Stewart said that during the latter part of our history Parliament had followed a definite course up to 1860, and had been in advance of the country; since that, it had been receding. The progress of sanitary legislation had been very much hampered by the connection of sanitary organisation with the Poor-law system. The opinions of the joint committee of the British Medical and Social Science Associations was, that there should be some organisation that should be empowered to overlook the working of the Poor-law system. At present, the Poor-law system appeared to be getting the upper hand in the appointment of medical officers; and the only hope of improvement arose from the limitation of the term of office to five years.—Dr. Hardwicke did not think it desirable to express so much dissatisfaction with the present state of things. He thought that things were working better than could be expected. He thought that sufficient allowance was not made for the present benefits.—Mr. Ernest Hart said that a large number of gentlemen were being trained and were gaining valuable experience and a knowledge of their duties. But they were not placed in communication with the authorities at Whitehall, who possess the information for their guidance, of which gentlemen have to pick up as much as possible in order to make as few blunders as possible. No means had been taken to provide them with statistics of disease.—Mr. Michael replied; and the meeting adjourned.

LANCASHIRE AND CHESHIRE BRANCH: SPECIAL GENERAL MEETING.

A special general meeting of this Branch was held in the Medical Institution, Liverpool, on Wednesday, March 25th, to consider the report of the subcommittee of the Parliamentary Bills Committee of the Association on the education and registration of midwives. The report appeared in the Journal of February 7th. Mr. White of Warrington, President of the Branch, took the chair. The report, copies of which had been circulated amongst the members, was taken as read.

Dr. E. Whittle moved, "That, in the opinion of this meeting, it is desirable that the education of midwives be improved." That resolution, he remarked, would pave the way to any steps that might be considered advisable.

Dr. Wallace seconded the motion.

Dr. A. B. Steele said that this was a motion to which it was scarcely possible to object. At the same time, he did not think it was at all desirable to interfere in any way with the education of women who were called midwives. He had a very strong feeling that it was the duty of every medical practitioner, whether specially concerned in obstetric practice or not, to discountenance as far as possible, and to discourage midwives' practice altogether. He would not enter further into the subject, but would simply put on record his protest against its being supposed to be the duty of that Branch to take any part whatever in the education of a class of women who were known by the name of midwives.

The resolution was agreed to.

Dr. Desmond said that, his name being amongst those to whom the consideration of the subject was entrusted by the Parliamentary Bills Committee, he would formally move the adoption of the report. The subject was not a new one, and had been well ventilated in the Journal for some time past. Seeing that what was everybody's business was nobody's business, the Obstetrical Society of London started a scheme, which was very good in its way, for the education of midwives. The scheme was discussed by the Parliamentary Bills Committee, in which he was the representative of the Lancashire and Cheshire Branch. It was thought desirable that some scheme should be put before the Association, with a view to its being well considered and discussed at the annual meeting in August next. They thought that a matter of that importance should not be left to any individual society or school, which was irresponsible, but that some recognised curriculum should be adopted, so that uniformity with respect to the position of midwives might be obtained all over the kingdom. It was deemed desirable to draw up a scheme, and present it in the first instance to the Branches. He would not refer to the difference between the two schemes further than to say, that the great feature of their own scheme was, that, instead of the education and regulation of midwives being left in the hands of irresponsible bodies, it should be taken up by the State. The feeling was, that the Medical Council, or some such body, should decide what ought to be the education of midwives, and the means by which such education should be given to them. He would, therefore, move, "That the scheme proposed by the Parliamentary Bills Committee be approved and adopted."

Dr. Lyster seconded the motion.

Dr. Nevins moved, as an amendment, "That this meeting would gladly welcome any plan for the voluntary improvement of professional education amongst midwives, but it is not in favour of any application to Parliament for legislation in the direction of compulsory education, implying, as a consequence, penalties on the one hand and legal advantages upon the other, which the experience of the last few years in medical legislation has shown to be futile." There had been a great deal of medical legislation, and duly qualified medical practitioners, who had been educated with great care, had found that they had failed signally in the prosecutions, as a rule, which had been adopted to put down illegal practice. They had failed entirely to make compulsory education answer the purpose, accompanied with penalties on those who did not go through the curriculum. He thought they would equally fail if they attempted to make midwives by Act of Parliament, because they would find it utterly impossible to prevent midwives from practising without going through a compulsory education. On the other hand, they would be holding out advantages which he did not think they had the prospect of placing in the power of midwives. Certificates of character from societies such as the Obstetrical Society in London and lying-in hospitals were no doubt of value in places where such institutions were known, but it would be impossible to carry out any general educational examination of the character indicated in the report, attended with fees and other expenses. There were many country places where women called in the aid of a midwife in preference to medical practitioners, and many women were quite competent to discharge the duties of midwife who would find it difficult to pass an examination in either reading, writing, or arithmetic. What was understood by the duties of midwife? What was to be the penalty, and how was it to be enforced? What jury would give a verdict against a woman who went to act as a midwife for a fee of five shillings? With regard to public appointments suggested in the report, he was not aware of any which were open to midwives. Were they not to be appointed nurses in lying-in hospitals? What public appointments could the Association offer to them to induce them to go through a course of reading, writing, and arithmetic, pass an examination in London, and return into the country and get a five shilling fee? Although voluntary education and voluntary examination were highly to be favoured, he thought that anything approaching to compulsory education, penalties which would be futile, and nominal advantages which could not be conferred, was undesirable, and he was opposed to any legislation of that kind.

Dr. F. J. **Bailey** seconded the amendment.

Dr. **Fitz Patrick** supported the amendment. He was of opinion that legislation on the subject was utterly out of the question. They had failed since 1858 in driving from their ranks men who were doing far more harm than midwives, for he had never seen any statistics furnished either by the Registrar-General or by the district registrars of any manslaughter which those women had committed; but there were many instances of malpractices by quacks, who abounded both in the metropolis and the country, and which legislation had utterly failed to put down. Many of the women called midwives acted in that capacity with a charitable object, who never received more than a shilling, or a cup of tea, or a glass of gin, and he never found that they did any harm. Some of them could neither read, write, nor calculate; and, for his own part, he should prefer one of that kind. Women who could read and write might take advantage of their position to read the letters of the ladies on whom they attended, and such women had been detected in making out false certificates of deaths, and other misdeeds. No one would hail the instruction of midwives more than himself, if it could be done in a practical and inexpensive way. In the Dublin Lying-in Hospital, it was done in a very different manner from that which he presumed was intended in the report under discussion. In the Irish counties, the grand juries at assizes had power to assess the county for the purpose of sending midwives, or nurse-tenders, as they were called, to the Dublin Lying-in Hospital. The county provided for a certain number of women each year to be sent to that institution, to be trained as nurse-tenders, whose training was paid for by the county. At the end of six months, they were examined, and, if they passed, they received their certificates as qualified nurse-tenders. The rates were not liable to be assessed for that purpose in England, and the Medical Council did not say they were prepared to undertake the formation of a training institution. He thought that at present the scheme was premature.

Dr. **Royle** (Manchester) also supported the amendment. He believed that no necessity for the scheme existed; and, even if it were admitted to exist, he objected to the low standard of qualification which it prescribed, contrasting it with the obstetrical requirements with regard to female practitioners on the Continent. He thought the Association would stultify itself by endorsing such a crude scheme as that presented to the meeting. If it were possible, it would be cruel for any legislation to interrupt the kindly and friendly offices which one woman could give to another in the time of trial and distress, and the placing of restrictions upon such services might prove an unmitigated curse instead of a blessing. The statement in the report, that thousands of women "are at present acting as midwives who have received no obstetrical instruction whatever", was, he believed, an exaggeration of fact. He thought the scheme should be allowed to quietly drop. Any instructions which it was desirable to give to women should be given either through private practitioners or through the obstetrical institutions.

Dr. **Desmond** said that the Parliamentary Bills Committee had not ventured to go into details with regard to the education of the women, simply indicating that they should be educated up to a certain point, and not beyond it. This was similar to the course adopted in the hospitals in Dublin, where midwives were thoroughly educated to manage natural labour, and to recognise deviations from it, but were not taught operations, nor any of the higher branches of midwifery. The object of the scheme was, that there should be uniformity of education. There were several kinds of public appointments open to midwives, and they should be given to women who had been taught in preference to those who had been taught nothing. In 1869, a committee of inquiry showed a condition of things in regard to midwives which was really startling, and furnished harrowing descriptions of mischief caused by the ignorance of that class.

Dr. **Nevins** reminded Dr. Desmond that the amendment distinctly recognised the improved instruction of midwives as desirable; and, with regard to public appointments, ladies' charities and other institutions were able to make a rule that they would not employ or recommend any woman who had not obtained a satisfactory certificate of competency.

On the votes being taken, the amendment was carried by 13 to 7.

Dr. **Nevins** moved a vote of thanks to the Obstetrical Society, and to those gentlemen who had bestowed so much care in preparing the scheme which had been laid before the meeting.

Dr. E. **Whittle** seconded the proposition.

This was unanimously agreed to, and acknowledged by Dr. Desmond.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MARCH 10TH, 1874.

E. H. SIEVEKING, M.D., Vice-President, in the Chair.

Necrosis from Phosphorus. By W. S. Savory, F.R.C.S., F.R.S.—Mr. Savory showed the upper and lower jaw-bones from a case of necrosis from phosphorus, and gave an account of the case.—Mr. **Birkett** thought this was the first time in which the whole of the lower jaw had been replaced. He referred to the case of a young child whom he saw many years ago, suffering from cancrum oris. A part of the lower jaw exfoliated and the lost part was reproduced; the patient did well, and was now about 30 years old, and had a useful lower jaw. The fact which he had ascertained from Mr. Savory, that sensation remained in that part of the face supplied by the nerve passing through the mental foramen, was interesting. In the case to which he had referred, sensation was as perfect as before, though it could scarcely be believed that a piece of the jaw extending posteriorly to the mental foramen could be removed without injury to the nerve.—Dr. **Drysdale** asked the cause of the patient's death; and, if from the effects of phosphorus, what was the state of the viscera.—Mr. **Cooper Forster** thought the case was worthy of a more detailed account. He asked how Mr. Savory had removed such large pieces of bone entire.—The **President** asked if phosphorus-disease was as frequent now as formerly. About twenty-five years ago, he was engaged in an inquiry on this subject, and visited most of the match manufactories in the East-end of London. He found that the frequency of the disease was in direct proportion to the badness of the ventilation. In one manufactory where this was attended to, there was not one case. He remembered seeing one man who had himself removed his lower jaw by sawing it across in the middle.—Mr. **Savory** said that the removal of the lower jaw was performed seven months after the first symptoms of mischief about the face; he divided the bone in the middle line, and each half was drawn out without force or hæmorrhage. When the jaw was removed, there was no evidence of new bone, but, a few weeks afterwards, new bone was felt in the left angle. The boy was about 18, stunted, and appeared about 14; he was five feet high. He had been employed in Bryant and May's factory for five years. During the last two, he had been employed in preparing the phosphorus paste, by heating over hot water phosphorus and gum, the mixture requiring to be kept constantly stirred. The following points were to be noticed: first, the extent of the necrosis, all the lower jaw and condyles, and both upper jaw and the adjacent bones, being involved; secondly, the very complete reproduction of the lower jaw in six months. On carefully examining the specimen, a normal periosteum was found in contact with the bone, so that probably it had been separated, and took part in the reforming of the bone. Then there were two teeth in the lower jaw, one of which was carious; all the teeth were in the upper jaw. The patient died of exhaustion from the great discharge.

ON THE RELATIONS OF ASTHMA TO SKIN-DISEASE.

BY GEORGE GASKOIN, M.R.C.S.ENG.

After mentioning that the hereditary character of psoriasis had been much exaggerated, according to the usual acceptation of the term hereditary, the author affirmed that its connection with asthma formed the most conspicuous feature of this complaint, being discoverable in the history of at least one-third of the cases. In a continuous inquiry, asthma had been sought for in 2000 cases of skin-disease, exception being made for those of a parasitic and syphilitic class; and the result had been its appearance in 141 cases, of which 65 were cases of psoriasis. Further observations in the course of the paper affirmed the dependence of skin-disease on the phthisical and arthritic diatheses in the great majority of cases; their influence being observable, with very few exceptions, in those families which presented instances of hereditary transmission.—Dr. Drysdale had seen hereditary ichthyosis, accompanied with emphysema, in four members of the same family. He had also seen a case of alopecia of the whole scalp accompanying emphysema. Other cases of chest-disease were attended with skin-diseases. He did not understand in what way Mr. Gaskoin used the term asthma.—Dr. Church would be glad to hear a definition of asthma. Mr. Gaskoin had spoken of a large number of cases in his paper; he did not know if he referred to the spasmodic form; if so, in his experience it was very rare. But, if by asthma Mr. Gaskoin meant emphysema and pulmonary catarrh, which was very common, then the connection between cutaneous diseases and chest-complaints was explicable.—Dr. Symes Thompson said the relation between asthma and psoriasis had been pointed out before, but no statistics, as in the paper, had been brought together; and he thought the paper was valuable in this respect, provided it were known what was meant by the term asthma. Since arsenic was said to have been of benefit in the cases, he would suppose the asthma was of the spasmodic kind, as arsenic had proved of great service in such cases.—Mr. Gaskoin had met with psoriasis associated with asthma much more frequently than was generally supposed. The relation to phthisis was not so frequent. He had taken as asthma what was called so by the people, and did not often find it was the dry spasmodic kind.

HARVEIAN SOCIETY OF LONDON.

Thursday, March 19th, 1874.

T. Ballard, M.D., late President, in the Chair.

Milk as a Diet and Medicine.—Dr. W. H. Day read a paper on milk as a diet and a medicine. He arranged his subject under four heads: 1. The composition and qualities of milk; 2. Condensed milk as a substitute for cow's milk; 3. Koumiss, or milk-wine; 4. Milk as a diet and a medicine. Dr. Day alluded to the many circumstances that affected the quantity and quality of milk, and cursorily glanced at its composition in the human species and in different animals. Unless milk were perfectly fresh and reliable, it was very prone to excite lactic acid fermentation; and so, in becoming sour, a fungoid growth was developed, which was highly detrimental to infantile assimilation. The milk, so changed, might not try the strong digestive powers of an adult; but for an infant, or young child, it would lay the foundation of delicacy, and invite those diseases which were ready to attack early life. He spoke of the spasm, cramp, and indigestion which attacked children brought up by hand, and who took their milk out of dirty bottles. The lactin underwent decomposition, and lactic acid was formed in large quantities. He next adverted to the adulteration of milk. The analysis of milk by chemists so differed, that the method must be at fault, or the results would be more uniform and reliable. Now that the high price of pure milk might, in time, place it beyond the reach of the poorer classes, it was important to inquire whether some of the forms of "condensed milk", lately introduced, might not be equally nutritious, and unaltered in their qualities, when deprived of the water they contained. One pound of the condensed milk was equivalent to three or four pounds of the crude milk. It was well adapted for children, when digestion was feeble; and was highly to be recommended in the heat of summer, when cow's milk was prone to undergo putrefactive change, and to cause sickness and diarrhœa. Koumiss was recommended by Dr. Jagielski as valuable in phthisis, and so easy of digestion as to be assimilated by the weakest stomach. Dr. Day urged that young children should be provided liberally with milk, if we would bring them up healthy and strong. In our large manufacturing towns, he thought that excessive infant mortality was, in a great measure, due to scanty and impure milk. Finally, the author dwelt on the importance of milk in cases of extreme debility, and the atrophy of children; ulceration of the stomach, gastralgia, etc. In acute diseases of the febrile class, and diseases of the nervous system generally, it was a powerful restorative. In the diarrhœa of enteric fever, excessive lactation, and other profuse discharges, it was a valuable remedy. As life advanced, and more especially towards its decline, when the tissues were undergoing degeneration, and the eliminating functions were becoming impaired, milk might temporarily arrest, or lessen, the activity of these changes, and prolong existence.—In the discussion that ensued, Dr. Symes Thompson, Dr. Ballard, Dr. Cleveland, Dr. Gibbon, Mr. Curgenven, and others took part.—Dr. Day replied, and the meeting separated.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, January 17th, 1874.

Robert D. Lyons, M.D., President, in the Chair.

Cirrhosis of the Lung.—Mr. John Hughes showed the lungs and other viscera of a woman, aged 30, who had for three years suffered from attacks of hæmoptysis, and latterly from ascites, hectic, œdema of the feet, and amenorrhœa. Her liver was immensely enlarged when she came under treatment for the last time. Vomiting followed an attack of hæmoptyis; stupor supervened, and passed into coma. The right lung passed over the mesial line. The heart lay in front of the left lung; there were extensive adhesions of both lungs. The left lung, on section, exhibited numerous caverns, varying in size from a pea to a nut, many of them being continuous with the bronchi. The lung was dense, sinking in water. The right lung contained a single cavity at the apex, and was rather emphysematous and hyperæmic. Caseous deposits were found in both lungs, and in the bronchial tubes. These deposits were often calcified. The liver extended into the pelvis; it was smooth, hard, and tough, presenting the characters of amyloid degeneration. The kidneys had likewise undergone this change.

Sarcoma Testis.—Mr. Tyrrell exhibited a specimen. A man, who stated that there was no testicle on the left side, but only a soft tumour in the groin, until he was 15 or 16 years old, and that a tumour descended five years before, came under observation in June 1872. Mr. Tyrrell then tapped the tumour with the aspirator, but only some arterial blood came away. In September 1873, the tumour was removed. The operation was complicated by the firm attachment to the tunica vaginalis of a large portion of omentum. The man recovered. The tumour was a good example of the "spindle-celled" sarcoma.

Large White Kidney.—Dr. Hayden presented some of the viscera of a car-driver, aged 20, admitted on January 5th, to the Mater Misericordiæ hospital, where he died seven days subsequently. He often suffered from bronchitis (recurrent) with emphysema of the lungs, and dilated right heart with general anasarca. In these attacks, the urine was usually of ordinary specific gravity, loaded with lithates, but containing only a little albumen. On one occasion, there were uræmic symptoms. When he was admitted, the urine was of specific gravity 1,011, and loaded with albumen. Uræmic convulsions set on January 10; next day he complained of tension in his head, and there was general capillary hyperæmia. He died in a second attack of convulsions. The lungs were voluminous and hyperæmic. The heart weighed seventeen ounces, the right ventricle was dilated, with attenuated walls; the left ventricle dilated and hypertrophied. The kidneys were examples of the "large white kidney" of Roberts, although, from their size and microscopical appearances, they were passing into the contracted state.

Abscess of Left Lobe of Liver.—Dr. Grimshaw exhibited specimens from the body of a woman, aged 37, a widow, the mother of three children, who was admitted to Cork Street Hospital, with the symptoms of enteric fever, and with the physical signs of chronic pulmonary phthisis. On rallying from the supposed enteric fever, her convalescence was very unsatisfactory. On January 1st, she had a well-marked aguish attack, which was repeated every day. A tumour, in the left hypochondrium, was suspected to be an enlarged spleen. She died. The lungs contained numerous cavities. The pleuræ were adherent in many places. The heart, kidneys, and spleen were quite healthy. There were evidences of peritonitis, and the large intestine, omentum, and left lobe of the liver, were all glued together. There was an enormous abscess in the left lobe of the liver. The sac contained more than a pint of pus. Dr. Grimshaw called attention to the simulation of enteric fever in the case, to the mistaken nature of the tumour in the left hypochondrium, and to the unusual seat and non-pyæmic nature of the abscess.

CORRESPONDENCE.

THE TEACHING OF ANATOMY.

SIR,—It was with much pleasure that I read the excellent article on the teaching of anatomy in the JOURNAL of March 14th, embodying, as it did, views which I have always held, and which I have often desired to see publicly expressed. I trust I shall not be considered egotistical in saying that, although my teaching career only extends over eight or nine years, my anatomical experience is, perhaps, as varied as that of most men, inasmuch as I enjoyed, while a student at Edinburgh, the personal friendship of the late Professor Goodsir, and acted as his prosector for two or three years. Afterwards, as senior demonstrator, I had the sole management of the practical anatomy department in the University of Glasgow, and have latterly lectured in an English provincial school, whose facilities for the teaching of anatomy are by no means contemptible. From what I have seen in these various capacities, I am induced to hold most strongly with your writer as to the immense advantages to be gained by teachers of anatomy being placed above the necessity of practising, and being thus enabled to devote their whole energies to their subject. Therein, I believe, lies the whole secret of the success of the Germans; for it has been shown that, with the same advantages of time and opportunity, we can equal them in almost every department of science, while in the practice of the medical art, where we have, so to speak, given ourselves fair play, we completely excel them. In Scotland, the Universities of Edinburgh, Glasgow, and Aberdeen (which were all modelled on the Continental system), and the Royal College of Surgeons, maintain teachers who are pure anatomists, and hence it is that we find connected with them the names of men such as the Monros, Knox, Lizars, Goodsir, Allen Thomson, and many others, who may be said to have laid the foundation of modern anatomy in this country. It has often been to me a matter of wonder why some of the old and wealthy London hospital schools have not contrived ere this to endow their anatomical chairs; and I fear that, until something of this sort is done, men possessed of a love for original research, and who would be glad to devote their lives to it, were they but sure of a mere competence, will be compelled, as heretofore, after a year or two's demonstratorship, to turn for a livelihood into the ensnaring paths of practice, and be for ever lost to science. The millennial period of endowed chairs, however, is, I fear, still in the distance; but, in the meantime, even with existing arrangements, I am fully persuaded that some improvement might be made in the department of lecturing.

But, before proceeding to details, we may be met with a question as to the utility of anatomical lectures at all; and there are many, I believe, who think them all but useless. No doubt, if lectures are downright poor ones, they are almost useless; but, granting them to be only of mediocre quality, I should be strongly in favour of them, were it only on the ground that they bring regularly up to the centre of work students who might otherwise squander away whole days without ever looking near a school. There are always certain men—good fellows on the whole, and who afterwards turn out well—who are disposed for the first year or eighteen months of their curriculum to loiter about and do nothing in particular. These men pick up nearly all they know from lectures; and I do not place any belief in the statement that they are thereby induced to neglect private reading. If once you can make a man interested in his work, he will pursue it of his own accord.

If it be granted, then, that anatomical lectures really are of use, they ought necessarily to be made as attractive as possible, and it has long seemed to me that their general unpopularity in English schools is due to the fact that there is not a sufficiently high tone given to them. The truth is, that mere dissecting-room anatomy is not eliminated from them as it ought to be. Although Goodsir was, as a rule, a poor speaker, few lectures were more appreciated than his. Even after they had passed their anatomical examinations, numbers of senior students used to drop in of an afternoon to listen to the latest views on the spleen, or the cerebellum, or the fibres of the heart, or any of the other topics on which he used to wax eloquent. And the secret of this was that he would not (as he used to say himself) "condescend to lecture on knife-and-forceps anatomy". One did not yawn through an *ad longum* description from him of the knee-joint, as detailed in a dissecting-room manual. He would dwell on its human peculiarities, and then show its double nature in many animals, and how the crucial ligaments were really the lateral ligaments of the double joint; he would explain the use of the alar and patellar pads of fat, and point out how the tendon of the popliteus lay in different positions of the joint, and how the subcrureus acted on the synovial membrane; the sesamoid character of the patella and its facetted articular surface would be explained, and the spiral movements of the joint, its locking and unlocking, and its action in maintaining the erect posture. Then would come a surgical point as to dislocation of the semilunar cartilages, and a glance at the morbidly fringed condition of the synovial membrane, followed, perhaps, by a comparison between the knee and the elbow. With innumerable such interesting facts would he garnish the dry details of the mere bones and ligaments which form the articulation, until even the chronically lazy men went away with a notion that they would look up the joint again; they had never seen anything in it before. What a contrast a lecture of this stamp to an arid recapitulation of the score of muscles in the forearm, with all the different processes and surfaces they go to, or to a bald description of the anterior tibial artery with all the things that lie in front, behind, to the right, and to the left of it! I hold that all such matter, and indeed all strictly regional anatomy, should be relegated to the demonstrator and studied in the dissecting-room. There alone can the student learn it, where he can feel and see each thing for himself, and turn it over and over again until a microscopic plan of his part is imprinted somewhere on his brain, ready to start up before his mental eye at any future moment. But the lecturer should take higher ground. It is his duty to help the student where he cannot well help himself: to boil down and present to him in a condensed form the result of the almost daily researches and investigations which are taking place. If he do his work thoroughly, he will find a session all too short to get over the bones and ligaments (which must be done) and the great viscera; and to render these attractive, every salient feature connected with them in development, morphology and physiology, nay, in surgery and medicine too, must be pressed into the service. Should a course of lectures on special surgical anatomy be desired, it may (as is done in the school with which I have the honour to be connected) be given in summer by the demonstrator in connection with the summer course of practical anatomy.

The great objectors to the higher teaching of anatomy are, of course, the "practical men", an *alias* employed by those gentlemen, who, having found that the anatomy they learned forty years ago has served them pretty well, cannot see the necessity for any improvement to-day. They are the same persons who object to the thermometer and the sphygmograph, just as their predecessors objected to the stethoscope and the microscope. They want to know what a man has to do with the vertebrate theory of the skull, whose sole future cranial researches may consist in plastering up a broken head; or what necessity there is for his learning the structure of the Graafian vesicle in order to tie a navel-string or pull out an afterbirth. Fortunately, it is nowadays becoming a generally recognised principle, that the better a man is educated all round the better is he at any special work, and that high culture does not unfit a man for doing well even the commonest duties. Were it otherwise, why insist that one whose destiny in life is to pile one brick on another with so much mortar between must learn to read and write?

At the same time, it must be admitted that while anatomical lecturers might treat their subject from a more elevated standpoint than they do, anatomical examiners have been very much in fault also. Had there been a demand for high-class anatomy at the College of Surgeons, it would, without doubt, have been supplied. But, until the last ten years, I have no hesitation in saying that the examiners were men who, while they enjoyed the highest and most deserved reputation as operative surgeons, were a generation behind their time in the science of anatomy. Almost everyone of them had his own particular little hobby—his shibboleth—by which he tested the knowledge of his victim. Who has not seen the anxiety of the "grinder", when he first met his pupil after an examination, to know if old So-and-so had asked his usual question about so-and-so? Are not men even now compelled to spend weary hours over the carpal bones, learning to recognise, like parrots or learned pigs, to which hand they belong, until the mere mention of the skeleton fills them with disgust? Most fortunately, we have now obtained a very different set of examiners, and the effect is seen in the renewed enthusiasm and energy everywhere met with in the medical schools.

Before quitting the subject, I should like to advert to the fact that, with examinations yearly becoming stricter (the time for study being the same) and with the medical press calling for better teaching, the Committee for Improving Medical Education, in their recent report, have thought fit to cut down the present two sessions course of anatomical lectures to one. The general impression on the mind of the medical public is that the Committee have recommended several very queer things, and that it would have been better if certain of its more influential members had been more *en rapport* with the daily work, necessities, and habits of the medical student than seems to have been the case. All I can say is, that if a lecturer is to go over the whole field of anatomy in eighty lectures, then the sooner lectures are done away with the better; they can only degrade a noble subject and be alike unsatisfactory to teacher and pupil.

In conclusion, as an anatomical teacher, my re-echoing your plea for a higher stamp of lecturing might lead some to infer that I have written these observations with the idea of indulging myself in a little self-glorification. No one who knows me will think me guilty of such a piece of unpardonable vanity. My constant grief and regret is my inability to approach the ideal standard which I have been proposing. But still I maintain that it is better to aim at the sun in the heavens than at the weeds around one's feet. I am, etc.,

W. MITCHELL BANKS.

THE FIRST OVARIOTOMY.

SIR,—In the BRITISH MEDICAL JOURNAL for December 20th, 1873, under the above caption, Dr. E. D. Mapother of Dublin objects to your having assigned "the first performance of ovariotomy, in 1809, to Ephraim McDowell of Kentucky," but claims it for Dr. Robert Houstoun of Glasgow in 1701. Indeed, he had stepped a little out of his way to do this, as it seems to me, in his Introductory Address at the opening of the present session of the Royal College of Surgeons of Ireland; for, in the report of Dr. Mapother's address, to be found in the JOURNAL for November 29th, 1873, I observe that, after eulogising the lives and labours of Mr. Cusack, Professor Macartney, Dr. Shekelton, Mr. Houston, and other members of the college in days past, he is reported as saying: "To a *namesake* of Dr. Houston, and to a namesake of his contemporary Ephraim McDowell, is assigned the first performance of ovariotomy. Professor Gross, in a memoir of the great Kentuckian of the latter name, asserts that, in 1809, he performed ovariotomy for the first time; but Dr. Mapother found, by the thirty-third volume of the *Philosophical Transactions*, that it was done successfully by a Dr. Houston in 1701."

Now we had thought this question of priority in ovariotomy long since settled by the admirable memoir of McDowell published by Dr. Gross in 1852. Had it not been, certainly the chapter on the early history of ovariotomy, to be found in Dr. Peaslee's work on *Ovarian Tumours*, is sufficient to settle the question of priority between Dr. Robert Houstoun and Dr. Ephraim McDowell.

If Dr. Mapother will refer to Dr. Peaslee's book, or to Mr. Spencer Wells's work on the *Diseases of the Ovaries*, he will find that he has been anticipated some twenty-four years, in his discovery of the case of Dr. Houstoun in the *Philosophical Transactions;* for he will find that Dr. Washington L. Atlee of Philadelphia, who has done as much for establishing ovariotomy in America as Mr. Wells for England, exhumed, and has, in the *American Journal of Medical Sciences* for April 1849, republished this same account of Dr. Houstoun's case, originally appearing in the *Philosophical Transactions.*

I will take the liberty of quoting a little more of the account than Dr. Mapother has done. After Dr. Houstoun had made his incision five inches long, to which Dr. Mapother refers, and trying vainly to get the contents of the sac to flow, he says:—"I took a strong fir-splinter, wrapped some loose lint about the end of it, and thrust it into the wound, and, by turning and winding it, I drew out about two yards in length of a substance thicker than any jelly, or rather like glue that is fresh made, and hung to dry; the breadth of it was above ten inches; this was followed by nine full quarts of such matter as I have met with in steatomatous and atheromatous tumours, with several hydatids of various sizes, containing a yellowish serum, the least of these bigger than an orange, with several large pieces of membranes, which seemed to be parts of the distended ovary. Then I squeezed out all I could, and stitched up the wound in three places, almost equidistant."

Dr. Mapother says "he does not say how he treated the pedicle"—and no wonder, since he never saw it.

Mr. Wells, in his book, defines ovariotomy:—"The operation for the removal of one or both ovaries." Dr. Peaslee, in reviewing Dr. Houstoun's case, says:—"I find that Dr. Houstoun did not perform ovariotomy. He simply made an incision, four inches long, through the abdominal walls and into the ovarian cyst (ovario-section), and evacuated its contents." And that Dr. Atlee, the original exhumer of the extract, does not look upon Dr. Houstoun as the originator of ovariotomy, may be inferred by the dedication of his book—"To the memory of Ephraim McDowell, M.D., of Kentucky, the Founder of Ovariotomy in 1809." So it seems that Dr. Mapother was slightly mistaken when he wrote his note to the JOURNAL, ascribing the first ovariotomy to Dr. Houstoun, declaring that such priority "will appear to any reader of Dr. Robert Houstoun's case."

That somebody may have preceded Dr. McDowell in performing ovariotomy, I will not say is impossible, since there is said to be "nothing new under the sun;" but we do aver that, to the present time, the most persevering antiquarian research has not revealed a case of true ovariotomy—a case of actual extirpation of diseased ovaries—before the case of Dr. Ephraim McDowell at Danville, Kentucky, in 1809. Even should such a case be ultimately found, it will, however, not at all detract from the credit of that extraordinary man, who, at the time of his performance of it, knew of no previous attempt to perform it, and who, no one yet has had the temerity to dispute, was the first to establish it as a legitimate operation in the medical world.

I am, etc., JOHN D. JACKSON, M.D.

Danville, Kentucky, Jan. 10th, 1874.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

THE annual meeting, for the election of officers and passing the balance-sheet, will be held on Wednesday, April 8th, at 3 P.M. precisely, at the rooms of the Century Club, 6, Pall Mall Place (opposite the Oxford and Cambridge Club, Pall Mall). Dr. J. Lush, M.P., President of the Association, will take the chair.

On this occasion, matters of considerable importance, affecting the status and remuneration of the service, will come before the meeting for discussion. The Council consider that the present moment is a critical one for Poor-law Medical Officers, as the Premier has committed himself to the policy of sanitary reform, and many of his immediate colleagues in the Government have pledged themselves to deal with the question of local taxation, with a view to its more equitable incidence. The importance of this, as affecting the interests of the Poor-law Medical Officers, must be evident; the Council, therefore, trust that there may be a good attendance.

As the expenses of the Association during the next two or three months will be very considerable, the Council trust that all arrears of subscriptions may be paid to the honorary secretary, Mr. J. Wickham Barnes, 126, Gower Street, Bedford Square.

OBITUARY.

WILLIAM LYON, M.D., GLASGOW.

DR. WILLIAN LYON died on February 25th, at his residence, Brandon Place, West George Street, Glasgow. Dr. Lyon was admitted a Licentiate of the Faculty of Physicians and Surgeons in 1816, and became a Fellow in 1828. He commenced practice in the country, a few miles to the east of Glasgow, where for a number of years he passed a busy professional life. He afterwards removed to Glasgow city, and for many years practised there. Thirty years ago, Dr. Lyon was appointed surgeon to the Infirmary, and, about the same time, he became lecturer on surgery in the Portland Street School of Medicine, now defunct. He was the first medical officer appointed by the Barony Parochial Board, in connection with Barnhill Poorhouse; and, on the occasion of the second visitation of cholera to this district, he received the superintendentship of that parish, under the Board of Health. He was also president of the Glasgow Medical Society and of the Medical-Chirurgical Society; indeed, in the course of his professional career, he was connected with every medical institution of a public nature in the city. He held a prominent position as a consulting surgeon in the West of Scotland. In 1859, the honorary degree of M.D. was conferred upon him by the University of Glasgow.

Dr. Lyon, who, during a long life, enjoyed excellent health, was of an active habit. He devoted himself assiduously to his profession, and, until 1851, when he visited the London Exhibition, could not be prevailed upon to take anything like a respite from his duties. Amongst his brethren he was held in high esteem for his great shrewdness, practical sagacity, fertility of resource, and indomitable perseverance. As an operator, his daring and his success were great. He was amongst the first in the West of Scotland to recognise the efficacy of ovariotomy.

HENRY DIGBY COTES DELAMOTTE, M.R.C.S.,
Swanage, Dorset.

MR. DELAMOTTE was born at Oxford, in 1796, where he was educated with the view of entering the medical profession. He attended lectures given at the Middlesex Hospital by Sir Benjamin Brodie, Sir Charles Bell, Mr. Mayo, etc., and afterwards settled in Swanage, where he laboured for an uninterrupted period of fifty-five years, nearly the whole of that time as a Poor-law medical officer, and Admiralty surgeon.

In December 1862, the poor of Swanage, being desirous to testify their high esteem of such a valuable friend, gave him a very handsome tea and coffee service, with the following inscription engraved on a massive kettle:—"Presented, with a silver tea and coffee service, to Henry Digby Cotes Delamotte, Surgeon, Swanage, by his friends and the poor, in token of their respect and gratitude, December, 1862."

Mr. Delamotte, who had scarcely known a day's illness throughout his life of seventy-seven years, required neither spectacles nor walking-stick, and was, on the morning of February 13th, in his usual health and high spirits. He had reached the house of one of his patients, and was about to ascend the stairs, when he dropped to the floor, dying instantly. The principal shops in the town were immediately closed, flags were hoisted half-mast high, and hundreds testified their respect by attending the funeral, which took place on the 18th. He leaves a widow and fifteen children, two of whom are in the medical profession.

THOMAS SWAIN, M.R.C.S., L.S.A.Eng., L.R.C.P.Edin.

Mr. Swain died at Birmingham, on Friday, February 27th, in the fifty-sixth year of his age. He had always enjoyed robust health until the last few months, when it was found that he was the subject of heart-disease, probably of long standing. He was born on June 30th, 1818, at Weedon Beck, in Northamptonshire, where his father, James Swain, was a much-respected officer of Excise. In 1832, he was apprenticed to the late Mr. J. P. Stallard, surgeon, of Leicester. In 1838, he left Leicester, to attend lectures at the then recently opened School of Medicine in Birmingham; and in 1841, proceeded to London. In 1842, he obtained the licence of Apothecaries' Hall, and became assistant to Messrs. Park and Armstrong, of Gravesend. With these gentlemen he remained a few months only; and, returning to Birmingham, in November 1842, he became assistant to Mr. Edwin Bartleet. In that town he remained till January 1844, when, for a short period, he became assistant to Mr. Thomas Paget, of Leicester. In 1845, he returned to Mr. Bartleet, and remained with that gentleman till, having for a time filled the post of House-Surgeon to Queen's Hospital, he commenced practice on his own account, in October, 1847. In 1848, he was elected Surgeon to the Self-Supporting Dispensary; and in 1849, entered upon a partnership, afterwards dissolved, with Mr. Josiah Clarkson. In 1859, he took the L.R.C.P. of Edinburgh; and in 1860, obtained the Membership of the Royal College of Surgeons of England. In June, 1862, he was appointed Lecturer on Medical Jurisprudence at Sydenham College, where, on the opening of the session, October 1864, he delivered an able introductory address. In October 1866, he became honorary secretary to his brother lecturers, an appointment which he held till the amalgamation of Sydenham with Queen's College, in May, 1868. He was then appointed to the joint-professorship of Medical Jurisprudence in the newly constituted College, becoming afterwards, on the resignation of Dr. Foster, honorary secretary to the body of professors. Many of these had been his colleagues at Sydenham College; and in October, 1872, they offered to him a memorial of their regard, in the shape of a handsome marble time-piece. The duties of these two offices he continued to discharge to the last.

Mr. Swain married twice, and leaves a widow and six children to lament his loss. Professor Swain belonged to that large class of medical practitioners—the very back-bone of the profession—whose time and experience, all absorbed by their own immediate clientary, is employed not ignobly, if unproductive of extended or lasting fame.

MEDICAL NEWS.

King and Queen's College of Physicians in Ireland.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, March 10th, 11th, and 12th, the following candidates obtained the license to practise Medicine.—Those marked (*m*) also obtained the license to practise Midwifery.

Bookey, David Brownrigg (*m*)
Emerson, Isaac Bomford
Flinn, David Edgar
Griffin, Thomas
Kennedy, Patrick (*m*)
McSweeny, Joseph Patrick (*m*)
Murray, Frederick Robert
Murray, James (*m*)
Russell, Arthur Willoughby (*m*)
Slevin, Patrick Joseph (*m*)

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, March 26th, 1874.

Bookey, Thomas Leeson, Whitchurch, Salop
Coffin, Richard James Maitland, Malta
Hogg, James, Dronsfield, Sheffield
Hogg, T m Bellshaw, Leeds
Thomson, Samuel John, St. Mary's Hospital
Wilding, Leonard James, Worcester

The following gentlemen also on the same day passed their primary professional examination.

Barnes, Edwin, St. Bartholomew's Hospital
Pearce, Arthur, St. Bartholomew's Hospital
Rudduck, John Burton, London Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

ARDEE UNION, co. Louth—Medical Officer for the Dunleer Dispensary District: £120 per annum.

BALLINASLOE DISTRICT LUNATIC ASYLUM—Visiting Physician: £100 per annum. Applications, 13th instant, to Dr. Eaton, Resident Medical Superintendent.

BOOTLE BOROUGH HOSPITAL—House Surgeon: £80 per annum, board, lodging, etc. Applications, 20th instant, to T. P. Dawson, Hon. Sec.

BRADFORD (Lancashire) URBAN SANITARY DISTRICT—Medical Officer of Health: £20 per annum.

BRISTOL GENERAL HOSPITAL—Physician. Applications, 22nd instant, to Henry Fox, R.N., Sec.

BURY DISPENSARY—House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 16th instant.

CAHERCIVEN UNION, co. Kerry—Medical Officer for the Valencia Dispensary District: £80 per annum.

CAMBRIDGE URBAN SANITARY DISTRICT—Medical Officer of Health: £250 per annum.

CENTRAL LONDON OPHTHALMIC HOSPITAL—Assistant-Surgeon. Applications, 8th instant.

CUMBERLAND INFIRMARY, Carlisle—House-Surgeon: £100 per annum, furnished apartments, board, etc. Applications, 22nd inst., to John Laver, Sec.

EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN—Resident Medical Officer. Applications, 7th instant, to John Henry, Sec.

GUILDFORD UNION—Medical Officer and Public Vaccinator for the Albury District: £60 per annum, and fees. Applications, 9th instant, to Mark Smallpeice, Clerk.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton—Resident Clinical Assistants. Applications, 6th instant, to the Sec.

HULL and SCULCOATES DISPENSARY—Physician.

HULL GENERAL INFIRMARY—Physician.

KILBURN DISPENSARY—Two Resident Medical Officers: £120 and £80 per annum, apartments, etc., respectively. Applications, 6th instant, to the Hon. Sec., 32, Boundary Road, N.W.

KILMACTHOMAS UNION, co. Waterford—Medical Officer for the Kilmacthomas Dispensary District: £120 per annum, and fees. Applications, 14th instant, to David Power, Hon. Sec., Newtown, Kilmacthomas.

KING'S COLLEGE HOSPITAL—Assistant-Physician.—Pathological Registrar and Curator of the Museum.—Assistant Dental Surgeon.

KNARESBOROUGH UNION—Medical Officer for the Knaresborough District: £55 per annum.

LUNESDALE UNION, Lancashire—Medical Officer for Workhouse: £11 per annum. For District No. 1: £49 per annum, if resident in the village of Hornby; any other part of district, £30 per annum, exclusive of usual extras. Applications, 21st instant, to Robert Stephenson, Clerk, Hornby.

MACHAR (Old), Aberdeenshire—Medical Officer for part of the Southern Division, and the Poor House. Applications, 10th instant, to Thomas Skeene, Inspector of Poor, Aberdeen.

NENAGH UNION, co. Tipperary—Medical Officer for the Sivermines Dispensary District: £100 per annum. Applications, 30th instant.

NORTH LONDON CONSUMPTION HOSPITAL—Physician. Applications, 15th April, to W. Hornibrook, Sec.

OXFORDSHIRE—Public Analyst.

PRESTWICH UNION—Medical Officer for the Bradford District: £20 per ann.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

ROYAL SOUTH LONDON DISPENSARY, St. George's Cross—Honorary District Surgeon. Applications, 6th instant, to the Resident Medical Officer.

ST. SAVIOUR UNION—Medical Officer for the Newington St. Mary District: £130 per annum.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

STRACHUR and STRALACHIAN, Argyleshire—Medical Officer for the Parishes of. Applications to A. Weir, Inspector of Poor, Strachur, by Inverary.

UNIVERSITY OF OTAGO, New Zealand—Professor of Anatomy and Physiology: £600 per annum and class fees, and allowance for passage money and outfit. Applications, 25th April, to John Auld, Esq., W. S., Edinburgh.

WATERFORD UNION—Medical Officer for the Ullid Dispensary District: £110 per annum.

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, washing, and furnished apartments.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Horder, T. Garrett, M.R.C.S.E., L.R.C.P.Ed., appointed Medical Officer of Health for the High District of Alston Union.—Salary, £20.

*Parsons, George, A.B., M.B.Dub., appointed Medical Officer and Public Vaccinator to the Hawkshead District of the Ulverston Union.

Presentation to Mr. George Jones, Birmingham.—On March 26th, the members of the Birmingham Circulating Medical Book Society met at the house of their President, Dr. Marshall, for the purpose of presenting a testimonial of their esteem to their Honorary Secretary, Mr. George Jones. The presentation was made by the President on behalf of the Society; and Dr. Melson, who had been joined with him as a committee to select the memorial, added a few observations. The testimonial consisted of a very handsome clock and bracket, suitably inscribed.

OPERATION DAYS AT THE HOSPITALS.

MONDAY	Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.
WEDNESDAY ..	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY.........	Royal Westminster Ophthalmic, 1.30 P.M. — Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY	St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Epidemiological Society, 8 P.M. Dr. Corfield, "On the Alleged Spontaneous Production of the Poison of Enteric Fever".

THURSDAY.—Hunterian Society. 7.30 P.M.: Council Meeting. 8 P.M.: Mr. Durham, "A Case of Pneumothorax resulting from Injury treated by Paracentesis and Aspiration"; Mr. Rivington, "A Case of Intraorbital Aneurism, and some other cases of Injury to the Head."

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Callender, "A Case of Neuralgia in Stump treated by Nerve-stretching" (the patient will be exhibited); Mr. Haward, "A Case of Recurrent Sarcoma of Breast"; Mr. Teevan, "Notes of Cases of Sterility after Lithotomy."

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

IF Dr. Snow Beck can complete his promised list of nine cases, we shall be happy to publish them. It seems to us useless to continue the discussion in any other form than on the basis of published facts.

MR. WOOD.—The formulæ mentioned are those of the United States *Pharmacopœia.*

SIR,—It may concern the medical profession generally, as well as those members who hold appointments in the Poor-Law Medical Service, to learn that from the last returns it appears that for some years past less and less has been paid every year to the medical officers for salaries and extra services, etc.

April 1874. I am, etc., A SURGEON.

NURSING ARRANGEMENTS OF LONDON HOSPITALS.

SIR,—I have read with much interest the second part of the report of your Special Commissioner on the nursing arrangements of the London hospitals. Your Commissioner mentions, as an objection to the contract system of nursing, that nursing associations devote their attention to the supply of nurses for private cases as well as to the maintenance of the hospital staff, drafting off their nurses as they become efficient, and supplying their places with fresh probationers. This statement is, to a certain extent, correct, but I assure you that this institution keeps its staff of nurses for private cases distinct from that of the hospital. We keep up a regular separate staff of hospital nurses, whom we do not remove unless obliged to do so by the nurses refusing to continue to work in hospitals, or for other considerations, such as health or the necessity of a change from hospital atmosphere. We do not take our nurses from hospital wards to nurse private cases; and, consequently, we do not send our nurses back into the wards after nursing private cases, a practice which your Commissioner very justly condemns.

I am, etc., R. ROBINSON, Treasurer of St. John's House.

St. John's House, 7 and 8, Norfolk Street, Strand, W.C., March 24, 1874.

NOTICE TO ADVERTISERS.—Advertisements for insertion in the BRITISH MEDICAL JOURNAL, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

ENGLISH MICROSCOPES AND THE VIENNA INTERNATIONAL EXHIBITION.

SIR,—Many readers of your most valuable JOURNAL have, no doubt, noticed in the last number of the *Monthly Microscopical Journal* some remarks made by the President of the Royal Microscopical Society, in his address with reference to my exhibits at the late Vienna Exhibition in 1873. As some of these remarks are neither generous nor correct, and totally at variance with actual facts, I beg you to afford me the opportunity to give them my most emphatic contradiction.

Firstly, I fail to comprehend the President's motive in designating me a "Prussian", or the propriety even of introducing my nationality at all. I am not a Prussian, but a Hungarian, and I shall simply leave that part of the President's address to the generous minds of your readers, to say whether or not a residence of nearly thirty years in this country entitles my products to be designated as English products.

Secondly, the President remarks, "and not even in his collection was there a single objective of note or high power".

Not only were there in my collection objectives of note and high power, which I was prepared to challenge against those of any maker, but I pointed them out myself to the President, who, on seeing them, simply told me that he did not attach any importance whatsoever to high powers, and only wished to examine a quarter inch or one-eighth inch, which would be quite sufficient to form his judgment.

Now, these expressions to me at Vienna, in comparison to those in his address, are strangely at variance with each other, and led to suppose that he *does* attach great importance to high power objectives; and, therefore, had the President fulfilled his duty, for which he was accredited as British juror, by bestowing some attention in the examination of my goods—the only products of the kind of English manufacture in the Exhibition—and not merely taken a superficial survey" of them, he then could not have failed to find that I did have objectives of high power and worthy of note in my collection—worthy of general praise, which I received from many scientific men of high eminence, leading opticians, and the press on the Continent, who impartially pronounced that my products of optical and scientific instruments are equalled only by few, and surpassed by none, in the whole Exhibition. Apologising for troubling you, I am, etc., M. PILLISCHER.

88, New Bond Street, W., March 25th, 1874.

MERCURY IN SYPHILIS.

SIR,—Permit me to return Mr. Hutchinson many thanks for his kind and courteous reply to my letter of January 27th. I have no doubt that many besides myself will feel grateful to him for his valuable remarks on this important subject; for, having made syphilis the object and subject of special study for many years, and being a careful and an accurate observer, any remarks falling from his lips, or coming from his pen, as the result of his matured experience, must be very valuable.

I think we are quite agreed as to the great value of mercury in the treatment of syphilis; that it is, in fact, the remedy *par excellence* for the disease in its primary and secondary stages. Mr. Hutchinson's remarks on the best method of administering the remedy will be much prized, being so simple and definite.

But about the tertiary stage, Mr. Hutchinson admits that much uncertainty exists. He thinks it is no longer a blood-disease, but that the tertiary manifestations are due to tissue-change. Is it not probable—yea, more than probable—that the syphilitic poison undergoes some change through remaining in the system for so many years, and that the tissue-changes are the result of the altered state of the poison in the blood? I think so. It is quite certain that the behaviour of mercury is very different in the primary and secondary stages of syphilis, from what it is in the tertiary; for, whereas its antidotal effects are plainly to be seen in the former, it generally aggravates the disease in the latter. Hence, may it not be considered as an established rule, that in all such cases where mercury disagrees, the grand remedy is the potassium iodide? May I not go a step further, and say, that the proper treatment for every case of tertiary disease is the potassium iodide in increasing doses? That this treatment will cure the great majority of such cases, I think will be generally admitted—whether permanently or only temporarily, is not so easy to say; but there are cases continually occurring where the iodide has only a very temporary or hardly any effect. For instance, I have a gentleman under my care at the present time who has been taking the iodide in scruple-doses for many months, for disease contracted nineteen years ago. So long as he takes the medicine two or three times a day, the disease is kept in abeyance; but whenever it is discontinued, in a few days the disease re-appears on his tongue and the sole of his foot. Then I have another gentleman who is suffering from lupoid disease of the nose and face, from disease contracted eighteen years ago, on which the iodide has hardly any effect at all. What is to be done in such cases? That Mr. Hutchinson must have seen many such cases, I have no doubt, for they are continually occurring in the practice of every one who has much to do with syphilis. It was on this particular point that I hoped the profession would have received much valuable information from Mr. Hutchinson; but he frankly confesses that he has none to give. Perhaps some member of our great Association, who has had much experience in the treatment of these troublesome cases, will kindly supply the deficiency. I am, etc.,

March 5th, 1874. A LIVERPOOL ASSOCIATE.

MATERNAL IMPRESSIONS.

SIR,—To those who advocate the influence of "Maternal Impressions on the Fœtus *in Utero*", the following cases which occurred in my practice very many years ago, may prove interesting.

CASE I.—Mrs. T. had been attended by me in several labours. On the present occasion, she was very curious to know if there was any mark upon the child. Upon a cursory view, I could see none, and so informed her. When the child was washed, the nurse called my attention to a rough and reddish patch on one of the legs, and this I mentioned to the lady. She at once said: "I can tell you what it is; it is a dormouse, which ran up my leg when I was pregnant." I had the chance of seeing this leg when the owner of it was grown up; and certainly, if the skin of a dormouse had been fixed upon it, it could not have been more perfect, both in regard to texture and to colour.

CASE II.—Mrs. C., a fine young woman, had had two or three natural labours. During her present pregnancy, she was exceedingly anxious and depressed, but would assign no reason for her fears. As her labour progressed, she was inces santly asking if anything was wrong. I could not make out the presentation; but strong pains came on, followed by the birth of a child, with a head and face exactly resembling a toad. Luckily, it was dead. Seeing the horror depicted on the countenance of myself and nurse, she instantly exclaimed: "I know what it is. For God's sake, take it away; don't let me see it." She afterwards told her mother that on going into the cellar she had been frightened by a huge toad jumping on her foot.

Case III.—By a strange fatality, the next pregnancy of this woman was accompanied by the same anxiety and depression, the same reticence, and the same result, except that on this occasion the child presented a natural face, but with the head flattened and elongated, so as to resemble most perfectly the back of a tortoise. It seemed that during her pregnancy she had been frightened by an Italian organ boy, thrusting his tortoise in at her open window. I may state that after these mishaps, she had several natural labours.

It may naturally be asked if I secured these monsters? I was unable to do so; the parties concerned had them made away with at once. I have often noticed the extreme dislike which mothers have to exhibit any deformity of their offspring. Of this, I once had a curious instance. I was informed one morning that a poor woman in my neighbourhood had been delivered by a midwife of a child with two heads. Being very desirous of obtaining this specimen, I requested my assistant to ride over and try to get it; and, knowing the woman was very poor, I armed him with a £5 note. He, however, failed in his mission. The mother utterly refused to part with it; indeed, it was already in a box nearly covered with quick lime. I was sadly annoyed at my failure; the less so, however, when I found that my friend Dr. Southwood Smith, who was staying close by, had likewise failed, though backed by the offer of a £10 note. I am, etc.,

St. John's Hill, Sevenoaks, March 1874. C. M. Thompson.

The Day of Rest.

Sir,—If Dr. Inman will be good enough to refer again to my former letter, he will see that I wrote of the Sabbath or a day *equivalent*, and that I did not assert that any of the people referred to comported themselves as the Hebrews were directed to do. To correct my supposed ignorance upon this point. Dr. Inman writes, " that the Hebrews, as opposed to Baal-ists, had not a distinct *Sun* Festival, but they had "new *moons* and Sabbaths"—the Sabbath not being a *Sun*day, but a day dedicated to *Saturn*, the most high god in sky, to human eyes". I am not ignorant that the Hebrew Sabbath is Saturday, and I do not think that any part of my letter leads to such a conclusion. Does your correspondent consider that the words I quoted from Picart, stating that one day in every week was dedicated to the sun, are false? It was my endeavour to show that a day so dedicated resembled the Hebrew and Christian Sabbath; but Dr. Inman puts an end to all argument with the sweeping assertion that *all* the authorities which I quote are unreliable. The only books which he suggests in their place are a Marginal Bible and Cruden's *Concordance.* Now, this latter authority is quite sufficient to prove the justness of my comparison. Cruden shows that the word Sabbath is sometimes meant for the whole week, sometimes for the Sabbatical year, and sometimes for all the Jewish festivals indifferently. This is additional proof of the correctness of my assertion, that a day *equivalent* to a Sabbath (a periodical religious festival) is observed by nearly every religious sect which has attained celebrity in the world.

Dr. Inman doubts whether I know the meaning of the term Gnostic. I believe it is derived from the Greek word *gnōsis*—knowledge—and that during the first two centuries of the Christian era it was used as "a generic term to designate all individuals who professed to interpret the Scriptures by the aid of philosophy". According to Gibbon, the Gnostics inferred that from its supposed imperfections the Jewish religion could never have been instituted by the wisdom of the Deity; and this I take to be Dr. Inman's view, and therefore styled him a Gnostic.

If I am wrong in considering that he believes the Bible history of the creation—in fact, the whole Book of Genesis—to be fabulous, I trust he will correct me; but I am far from desirous of discussing the truth or falseness of sacred history. Dr. Inman's researches upon this special subject have been most extensive, whereas my knowledge regarding it is only derived from general reading. The work to which we have alluded (*Ancient Faiths*) is evidence that its author has devoted a great deal of study to his writings upon these matters; but I cannot alter the opinion which I have already advanced—viz., that he has not made a very good use of this deep study. I am, etc., E. Noble Smith.

Hobby-Horses.

Sir,—The boy mounts his hobby-horse and breaks it to pieces; the man mounts his hobby-horse and rides it to death. Hobby-horses—political, philosophical, and theological—have in their turn shared a similar fate. I fear we are hurrying some of our medical hobby-horses onwards to the same goal. A late celebrated surgeon of a London hospital uttered this dictum, "No man who smokes must expect to have an heir to his estates." Of course, in the blindness of prejudice, he had ignored the fact that the lower order of Irish, who smoke incessantly, both man and woman, leave lots of heirs and heiresses to inherit their pigs and potatoes. If the medical adviser happen to be an antimercurialist, then we have such statements as the following. "Primary sore treated by mercurials—destruction of the nose, phthisis, death." "Salivation for primary sore (21 years ago), thirteen miscarriages, etc." (*Medical Times and Gazette,* June 1863).

Really, sir, this kind of logic is not a whit better than that of the lady who, when told by a gentleman that his father, aged 70, was a great smoker, replied if he had not smoked he might have been 80.

These remarks are the result of my having read in the British Medical Journal (March 21st) the report of a case of general paralysis, supposed to be of syphilitic origin, shown by Dr. Buzzard at the Clinical Society. The man, it appeared, had suffered from chancre and bubo fourteen years ago, which were followed by no other symptom, not even by sore-throat. "His treatment consisted of iodide of potassium in gradually increasing doses, amounting at last to sixty grains three times daily; and this was followed by subcutaneous injections of the chloro-albuminate of mercury for two months." In answer to the pertinent question of Mr. B. Carter, "Why the case was diagnosed as syphilitic?" Dr. Buzzard said the diagnosis was founded partly on the almost magical effect of the iodide, and partly upon the fact that there was no other antecedent cause to explain the attack.

It appears, sir, to me that it is too much the fashion now-a-days to lay to the charge of syphilis all diseases for which a palpable cause cannot be discovered. The old saw, *Omne ignotum pro "magnifico"*, must be paraphrased by *Omne ignotum pro "syphilitico"*. The attempt to introduce subcutaneous injections into the treatment of syphilis is futile. It is so unpleasant a remedy that few patients—at least in the upper classes—will submit to it; and I have failed to discover any superior advantages it possesses. I am, etc.,

Finsbury Square, March 23rd, 1874. R. S. Sisson, M.D.

Correspondents are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

New Medical and Chemical Terms.

Sir,—A correspondent in last week's issue, who modestly, but doubtless correctly, assumes the two first letters of the alphabet as his *nom de plume,* seems to have run foul of some very simple matters. He complains that, being a general practitioner, he wishes to keep *au courant* with the times, and yet cannot, because there is not a dictionary to explain the meaning of words, the origin of which he cannot trace. I would suggest that he would be quite as much at fault if such a dictionary existed.

When a new word is introduced to medical or scientific literature, it is undoubtedly to supply a want, and is also fully explained by its introducer. Thus, unless fully conversant with the subject to which the word relates, or with which it is connected, one cannot expect to be cognisant of its import.

A. B. instances "the absurd word" *aspiration,* than which I do not think a softer or more musical one could have been chosen. The word is not new even to English science, for it has been used to indicate an apparatus used for chemical experiments far back in the annals of history. Its general English meaning is, *a rough breathing*; it has also its synonyms, *a longing* and *a yearning;* and I think that even this latter meaning may be squeezed in to fit the new surgical instrument, for, when exhausted, it certainly has *a yearning* to be charged again; nevertheless, as a French word, it may be accepted without question as an expressive one.

I agree with A. B. that many words have neither sense nor meaning, as instanced by the words aldehyde and chlorodyne. Thus aldehyde, which is a chemical body, derived from alcohol, and discovered by Kopp early in the present century, is compounded from *al*cohol *dehyd*rogenatus, so that really it means alcohol deprived of hydrogen: but the alcohol is only represented by the Arabic article *al,* which is affixed to many words, as alkali, etc. Chlorodyne, again, is a more absurd word still; but, as it is applied to a patent medicine, it is almost unnecessary to notice it, as it certainly is not a scientific term. It however means that chloroform is in its composition, and that it relieves pain, but the inventor has forgotten the privative α.

Croton-chloral-hydrate means that chloral (derived from chloraldehyde—its proper name being trichloraldehyde) enters into chemical union with crotonic acid, and becomes a hydrate; chloral, again, was originally named from *chlor*ine and *al*cohol, the materials from which it is made.

I think enough has been said to show that a dictionary of modest dimensions would be inadequate to explain comprehensibly all the terms that are used in our science; it is therefore necessary, if one wish to keep pace with the times, to read all new matters so ably put before us in the medical papers, and then words, instead of mystifying, will simply recall the subjects to which they belong.

March 28th, 1874. I am, etc., A. Ω.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, March 27th; The Ayr Advertiser, March 26th; The West County Lantern, March 21st; The Scotsman, March 26th; The Brighton Examiner, March 24th; The Leicester Advertiser, March 28th; The Blackburn Standard, April 1st; The Hull Evening News, March 27th; The Sunderland Times, March 27th; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Sir William Fergusson, Bart., London; Dr. J. F. Payne, London; Dr. Murchison, London; Dr. Gore, Ballinglass; Dr. S. Lewis, Liverpool; Dr. C. Handfield Jones, London; Dr. Edis, London; Mr. T. P. Pick. London; The Secretary of the Pathological Society; Dr. J. W. Moore, Dublin; Mr. Eassie, Child's Hill; Mr. W. H. Michael, London; Mr. Eastes, London; The Secretary of the Hunterian Society; Dr. T. Snow Beck, London; Mr. J. W. Langmore, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; M.R.C.S.; Dr. Millen Coughtrey, Auckland, New Zealand; Dr. G. H. Philipson, Newcastle-upon-Tyne; Dr. A. Meadows, London; Mr. Fulcher, Hanwell; Dr. W. Williams, Liverpool; Dr. McLewin, Edinburgh; Dr. Mercer, Beverley; Dr. Mouat, Portsmouth; Dr. Baylis, Tunbridge Wells; Dr. Hardwicke, London; Mr. Holmes, London; Dr. Schliep, Berlin; A Member; Dr. Rumsey, Cheltenham; Dr. Paul, London; Dr. Wm. Squire, London; Messrs. Young and Postans, London; Dr. Syson, Huntingdon; Our Paris Correspondent; Dr. Whitehead, Manchester; Dr. Hugh Miller, Glasgow; Our Dublin Correspondent; Dr. Tripe, Hackney; Dr. Sibson, London; Dr. Arthur Ransome, Manchester; Mr. G. Jones, Birmingham; Mr. Hamilton, Liverpool; An Associate; Dr. F. J. Brown, Rochester; Dr. Farquharson, London; Sir Henry Thompson, London; Mr. Mac Swiney, London; The Registrar of the Royal College of Physicians; Dr. Sutherland, London; Mr. R. G. Herbertson, Cunmock; Dr. J. Currie, Lydney: Dr. Robinson, Dublin; Our Paris Correspondent; Dr. Pierce, Manchester; Mr. G. Terry, Mells, Frome: Dr. Turner, Keith; Mr. J. Torrance, Rugby; Mr. J. T. Smith, Edinburgh: Mr. Smith, St. Helier's; etc.

BOOKS, etc., RECEIVED.

Physiology for Practical Use. By Various Writers. Edited by James Hinton. In Two Volumes. London: H. S. King and Co. 1874.

Cremation: the Treatment of the Body after Death. By Sir H. Thompson. London: H. S. King and Co. 1874.

Report of the Autopsy of the Siamese Twins. Philadelphia: J. B. Lippincott and Co. 1874.

A Treatise on Food and Dietetics, physiologically and therapeutically considered. By F. W. Pavy, M.D., F.R.S. London: 1874.

THE CROONIAN LECTURES
ON
FUNCTIONAL DERANGEMENTS OF THE LIVER.

Delivered at the Royal College of Physicians.

By CHARLES MURCHISON, M.D., LL.D., F.R.S.,
Physician and Lecturer on Medicine, St. Thomas's Hospital.

LECTURE II.

III. *Abnormal Disintegration.* 1. *Lithæmia;* 2. *Gout;* 3. *Urinary Calculi;* 4. *Biliary Calculi;* 5. *Degenerations of the Kidneys;* 6. *Structural Diseases of the Liver;* 7. *Degenerations of Tissue throughout Body;* 8. *Local Inflammations;* 9. *"Constitutional Diseases."*—IV. *Derangements of Organs of Digestion.* 1. *Tongue;* 2. *Appetite;* 3. *Taste;* 4. *Flatulence;* 5. *Constipation and Diarrhœa;* 6. *Vitiated Stools;* 7. *Intestinal Hæmorrhage;* 8. *Hæmorrhoids;* 9. *Hepatic Pain;* 10. *Jaundice, its Pathology.*—V. *Derangements of the Nervous System.* 1. *Aching Pains in Limbs;* 2. *Pain in Shoulder;* 3. *Neuralgia;* 4. *Cramps;* 5. *Headache—Megrim;* 6. *Vertigo;* 7. *Convulsions;* 8. *Noises in Ears;* 9. *Sleeplessness;* 10. *Depression of Spirits;* 11. *Irritability;* 12. *The Typhoid State.*

MR. PRESIDENT, FELLOWS OF THE COLLEGE, AND GENTLEMEN,—In my last lecture I endeavoured to show that the secretion of bile was, perhaps, the least important of the functions of the liver; but that, in the first place, this organ contributed greatly to the processes of sanguification and of nutrition of the tissues; and, secondly, that it was probably the chief seat of the disintegration of albuminous matter; while even the secretion of bile, although in part excrementitious, was mainly destined to assist the assimilation of the food. If these views were correct, I pointed out that the existing classification of the functional derangements of the liver, founded on the quantity or the quality of the bile in the stools, had become obsolete; and I proposed to substitute another, founded on the more important functions of the liver, and on the derangements which the liver excites in other organs of the body. I then described some of the derangements of nutrition and elimination traceable to the liver; and I now proceed to consider the more important disorders coming under the head of Abnormal Elimination.

III.—*Abnormal Disintegration.*

Modern investigations, pathological as well as physiological, go far to prove that one of the chief functional derangements of the liver, if it be not the foremost of all, is an imperfect disintegration of albuminous matter, or its non-conversion into a soluble product (urea), which can be readily excreted by the kidneys. A strong corroboration of the correctness of this view is furnished by the disease known as acute atrophy of the liver, to which I have already had occasion to refer. In this disease there is a rapid destruction of the secreting tissue of the liver, and the result is a disappearance of urea from the urine, and the substitution for it of leucin ($C^6 H^{13} NO^2$) and tyrosin ($C^9 H^{11} NO^3$), products of the disintegration of albumen more complex and less oxidised than lithic acid ($C^5 H^4 N^4 O^3$) and urea ($CH^4 N^2 O$), and which are also found in abundance in the wasted tissue of the liver. The substitution of leucin and tyrosin for a portion of the urea of the urine takes place in other diseases of the liver, in which the destruction of the hepatic tissue is less rapid and less extensive than in acute atrophy, as, for example, in certain cases of cirrhosis and of obstruction of the common bile-duct. I have known it also to occur in certain febrile diseases, such as typhus and enteric fever, in which the hepatic tissue appears, in consequence of the increased work thrown upon it, to undergo partial disintegration.[*] But these important changes in the urine, so far as we know, only occur in cases where there is structural change of the liver. The urine is liable to other changes indicating imperfect disintegration or oxidation of albuminous matter, which are much more common, and which are also the result of functional derangement of the liver, but which are not necessarily associated with structural disease of that organ. The most common of these changes in the urine are deposits on cooling of lithic acid, lithates, and pigmentary matters; but there are probably others, less frequent and as yet but little studied, such as the presence of xanthin, cystin, kreatinin, etc. I need not remind an audience such as that which I have the honour to address, that deposits in the urine of lithic acid or lithates are not due to any morbid condition of the kidneys. What I wish to insist upon is, that the frequent occurrence of these deposits in the urine ought always to be regarded as a sign of functional derangement of the liver, arising from causes, sometimes temporary, at other times more or less permanent. Excluding those cases in which deposits of lithic acid or lithates are thrown down in the urine not until twelve or twenty hours after its emission, as the result of spontaneous changes, to which Scherer has given the name of acid urinary fermentation,[*] and those which are due to a marked deficiency of urinary water, deposits of lithic acid, lithates, and abnormal pigments, which appear in the urine as soon as it cools, are chiefly met with under the following conditions.

1. In febrile diseases, in which we know that the liver becomes enlarged and congested, and its gland-cells loaded with minute granules, and in which there always is an increased disintegration of albuminous matter. Every one, for example, is familiar with the copious deposits of lithates which are so common during an attack of ordinary febrile catarrh.

2. In many structural diseases of the liver, and particularly in those which are characterised by an increased amount of blood in the organ, such as inflammation, cirrhosis, cancer, and simple hyperæmia, whether mechanical or active.

3. In functional derangement of the liver, either temporary or persistent.

To this third cause of an excess of lithic acid in the urine, I wish now to restrict my remarks. What I desire to maintain is, that lithuria, like glycosuria, is very often due to a functional disease of the liver, although even glycosuria is still ranged in some text-books with albuminuria and diseases of the kidneys. In other words, abnormal disintegration of albuminous matter in the liver may lead to a morbid condition of the blood and of the entire system, which often manifests itself in lithuria. This morbid state of the blood I propose to designate lithæmia.[†]

1. *Lithæmia.*—When oxidation is imperfectly performed in the liver, there is a production of insoluble lithic acid and lithates, instead of urea, which is the soluble product resulting from the last stage of oxidation of nitrogenous matter. Persons who habitually enjoy the best of health are liable to deposits of lithates in the urine after a surfeit of food, or even after partaking moderately of one of the fashionable dinners of the age. Under these circumstances, an excess of work is thrown upon the liver and the other glandular organs, and one result is that a quantity of albumen, instead of being converted into urea, is discharged by the kidneys in the less oxidised form of lithic acid or its salts. But what in most persons is an occasional result of an extraordinary cause, is in some almost a daily occurrence, either from the diet being always excessive in amount or unduly stimulating, or from some innate defect of power, often hereditary, in the liver, in virtue of which its healthy functions are liable to be deranged by the most ordinary articles of diet. Most persons appear to have more liver, just as they have more lung, than is absolutely necessary for the due performance of its functions. But in others, not unfrequently the offspring of gouty parents, the organ, in its natural condition, seems only just capable of performing its healthy functions under the most favourable circumstances, and functional derangement is at once induced by articles of diet which most persons digest with facility. This functional derangement may manifest itself by various symptoms of "indigestion", by disturbances of circulation and of other physiological systems, but especially by deposits of lithic acid, lithates, and pigments in the urine. These deposits, it is true, are often absent, and yet the urine may contain a great excess of lithic acid. Indeed, as Dr. Bence Jones[‡] has shown, clear urine sometimes contains more lithic acid than that which thickens on cooling. But the frequent deposit of lithates shows that oxidation is less perfect than it ought to be. Very often, however, these urinary deposits exist for years without the patient experiencing any general or local discomfort. But sooner or later, often about middle life, lithic acid and lithates are formed in such excess that they cannot be eliminated by the ordinary channels, and they accumulate and create disturbance in different parts of the organism, and then the urinary deposits begin to attract more attention than they had previously done, from their being accompanied by symptoms of indigestion, or from the evidence of some serious local mischief, the onset

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[*] See Murchison *On the Continued Fevers of Great Britain,* 2nd edition. 1873, pp. 157, 210, 255, 533, 629.

[*] *Ann. d. Chemie und Pharm.*, Bd. 42, s. 171.

[†] It has been pointed out to me that Dr. Austin Flint has proposed the term "uricæmia" to designate the excess of uric acid in gout and in cases of lead-poisoning (*Principles and Practice of Medicine*, 3rd edition; Philadelphia, 1868, p. 86). The term which I have employed appears to me to be preferable.

[‡] *Philosophical Transactions*, 1849, part ii, p. 249.

of which had been insidious. These symptoms are all the more likely to occur if the patient be what is commonly known as "a generous liver", if he take little exercise in the open air, or if he have much mental work. Of the symptoms referred to, the most common are the following :—

a. A feeling of weight and fulness at the epigastrium and in the region of the liver.

b. Flatulent distension of the stomach and bowels.

c. Heart-burn and acid eructations.

d. A feeling of oppression and often of weariness and aching pains in the limbs, or of insurmountable sleepiness after meals.

e. A furred tongue, which is often large and indented at the edges, and a clammy, bitter, or metallic taste in the mouth, especially in the morning.

f. Appetite often good ; at other times anorexia and nausea.

g. An excessive secretion of viscid mucus in the fauces and at the back of the nose.

h. Constipation, the motions being scybalous, sometimes too dark, at others too light, or even clay-coloured. Occasionally, attacks of diarrhœa alternating with constipation, especially if the patient be intemperate in the use of alcohol.

i. In some patients, attacks of palpitation of the heart, or irregularity, or intermission of the pulse.

k. In many patients, occasional attacks of frontal headache.

l. In many patients, restlessness at night and bad dreams.

m. In some patients, attacks of vertigo or dimness of sight, often induced by particular articles of diet.

All of these symptoms are liable to occasional aggravations from errors in diet. Gradually the patient is taught by experience to become more careful as to what he eats or drinks. One thing after another he is compelled to give up. First, he renounces malt liquors ; then he discovers that Port wine, Madeira, Champagne, and Burgundy disagree, and he betakes himself for a time to "dry sherry"; but at length this does not suit, and after an interval, during which a trial is made of claret or hock, the patient, probably under medical advice, finds temporary relief from the substitution for wines of brandy or whisky largely diluted with water. At last, unless he be misled by the fashionable, but to my mind erroneous, doctrine of the present day, that alcohol in one form or another is necessary for digestion or to enable a man to get through his mental or bodily work, he finds that he enjoys best health when he abstains altogether from wine and spirits and drinks plain water. The patient goes through a like experience with regard to solid food ; one dish after another, very often what he likes best, has to be given up, until at length, if he be well advised and have the sense to follow the advice, he restricts himself to the plainest food in moderate quantity. As a rule, those articles of diet are most apt to disagree which contain much saccharine or oleaginous matter, and not, as might perhaps have been expected, nitrogenous food if plainly cooked. In most of these cases, the digestion appears to be strongest in the morning, and the patient suffers from late dinners or suppers.

The picture which I have thus imperfectly drawn represents a morbid condition extremely common in this country, which is associated with a constant tendency to the deposit of lithic acid or lithates in the urine, and which, for the reasons already given, I believe to originate in functional derangement of the liver.

2. *Gout.* But, secondly, you cannot fail to recognise that this picture represents a train of symptoms very common in gouty people, and to which the terms "gouty dyspepsia", "latent gout", "suppressed", "anomalous", or "irregular gout" have been applied ; although what I desire to maintain is, that they are also very common in persons who neither inherit articular gout, nor ever have it themselves. Gout itself, however, is merely one of the results of lithæmia. Thanks to the researches of our colleague Dr. Garrod, we now know that gouty inflammation of a joint is due to various exciting causes, which it is needless here to enumerate, determining a local deposit of lithate of soda, which has previously existed in abnormal quantity in the blood, as well as in the fluid that exudes from it into all the textures of the body. The accumulation of this substance in the blood will, no doubt, be favoured by non-elimination consequent upon disease of the kidneys ; but in most cases of gout the kidneys are in the first instance healthy, and the presence in the blood or tissues of lithic acid or its salts is the result of imperfect digestion, or more strictly of functional derangement of the liver. Articular gout is, so to speak, a local accident, which may occur at any time in persons, in whom the normal process by which albuminous matter becomes disintegrated in the liver into urea is persistently deranged. In other words, gout, like diabetes, is the result of a functional derangement of the liver ; and just as we found that in many persons in whom there is no evidence of articular gout an innate defective power of the liver, in virtue of which its functions are deranged with unusual facility, is often transmitted by parents to their offspring, so gout, which is one of the consequences of that condition, comes to be an hereditary disease. I hold, therefore, that what is called a "gouty diathesis" always indicates, and is the result of, hepatic derangement, and that many symptoms commonly referred to gout would be more correctly ascribed to disorder of the liver.

3. *Urinary Calculi* are another consequence of lithæmia, and therefore of functional derangement of the liver. Of the concretions which form in the urinary passages, the great majority consist, in the first instance, at all events, of lithic acid or its salts. According to Dr. William Roberts, lithic acid constitutes five-sixths of all renal concretions, and of vesical calculi which have only recently descended from the kidney.[*] The circumstances favourable to the precipitation of lithic acid are, an acid condition of the urine, but mainly an excessive elimination by the kidneys of free lithic acid, which had previously existed (either free or combined) in excess in the blood, and which we have seen to be formed mainly, at all events, in the liver. There are also good reasons for believing that renal calculi composed of other substances than lithic acid have an hepatic origin. Cystin ($C^3 H^7 NSO^2$), for example, which represents a different process of oxidation from that which produces lithic acid, closely resembles taurin, and, like it, contains a large proportion of sulphur ;[†] and, moreover, it has been found by Scherer in the livers of patients suffering from enteric fever.[‡] It would seem, therefore, that those rare renal calculi which are composed of cystin are due in the first instance to some functional derangement of the liver. Xanthin ($C^5 H^4 N^4 O^2$), again, of which a few renal calculi, chiefly in young people, are composed, also appears to arise from imperfect oxidation of the products of albuminous matter. It differs from lithic acid only in containing one atom less of oxygen; so that it also is probably formed in the liver, in which organ it has been found by Scherer, as well as in the blood, spleen, and muscles.[§] Even oxalate of lime, which Dr. Bence Jones found, either alone or combined with other substances, in 163 out of 450 urinary calculi,[‖] may in some way be connected with functional derangement of the liver, although the evidence on this point is less clear than in the case of other urinary concretions. I do not forget that it was maintained by so eminent an authority as our colleague Dr. Owen Rees, in the Croonian Lectures delivered before this College in 1856, that oxalic acid is never excreted from the blood, but is always formed in the urine after its secretion by decomposition of lithic acid; and that this opinion has more recently been advocated by another eminent Fellow of this College, Dr. Basham.[¶] Facts, however, are now known which point strongly to an opposite conclusion. For example, oxalic acid and its compounds, when introduced into the stomach, will appear as oxalate of lime in the urine; while in one case, at least, oxalic acid has been found in the blood by Dr. Garrod.[**] It has also been found in saliva, in perspiration, and in mucus. The researches also of Beneke[††] make it probable that the chief, if not sole, source of oxalic acid is impeded metamorphosis of the nitrogenous constituents of the blood and food; while, from its composition ($C^2 H^2 O^4$), it appears to be one of the penultimate stages in the oxidation of the more complex organic substances into carbonic acid and water. What part of the system is in these cases mainly at fault is not very clear, although we are quite certain that the liver contributes greatly to the disintegration of albuminous matter; and it seems not improbable that, when an excess of lithic acid is formed in the liver, a portion of it may be subsequently converted into oxalic acid. Wöhler has succeeded in obtaining oxalic acid from lithic acid out of the body; while Schunck[‡‡] and other chemists distinctly state that, within the body, oxalic acid is formed by the oxidation of lithic acid. When lithic acid is imperfectly oxidised, it is believed to break up into oxalic acid and urea. It may be added, that oxalate of lime usually coexists or alternates with lithic acid or its salts, both in the urine and in urinary calculi. But whether the liver be concerned in the production of oxaluria or not, there can be no doubt that it is the organ fundamentally at fault in the great majority of urinary calculi; and that it is to it, and not to the kidneys, that we must mainly look for their prevention and treatment. This pathological inference is confirmed by clinical experience. One of the greatest modern authorities on urinary calculi states, as the result of his observation, that patients with calculous disease are only temporarily benefited by the alkaline waters of Vichy and Vals, which dilute the urine and render it alkaline, but do not cure the disease; whereas more permanent results are obtained by the use of

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[*] *Urinary and Renal Diseases*, 2nd edition, 1872, p. 270.

[†] *Ibid.*, p. 84.

[‡] *Archiv für Path. Anat.*, Bd. x, p. 228.

[§] Roberts, *op. cit.*, p. 88.

[‖] *Lectures on Pathology and Therapeutics*, 1867, p. 99.

[¶] *Renal Diseases*, 1870, p. 187.

[**] *Medico-Chirurgical Transactions*, 1848.

[††] *Zur Entwicklungsgeschichte der Oxaluria*, F. W. Beneke, 1852.

[‡‡] *Proceedings of the Royal Society*, No. 95.

the waters of Friederichshall, Carlsbad, and Püllna, which produce activity in all the digestive organs, and eliminate by other channels the waste matters previously thrown out as lithic acid by the kidneys, but which mainly act by relieving the overloaded liver and restoring its normal functions.

4. *Biliary Calculi*, which consist for the most part of cholesterin and bile-pigment, are another result of functional derangement of the liver. They are chiefly met with in persons of middle or advanced life who have led sedentary lives, and they are particularly common in those who have lived too well and eaten much saccharine food, and who are the subjects of lithæmia. It may be difficult to explain how the functional derangement of the liver which results in lithæmia should also lead to the formation of concretions composed of cholesterin and bile-pigment in the biliary passages; but the frequent concurrence of the lithic acid dyscrasia with gall-stones is a clinical fact which I have had many opportunities of verifying. This observation accounts for the frequent occurrence of biliary calculi in gouty people, and it also explains the frequent coincidence in the same individual of gall-stones and urinary calculi. I cannot agree with Frerichs in regarding this coincidence as purely accidental.[*] Many years ago, Morgagni insisted on the frequent coexistence of urinary and biliary calculi. The late Dr. Prout also remarked that the formation of gall-stones of cholesterin was frequently associated with a tendency to lithic acid deposits in the urine; and Dr. George Budd, in his classical work on *Diseases of the Liver*, states that "the habit of drinking porter, which frequently leads to lithic acid deposits and to the most inveterate forms of gout in persons who inherit no disposition to them, may also frequently lead to the formation of gall-stones".[†] Lastly, the intimate relation between urinary calculi, biliary calculi, and gout was in accordance with the great clinical experience of the late Professor Trousseau.[‡] In connection with these remarks, it may be worth adding that, in a few instances, lithic acid has been found in biliary concretions.[§]

5. *Degenerations of the Kidneys.*—From what has been already stated, it is clear that the kidneys and the liver are intimately connected in their functions, the main object of the kidneys being to eliminate certain products which are in great part secreted in the liver. Derangements of one organ are, therefore, very likely to lead to disorder of the other. In the first place, my experience has led me to regard lithæmia as one of the chief causes of "acute Bright's disease" or acute nephritis. Most cases of this disorder are traceable either to scarlatina or to a chill. In patients under 20 years of age, few cases cannot be traced to scarlatina. In adults, when the attack follows a chill, and there has been no antecedent attack of scarlatina, it will almost invariably be found that the patients have previously suffered from derangements of the liver with lithæmia, while many have led intemperate lives. Again, we find that functional derangement of the liver resulting in lithæmia, with dyspeptic symptoms such as those which I have described, is a common cause of the contracted, granular, or gouty kidney. Our colleague Dr. George Johnson, one of the greatest living authorities on diseases of the kidneys, thus writes respecting the causes of this form of Bright's disease:—"It is often associated with the gouty diathesis, as one of its synonyms indicates; and it is of common occurrence in persons who eat and drink to excess, or who, not being intemperate in food or drink, suffer from certain forms of dyspepsia, without the complication of gouty paroxysms." And further on, in the lecture from which I have just quoted, he observes:—"Dyspepsia is frequently associated with this form of disease, sometimes as a cause, sometimes as a consequence. You may often learn that a patient of strictly temperate habits has for months or years suffered from pain or uneasiness after food, flatulent distension of the stomach and bowels, habitual looseness or irregularity of the bowels, constipation and diarrhœa alternately. With this, there is often turbidity of the urine, which is high-coloured, excessively acid, and deposits urates abundantly. After a time, the urine, which had been scanty, becomes more copious, of pale colour, of low specific gravity, and is found to contain albumen and granular casts. In such a case, probably *renal degeneration is a consequence of the long-continued elimination of products of faulty digestion through the kidneys.* I have seen this sequence of events so frequently, that I have no doubt as to their causative relationship. Dyspeptic symptoms, such as I have described, and consequent renal degeneration, are in some cases excited or greatly aggravated by habitual excess of alcohol."[||] Numerous cases which have come under my own observation, and which I have carefully watched, have satisfied me as to the strict accuracy of Dr. Johnson's description; but the dyspepsia which so commonly precedes the first symptoms of contracted kidney is that which I have already described as accompanying persistent lithæmia, and as consisting in derangement, not so much of the gastro-intestinal digestion, as of the disintegrative processes which go on in the liver.

Chronic degeneration of the kidneys with albuminuria is sometimes also a sequel of diabetes, the kidneys becoming diseased from the constant irritation of the saccharine urine. This is another way in which functional derangement of the liver may lead to structural disease of the kidneys.

6. *Structural Diseases of the Liver.*—It is highly probable that derangement of the disintegrative processes going on in the liver may lead to structural changes in the liver as well as in the kidneys. In the first place, fatty degeneration of the liver is well known to be a common lesion in persons who are large feeders or drink much alcohol and lead indolent lives, and in whose urine there are often copious deposits of lithates.[*] Under these circumstances, the change in the liver is sometimes associated with a similar change in the structure of the heart or kidneys, or with general corpulence. Again, in a large proportion of the cases of catarrhal jaundice, occurring towards middle or in advanced life, the patients have either previously suffered from actual gout, or they have been the subjects of lithæmia with some of the symptoms of dyspepsia already described as accompanying it. Thirdly, although cirrhosis is most commonly the result of the direct irritation of the liver by alcohol, there are certain cases in which it cannot be traced to such a source, but in which its symptoms have been preceded for years by the lithic acid dyscrasia and dyspepsia. Cases of this sort have come under my own notice, and have been described by Baglivi, Stoll, Scudamore, and Trousseau as a "chronic gouty hepatitis".[†] Lastly, if we carefully investigate the antecedent medical history of patients suffering from primary cancer of the liver, we often find that for many years they have been "bilious", or they have been liable to dyspeptic symptoms attended by copious deposits of lithic acid or lithates in the urine, either habitually or from the slightest error in diet. That protracted derangement of cell-function should ultimately lead to abnormal cell-formation, in persons predisposed to cancer, does not appear to be an unwarrantable assumption.

7. *Degeneration of Tissue throughout the Body.*—With the approach of old age, there is a tendency of the tissues throughout the body to undergo degeneration and decay, fatty, and sometimes calcareous matter, being substituted for the normal structures. More than twenty years ago, it was pointed out by Mr. Barlow,[‡] that the "climacteric disease", described by a former President of this college, Sir Henry Halford, and the "Decline of the Vital Powers in Old Age", described by Dr. Marshall Hall, were, in great measure, due to these degenerations, and the fact is now generally acknowledged. In no structure are these degenerations more marked, or the cause of greater danger to life, than in the heart and in the coats of the arteries, the degenerations of which lie at the foundation of apoplexy, paralysis, aortic incompetence, and other maladies of advanced life. The explanation of these degenerations of tissue is to be found in derangements of the nutritive and disintegrative processes in which the liver plays so important a part; and in many instances, I do not say in all, it is the liver which appears to be primarily at fault. The nutrition of the tissues becomes impaired, partly perhaps in consequence of the supply of faulty nutritive material, but mainly from the functional activity of the liver becoming weakened with advancing age, as the result of which the blood and juices of the body are impregnated with a quantity of disintegrated albuminous matter, not sufficiently oxidised to be eliminated by the kidneys. But what, in many persons, is merely a form of senile decay, may, under certain conditions, occur at a comparatively early period of life. Many observations have satisfied me that persons who habitually consume a large quantity of rich and stimulating food, and of alcoholic drinks, who take little exercise, and whose urine is constantly loaded with an excess of lithic acid and lithates, are particularly prone to fatty degeneration. Andral and Lobstein long ago connected atheroma of the vessels with "a particular taint of the fluids closely resembling gout",[§] and it has been a common observation, by physicians practising at spas resorted to by gouty patients, and borne out by my own experience, that atheroma of the arteries, at an unusually early period of life, and diseases of the aortic valves, which are not congenital and are inde-

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[*] *Klinik der Leberkrank.*, New Sydenham Society's Translation, vol. ii, p. 511.

[†] 3rd edition, p. 369.

[‡] *Clinical Lectures*, New Sydenham Society's Edition, vol. iv, p. 231.

[§] Frerichs, *op. cit.*, vol. ii, p. 497.

[||] BRITISH MEDICAL JOURNAL, 1873, vol. i, pp. 161, 191.

[*] Fatty liver is also very common in a very different condition of the system—viz., in wasting diseases, such as phthisis and chronic dysentery. It is supposed that the blood in these cases becomes charged with the oily matter which is rapidly absorbed from the patient's tissues, and that a portion of this becomes arrested in the liver.

[†] C. Scudamore, *Nature and Cure of Gout*, 4th edition, 1823, p. 43: Trousseau, *op. cit.*, vol. iv., p. 381.

[‡] "General Observations on Fatty Degeneration," *Medical Times and Gazette*, May 15th, 1852.

[§] C. E. Hasse, *Diseases of the Organs of Circulation and Respiration*, Sydenham Society's Translation, 1846, p. 82.

pendent of injury or rheumatism, are met with far oftener in persons who are the subjects of the lithic acid dyscrasia, or who have had gout, than in those who have no such tendencies.

8. *Local Inflammations.*—Lithæmia predisposes to local inflammations. Persons in good health, not apparently so, but in the strictest sense, are little liable to local inflammations. For example, when a given number of persons are exposed in common to an exciting cause of pneumonia, comparatively few are attacked with that disease; and, when the previous history of those attacked is investigated, it is usually found that, prior to the acute attack, they have been in an abnormal state of health. This was a point much insisted on by our late colleague Dr. Todd. In one of his remarkable clinical lectures he writes as follows: —"Simple pneumonia is very rare in another sense also, that is, in its freedom from complication with, or dependence on, some peculiarity of constitution. To make this clearer to you, let me take an illustration. If two men, A and B, both in good health, be exposed to some noxious influence—cold, for example—at the same time, and for the same period, A will get a severe attack of pneumonia and B will not. Now, at first sight, one can scarcely conceive why the pneumonia should attack the one and not the other, for they were both apparently equally well at the time of exposure to cold; but, if we carefully examine into the previous history of these individuals, we shall find that A is of a gouty or strumous constitution, or has some peculiarity of diathesis which B does not possess, and it is by reason of this that A is seized with pneumonia when subjected to the noxious influence which produces no such injurious effect upon B."* One of the conditions predisposing to local inflammations is gout; but the dyscrasia, which I have designated lithæmia, and of which gout itself is only one of the local manifestations, acts in the same way. Having paid considerable attention to the matter, I am satisfied that persons with the lithic acid dyscrasia are much more prone than others to ordinary febrile colds, as well as to more severe local inflammations. They may appear robust and healthy up to the sudden occurrence of the inflammatory attack, but they have not really been in a normal state of health. I have also had occasion to observe that in certain persons who habitually pass an excess of lithates in the urine, the lithates cease to be eliminated on the advent of a local inflammation or of an ordinary febrile catarrh, to be again discharged in abundance on the subsidence of the pyrexia. In such cases, the retention of lithates in the system has probably determined the local inflammation.

9. *Constitutional Diseases.*—When blood-poisons are taken into the system from without, the liver is one of the organs which first and mainly suffers; but I trust that I have also made it clear that morbid states of the blood, or constitutional diseases, such as gout and diabetes, may be generated in the liver from derangements of the processes of disintegration and nutrition which normally take place in it. It is very probable, however, that other morbid states of the blood and constitutional diseases have their origin in the liver. In acute atrophy of the liver, the liver appears to be the starting-point of the pathological process, but all the subsequent phenomena show that the malady is essentially a blood-disease. In certain cases of erysipelas and pyæmia, I have long taught, in my lectures on medicine, that the *materies morbi* was engendered in the body; and I think it might be shown that, as in acute atrophy, the liver is the organ at first mainly at fault.

Again, it is not improbable that the large quantity of fibrin found in the blood in acute rheumatism may result from fibrin not being destroyed in the liver to the proper extent. We know, also, that in certain states of the body, as after surgical operations, childbirth, and acute febrile diseases, the blood is very prone to coagulate in the large vessels; and that, when these coagula form in the right side of the heart, sudden death may result. Our colleague Dr. Fayrer has shown that these phenomena are much more common in India than in this country;† and, since the commencement of these lectures, he has written to me to suggest that this may be due to the greater tendency to hepatic derangements in tropical countries.

On the other hand, the deficiency of red blood-corpuscles in anæmia, chlorosis, scrofula, and some other maladies, is also probably traceable, in the first instance, to functional derangement of the liver. There can be no doubt that patients with protracted functional derangement of the liver are often very anæmic. They present a pale, pasty appearance, and bear losses of blood or acute diseases badly. Many years ago, Messrs. Todd and Bowman‡ observed that persons suffering from functional derangement of the liver are often pale, as if from loss of blood, although no such loss has been experienced; their nutrition is enfeebled, digestion impaired, and there is slight yellowness of the complexion as in cases of hepatic disease, and yet after death no lesion is discernible, except perhaps slight enlargement of the liver. In these cases, iron may disagree until the liver has been restored to its normal functions.

Indeed, it seems not improbable that most so-called constitutional diseases are due in the first instance to some defective action of the liver. The child of a gouty father is not born with the *materies morbi* or poison of gout either in his blood or in his tissues; but he is born with a morbid tendency in his liver to produce that poison. The same may perhaps be said of cancer and of tubercle. Both are unquestionably, like gout, constitutional and hereditary diseases; but the child of a cancerous parent is not born with the *materies morbi* of cancer in his blood or tissues, but only with a tendency to a certain form of abnormal nutrition, which results in a cancerous growth. This morbid tendency, resident at first, no doubt, in the entire ovum, is in the adult probably located in the blood-forming and blood-depurating organs, among which the liver holds the most important place. It is no argument against this view that the liver is not the part of the body most often affected with primary cancer, for neither is it the seat of the local explosions of gout.

[*To be continued.*]

THE GOULSTONIAN LECTURES
ON
THE ORIGIN AND RELATIONS OF NEW GROWTHS.

Delivered at the Royal College of Physicians.

By J. F. PAYNE, M.B.Oxon., F.R.C.P.,
Assistant-Physician to St. Thomas's Hospital.

LECTURE III.—*Abstract.*

THE word cancer, like all terms of science, has been used in very different senses at different times; but these are only important so far as it has been distinguished from other tumours. Abernethy described cancer as a variety of sarcoma, but his description is drawn almost entirely from scirrhus. The characters he gives are wholly physiological or derived from growth, not at all anatomical, though he endeavoured to form an anatomical classification of simple tumours. Sir James Paget adopted most of the characters of Abernethy, and added another, namely, that of structure, which seems, logically, to belong to a different category. Müller's definition is not very different from that of Abernethy and Paget, except that he introduced the ill-omened word "constitutional". The physiological characters of cancer thus distinguished are of the highest importance; by themselves, they constitute a definition possessing a very considerable degree of accuracy and quite logically consistent. They are not, strictly speaking, the signs of malignancy; rather, they *are* malignancy. The difficulties which occur in the practical application of these rules are chiefly two; viz., that malignant tumours thus defined pass by imperceptible gradations into others which are perfectly innocent, and that even a tumour which may in the end become highly malignant is not so at first. Hence the test is not always applicable. This often occurs in the case of tumours affecting some specially vital organ, such as an orifice of the stomach or the trachea, when death is produced before time allows any development of the so-called malignant properties.

Hence has arisen the search for some anatomical test, always applicable, which shall serve as a constant indication of malignant properties. This search has been only partially successful. No one type of structure is either peculiar to, or characteristic of, malignant growth. We cannot draw a direct inference from structure to malignant properties; still less can we draw any positive conclusion as to the structure of a tumour merely from the fact that it has manifested malignant properties, any more than from the fact that an animal is predacious or carnivorous we can refer it to any one order, since predacious or carnivorous species may occur in several orders. The two definitions derived from structure and from physiological characters respectively will not, then, coincide, neither can they be precisely contradictory; they are not comparable, or do not lie in the same place. From a failure to see this fact, have arisen the misunderstandings between the practical physician or surgeon and the histologist.

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* *Clinical Lecture on Acute Diseases*, 1860, p. 367.

† *Clinical and Pathological Observations in India*, 1873.

‡ Todd and Bowman, *Physiology of Man*, 1856, vol. ii, p. 264.

The only way out of the difficulty is to follow the example of the naturalists, and classify objects according to their structural characters; their name in such a classification will then give the key to the recorded experience about their properties. Whether the term cancer should be applied to an anatomical group, that is, to a special type of structure, or to a class of tumours growing in a particular way, that is, to a physiological type, is a question chiefly of convenience; but the term "malignant tumour" seems adequate for the latter. Cancer, or its Greek equivalent carcinoma, will then be an anatomical, not a clinical term. Of anatomical definitions of cancer, that of Virchow remains the most complete; viz., a tumour containing epithelial or epitheloid cells enclosed in an alveolar stroma; other peculiarities in the arrangement of the cells being also a part of the definition. It is difficult to define precisely what are epithelial cells; but the essential thing is the existence of two kinds of structural elements, and a certain contrast between them. Ranvier, laying stress upon one of these elements—the stroma—calls cancer a species of fibroma. Waldeyer, on the other hand, attaching more importance to the cells, regards it as an essentially epithelial growth, extending into the connective tissue. The stroma and cells are, on this view, of distinct origin, and take their rise, even on principles explained in the former lecture, from different embryonic layers.

It is at present a point of much controversy whether this supposed duality of origin exists, or whether all the elements, as Virchow supposes, arise from connective tissue. On the one side, it is urged that cancers in this sense arise only in parts where there are epithelial elements, and that continuous outgrowth may be traced thence into the tumour, while no transitional forms are met with. On the other hand, it is urged that there are actually transitional forms between the cells of cancer and connective tissue-cells, and that the latter are only stimulated by some infection communicated from neighbouring parts to take on a particular kind of growth.

The case appears to be rather different with respect to epithelioma and the more deeply seated cancers. In the former, there seems to be much reason to believe that all the epithelial portion of the tumour is an outgrowth from pre-existing epithelium, leaving out of account for the time the extremely rare cases of supposed epithelioma originating elsewhere than on epithelial surfaces.

Waldeyer and other pathologists extend the same principle to other forms of cancer, supposing that these originate in glands, and bear the same relation to them as epithelioma to the epithelium. At all events, it is contended they never originate except from epithelium of some kind; and accordingly the name of cancer is refused to tumours springing from bone, connective tissue, lymphatics, or other non-epithelial parts. The details of this question admit of much discussion; but it may be said generally that the mode of origin is not so clearly demonstrated in the case of other cancers as in epithelioma. Moreover, instances may be quoted of tumours with the structure of cancer growing from non-epithelial tissues, and the difficulty is not wholly surmounted by calling such tumours alveolar sarcoma. The conclusion is, that the exclusively epithelial origin of any special type of structure called cancer is not proved. To take the origin as the basis of classification, and to call only such tumours cancer as arise in or from epithelial parts, is of course to shift the basis of nomenclature and to destroy, in effect, the anatomical definition of cancer.

Malignancy is not a property of cancer only, but belongs to different classes of tumours in different degrees.

With respect to the occurrence of cancers in several parts of the body, one of these tumours is believed to be always primary, the others secondary. Secondary growths are excited by some material substance carried to the new site from the primary cancer. Whether this substance consists of cells or of some seminal principle (*seminium* of Virchow) which stimulates the tissue-elements to new growth, is a subject of controversy. It may be said that the transport of cells certainly occurs in some cases, while the *seminium* is a perfectly hypothetical substance. Anyhow, there seems reason to believe that the tissue-elements of the new site participate in the new growth, which is not formed (as Waldeyer asserts) wholly after the manner of a graft by growth of the transplanted elements.

These considerations suggest an answer to the question often proposed, whether cancer is local or constitutional; for, if this be the true history of cancer, then it is clearly, in its origin, local; whether or not, there are characters superadded to it which make it constitutional in any one of the many senses in which that word has been used. This is the moral of the whole story, and the story must have been badly told if it have not suggested it.

ON CERTAIN POINTS CONNECTED WITH THE TREATMENT OF CASES OF NECROSED BONE.*

By H. G. HOWSE, M.S.,
Senior Assistant-Surgeon at Guy's Hospital.

It is well that in a paper of this kind the writer should be as explicit as possible in enunciating the *principle* which he wishes to support. I will, therefore, first state my proposition, and afterwards bring forward facts and arguments, as far as time will permit, in its support. It is that, in operating upon a case of necrosed bone, where the sequestrum is surrounded by a large mass of new bone, often of considerable density and thickness, it is most conducive to the success and speedy cure of the case to cut away the new bone very freely, so as to leave the cavity in which the sequestrum is placed freely exposed, and thus to allow it to close by granulating from the bottom.

This, then, is my proposition. It stands opposed to the surgical teaching of the present day, as I shall show directly. I will cite only one authority, but it is from a work more widely read, perhaps, than any other English surgical work of its size. Mr. Erichsen (6th edit., vol. ii, pp. 152-3) says:—"Care, however, should be taken not to remove more of the new case than is absolutely necessary, as the aperture so made will not be filled up again by osseous matter, but by fibrous tissue, and thus the ultimate soundness of the limb might be endangered. . . . If the sequestrum be too large to be removed entire through the cloacæ, it may, perhaps, best be extracted piece-meal, having been previously divided by passing the points of narrow but strong cutting pliers into the interior of the bone."

Such being the present surgical teaching, I must bring forward the facts and arguments which seem to me to prove conclusively that it is wrong. In the first place, why is such a view maintained—why, in an operation for the removal of necrosed bone, does the surgeon seem as if he were anxious to preserve every particle of new bone that he possibly can? I believe the answer simply to be, that this is an age of conservative surgery. We save arms and legs that our forefathers would have ruthlessly lopped away; we resect joints that would have subjected their owners to the same forfeiture; we perform plastic operations on lips, noses, perinæums, and even bladders, and, because the result has been highly satisfactory in these cases—beneficial alike to the profession and to the public—therefore we must apply the same rule to the saving of new bone; therefore, the result will be to us as satisfactory in the one case as in the other. But there is no rule without an exception, and the present case is, I submit, an exception. Let me narrate a typical case illustrating my proposition.

H. H., a lad aged 12 years, was struck on the leg by a cricket-ball. The blow caused him sharp pain, and he left off playing for the day; but he was able to walk about that and the following day or two. It became, however, much swollen, and an abscess formed and burst after some time. He was brought to me ten weeks after the accident. There were then two or three sinuses about the middle of the leg, and there was thickening of the tibia extending from the upper third right down to the internal malleolus. He could, however, move the ankle pretty freely. I told the parents that the blow had killed a large part of the bone, and that an operation was necessary, to which they readily consented; but, as it was not certain whether the sequestrum had yet separated, I put it off for six weeks longer, so as to ensure this result. At the operation, the sinuses were laid into one, some new bone cut through, and a piece of sequestrum readily removed. A long iron probe then passed upwards quite as high as the thickening extended, and downwards into the interior of the internal malleolus (the lower cavity being much the longer), but no more dead bone could anywhere be felt, the whole of the cavity being lined with soft granulation-tissue. In order to satisfy my mind upon that point, I traced out the upper sinus to its end, cutting through the plate of new bone covering it in, so as to expose its cavity freely. The lower sinus was also traced down for about an inch and a half. The wound was washed out with a dilute solution of carbolic acid, and the cavity filled with lint soaked in carbolic oil; this dressing being repeated every day. What was the result in this case? The wound granulated up to perfection in its upper part, but left a sinus at its lower part communicating with the large cavity in the new bone. This remained open, though, after probing, I felt satisfied that no more dead bone remained. I lost sight of the patient for awhile, but he was at length brought to me again, after about six months' absence, the sinus still remaining open and running as deeply as ever. Under these circumstances, I decided to operate again, and open up the lower sinus as in the case of the upper one. This was done a day or two afterwards, the new bone was cut through, and the cavity laid freely open. No more sequestrum was found. In removing the new bone close by the internal malleolus, a small portion of the epiphysial cartilage was cut through; but, as the operation was performed antiseptically, I did not mind this. In the course of a few weeks, the whole of the wound granulated up from the bottom, and, when I last saw him, no trace of anything wrong remained except the large scars on the leg. The bone had resumed its original size, and he expressed himself as being quite as well as before the accident.

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* Read before the South-Eastern Branch.

This case will also illustrate the second proposition to which I wish to draw your attention: that, in a case of necrosis, it is not only advisable to cut through the new bone bridging in the sequestrum cavity, but also to scrape completely away the granulations lining that cavity.

Thus both my propositions are *destructive*, not *conservative*. But why is it prejudicial to leave the new bone and the granulations? I have given you a case where it proved practically injurious to do so, and this case is not an isolated one, as far as I have seen. I think the treatment depends on facts which are readily verified. The first reason is a very obvious one—merely mechanical.

A. It is advisable to lay the whole cavity bare, because there may be a very small piece of bone concealed amongst the granulations; this escapes detection by the probe, and will quite prevent the closure of the sinus until it is removed.

Examples of this may be seen so frequently in operations for necrosis, that it is scarcely worth while to refer to any individual case. The sinuses, in a case of necrosis, especially when the formation of new bone is considerable, are often very tortuous, and, unless they be laid open, it is impossible with the probe to reach their end. Hence a piece of sequestrum may very readily escape detection.

B. The structure of the granulation-tissue lining a sequestrum will of itself often prevent such a cavity from closing. I have on several occasions cut sections from the large fringe-like granulations lining necrosis sinuses. The usual structure that they possess is a blood-vessel in the centre, surrounded by very imperfect connective tissue, and, externally, several layers of pyoid cells. But on some occasions I have found that, in place of the pyoid cells, the sinus-wall was covered over with a beautiful squamous epithelium just like a mucous surface. In fact, the passage had become a *permanent way*, and, while the granulations possessed that structure, there was no more likelihood of its closing than there was of a bit of bowel or the duct of some gland obliterating itself. This, I think, must be the reason why, after removal of necrosed bone, sinuses, if left untouched at the time of the operation, will remain in *statu quo* for months. Thus I have often seen sinuses, in cases of cured hip-joint disease, remain open even for years without any very obvious reason—I mean, as passages for the exit of discharge. But, viewed in the light of the structure just described, the reason becomes plain, and the treatment equally so; viz., the destruction of the epithelial surface. And this is best done by scraping away the granulations bodily.

Certain cases of fistula in ano, salivary fistula, etc., are curable by the introduction of irritating injections, or of a red-hot wire. It is probable that at least part of the good effect attending this treatment is due to the removal of the epithelial layer lining the sinus. The beneficial result of the red-hot wire is usually attributed to the contraction which a burnt tissue always sustains in the process of cicatrisation; but there is reason to believe that quite as much may be due to the destruction of the epithelial surface as to the gradual contraction.

C. Another reason for scraping away the granulation-fringes is, that they very frequently entangle in their folds *débris* from the sequestrum, which will act as a foreign body and prevent the sinus from closing. It may be considered that this is rather a remote and unlikely cause, but it is not so, as may be shown by a consideration of what I may call the *natural history* of a case of necrosis. Supposing, then, that we have a sequestrum contained in its case of new bone—supposing also that no surgical interference is applied to the case, how does nature herself set to work to cure the patient? Partly, no doubt, through the suppuration which goes on around the dead bone. The pus so formed tends to push the sequestrum out through the sinus-openings, or by forming fresh abscesses to form new apertures, and thus to get rid of it. But, in the majority of cases, it is impossible to dispose of all the necrosed bone in this way; and hence we find that partly the sequestrum is removed through the agency of the granulation-fringes lining the cavity in which it is contained. These fringes are very vascular, and, lying in contact with the dead bone, erode and absorb it, just as a thoracic aneurism will hollow out and finally remove the sternum or the dorsal vertebræ. This is the reason why we see so many little pits and depressions on the surface of a sequestrum. Each little hollow probably at one time corresponded with a little granulation which fitted into it. In the case of the larger hollows, I have often seen, at the time of performing a sequestrum operation, the fringe as above described fitting into it, and I could not reasonably doubt that it had formed the hole. Indeed, on two or three occasions, I have found the tip of the fringe so fitting into the hollow that it could not be withdrawn without tearing it off at the constricted neck. In this case, it was probable that the deeper bone was softer, and thus more easily absorbed, than the superficial, so that the end of the fringe grew more rapidly than the constricted neck. The dead bone being absorbed in this way, it will be evident that numerous little scales and spicules will become separated in course of time, and, lying loose in among the granulations, and surrounded more or less with pus, will tend to prevent them from uniting, and thus keep open the cavity.

D. A third reason for the removal of the granulations is, that they occasionally undergo caseous degeneration in old cases of necrosis, where they have attained a considerable size. This is probably due to some alteration in the blood-supply to their interior, whereby a deficient amount is sent to it, and they consequently undergo this peculiar kind of fatty degeneration.

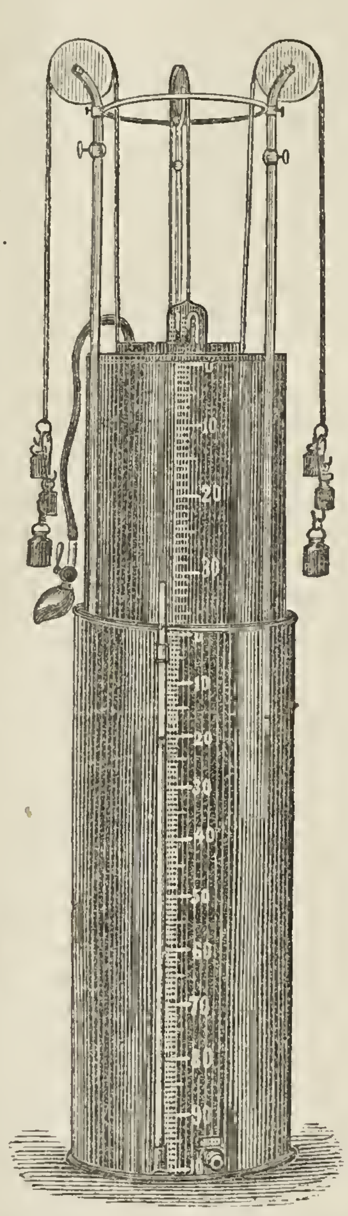
Time will not permit, to-day, my bringing forward illustrative cases; but I should like to deal with one or two objections that may possibly be made to the treatment. First, there is the one already quoted here, that the cavity made by cutting away the new bone so freely does not fill up with bone, but with fibroid tissue, and that thus the ultimate strength of the bone becomes endangered. I believe this to be an entire mistake. The cavity first fills up with granulation-tissue; this speedily ossifies, and thus the outline of the bone is restored. In a great number of cases of necrosis on which I have operated, I have cut away the new bone very freely indeed, and have always found the cavity fill up very rapidly in the way described. The only precaution which it is necessary to take is to leave a bridge of the new bone by the side of the cavity, so as not to divide the continuity of the bone. In a case of this kind operated upon some months ago at the Evelina Children's Hospital, I cut away all the new bone right through to the white shining periosteum at the opposite side, leaving only a bridge of new bone so delicate and flexible that it left the impression on the mind of the casual observer that the limb was broken. This was a second operation. At the first, I had laid open several sinuses leading into cavities of new bone, but failed to find any sequestrum. It had probably been absorbed by the process already described. The cavity healed, all but one sinus, which led into another hollow placed in rather a different position from the first; this must have escaped observation at the first operation, as it lay quite at the posterior aspect of the bone. To reach it, I had to cut away most abundantly all the new bone formed since the first operation, and then removed the shell of the cavity as before mentioned. In this case, I was rather apprehensive as to the result; but the rapidity with which the cavity closed was something marvellous. In a few weeks, the opening had quite filled up, the tissue ossified, and the wound healed, and the last time I saw the child the outline of the limb was very little different to the other.

The only exception to this rule of rapid bone-formation, that I know of, is in adults who are the subjects of some dyscrasia, such as tubercle or syphilis. But, then, what surgeon would think of performing sequestrotomy upon a patient far advanced in consumption? The case is different with syphilis. We know full well that no wound will heal readily in patients suffering from this poison. Indeed, the condition of the viscera is often so bad, that no operation at all is advisable. In any such case, the age of the patient, the activity of the poison, and the condition of the viscera, must be the main things taken into consideration in determining the extent to which it is safe to remove the bone or incise the soft parts.

The last objection to which I shall refer is the fear of what is called "osteo-myelitis", which, we are told, nearly always terminates fatally by pyæmia. The risk of this is, I think, quite removed by practising a modified form of antiseptic surgery. In all such cases, directly after the operation, if it be not performed under the spray (which, however, I generally make use of at the present time), I wash out the wound with a solution of carbolic acid in water (1 in 40), and then plug it with lint soaked in a mixture of carbolic acid and olive oil in the proportion of 1 to 20. The dressings are changed each day, and the wound bathed in a similar solution of carbolic acid until it is quite clean, when it may be dressed every two or even three days, especially if Lister's antiseptic gauze be applied externally. Treated in this way, I have never seen a case of osteo-myelitis, except in one patient who was the subject of syphilitic necrosis of the whole of the tibia, with lardaceous viscera and nodes on the skull; in fact, in such a condition (though a country-woman) as is rarely seen save in the worst inmates of our syphilitic wards. In this case, a slight operation for the removal of a large projecting sequestrum sufficed to cause severe erysipelatoid inflammation of the whole of the leg, followed by sloughing, uncontrollable by any treatment that we could adopt. I am bound to confess, however, that the dressings in this case were neglected for two or three days, during which circumstances prevented my personal supervision of it, and the erysipelas appeared to arise as a direct consequence of this neglect. Clearly, then, this case is not an exception to the rule enunciated above.

ON A PORTABLE PNEUMATIC APPARATUS FOR THE MECHANICAL TREATMENT OF DISEASES OF THE LUNGS AND HEART.

By L. WALDENBURG, M.D.,
Professor in the Royal University in Berlin.



By means of pneumatometry, introduced by me as a means of diagnosis (see *Berlin. Klin. Wochen.*, No. 45, 1871), it has been shown how important it is to distinguish between the different diseases of the respiratory organs, to study inspiration and expiration as two separate acts. It appears that in one class of diseases the inspiratory power may be intact, or even increased, while expiration alone is interfered with. This condition is seen principally in emphysema. In another class of diseases—as phthisis in the first stage, stenosis of the trachea, etc.—only the inspiratory power is diminished, while expiration is quite or nearly normal. Finally, in the advanced stages of phthisis, inspiration as well as expiration may suffer. The idea naturally suggests itself, that it would be of importance for therapeutics to operate upon inspiration and expiration separately. Several years ago, an apparatus was constructed by Hauke, which permits both the inspiration of compressed air and expiration into rarefied air. This latter method is indicated for emphysema of the lungs, while inspiration of compressed air is recommended by Hauke for phthisis and croup. Later on, Berkart constructed an apparatus for the treatment of emphysema, in which, by means of a suction-pump, he produced a space with rarefied air into which the patient expired. Hauke's apparatus, which I used first, and which is dependent upon a pump-arrangement, proved to be insufficient, since it works with a very limited and continually varying power, aside from other lesser defects. I therefore constructed another apparatus, which I demonstrated in September last before the German Congress of Physicians in Wiesbaden, and which, I believe, satisfies all reasonable demands. I do not think it necessary to describe this apparatus, the annexed cut being sufficient to explain it; and I will only mention that both the inner and outer cylinders are one *mètre* (39 inches) high, and that the diameter of the former measures 27 *centimètres* (10.6 inches), that of the latter being 30 *centimètres* (11.8 inches). The mode of using it is exceedingly simple. The apparatus is filled with water to the height of about 20 *centimètres* (7.8 inches). Weights being attached to the cords, these tend to draw up the inner cylinder, and thus rarefy the air therein. The pressure of the atmosphere upon the cylinder amounts to 591.7 *kilogrammes* (about 1,300 English pounds). According to the weight attached, the air is rarefied in a ratio which may be exactly calculated; the weight of the inner cylinder, which amounts to about ten pounds, being allowed. When, for instance, thirty pounds are attached, this gives a net weight of twenty pounds, which corresponds to about one-sixtieth of the atmospheric pressure (=12 *millimètres*) of mercury. The mercury-manometer attached to the apparatus shows the same number. From the inner cylinder, a tube proceeds to a mask which may be firmly adjusted upon the face, and which is provided with a cock in such a manner that either the air in the cylinder is shut off, and only communication with the outside air exists, or, *vice versâ*, the connection with the latter is broken, and the mask communicates only with the air of the cylinder. If the cock be opened while the weights are attached, the cylinder sucks air in with a constant force (in the above example, one-sixtieth of atmospheric pressure), and rises. If the mask be now firmly held before the nose and mouth, and an expiration made while the cock is open, the air is drawn out of the lungs with constant force, and expiration assisted; and we may likewise, by working in opposition to the suction, inspire rarefied air. Should it be desired, on the contrary, to employ compressed air, the cylinder is first raised by attaching weights; these are then taken of, and weights laid upon the cylinder. If, for example, ten pounds be laid on, we work with a power of twenty pounds (=one-sixtieth of an atmosphere), and again the mercury-manometer shows a pressure of 12 *millimètres*, but in the opposite direction. The cock being opened, the condensed air streams out under constant pressure, and may be employed for inspiration.

I have investigated the effects of condensed and of rarefied air on healthy and diseased persons, and arrived at very important results, which followed with almost the certainty of a physical experiment. I may state that the power which I employ, both for the rarefaction and for the condensation of the air, amounts generally from one-sixtieth to one-fortieth of an atmosphere (20 to 30 lbs.); that I have, however, in exceptional instances, gone as high as one-twentieth of an atmosphere.* I will in this place merely give a short statement of the results. For details, I must refer the reader to the *Berliner Klinische Wochenschrift*, Nos. 39, 40, 46, 47, of last year.

A. *Effects upon Respiration.*—1. By inspiration of condensed air, and by expiration into rarefied air, the ventilation of the lungs is for the time being increased. Persons, for example, with a vital capacity of the lungs of 4,000 cubic *centimètres*, inspire or expire several hundred cubic *centimètres*, or even 1,000 to 2,000 *centimètres* more than their vital capacity amounts to. The thorax is, therefore, by the inspiration of condensed air, more widely expanded than is otherwise possible by the deepest inspiration; on the other hand, by expiration into rarefied air, the lungs contract more than is otherwise the case in forced expiration—or, in other words, by the expiration into rarefied air, a part of the residuary air is drawn mechanically from the lungs.

2. By continued employment both of inspiration of compressed and expiration into rarefied air, the vital capacity of the lungs is gradually considerably increased. I have in several cases of emphysema seen the vital capacity within a few weeks increase by more than 1,000 cubic *centimètres*; in the case of one gentleman, it rose within fourteen days from 2,800 to 4,000 cubic *centimètres*. In accordance with this, it could be proved by percussion that the previously abnormally expanded lung gradually contracted and returned to its normal limits.

3. By means of the pneumatometer, we may show with certainty that the power of inspiration, as well as the pressure in expiration, increase by the use of the pneumatic apparatus, and often very considerably so. For instance, a person suffering from emphysema had, when he came under treatment, an inspiratory power of 130 *millimètres*, and exerted by expiration a pressure of 100 *millimètres*; within fourteen days, the former increased to 150 *millimètres*, the latter to 140 *millimètres*. In the case of a phthisical patient, with inspiration of 60 *millimètres*, and expiration of 90 *millimètres*, both increased within six days to 110 *millimètres*.

From these results, the indications for treatment become self-evident. Expiration into rarefied air is chiefly useful for emphysema of the lungs; and retraction of the expanded lungs, which may be shown by percussion to have taken place, is with certainty to be accomplished. Anatomical lesions cannot, of course, be done away with. Inspiration of compressed air is indicated where it is desired to enlarge the thorax and expand the lungs, especially as a prophylactic against phthisis in the first stage of consumption, in conditions consequent upon pleurisy, in pleuritic effusions after tapping, for inducing artificial respiration, stenosis, etc.

B. *Effects upon the Heart and Circulation.*—Physiology teaches us that the mechanism of respiration has an essential influence upon that of circulation. The lungs, enclosed air-tight in the thorax, exert a negative pressure upon the heart and the great vessels, and this is greatest during inspiration; the blood is, as it were, sucked out of the veins, and pressure in the aortic system is diminished, as seen in the kymographion. Two well known physiological experiments (Johannes Müller, Ed. Weber, Donders) prove that by changing the pressure in the lungs, the heart's action may be powerfully influenced, so much so as to cause apparent death. In the first place, by means of as deep and as long retained inspiration as possible, with the mouth and nose closed, the pulse may be made completely to disappear. Secondly, by forcibly expelling air, after a deep inspiration, with the glottis closed, circulation may be likewise impeded, and even brought to a standstill. In the first experiment, the negative pressure of the lungs is largely increased, and thereby the power of the heart so diminished that it can no longer act; in the second experiment, the negative pressure is changed into a considerable positive pressure, and thereby the flow of blood from the veins into the heart is completely checked.

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* For inspiration of rarefied air, I employ a much smaller force, usually one-three-hundredth to one-hundredth of an atmosphere.

The pneumatic apparatus enables us to make use of the mechanical effects of the increased and diminished pressure upon the heart and the vessels for therapeutical purposes, and the power to be applied may be exactly regulated according to weights or mercurial pressure. I have obtained the following results with it.

1. *Inspiration of Compressed Air.*—By this the pressure in the lungs is increased; it becomes less negative; or, with a sufficient degree of compression, is converted into a positive pressure. The necessary consequences of this are the following. *a.* The pressure in the aortic system is raised; the pulse becomes more resistent, even hard. *b.* The flow of the blood from the heart into the aorta is increased; the pulse becomes fuller and larger. *c.* The flow of the blood from the veins into the right side of the heart is checked; the jugular veins are plainly seen to become turgid. Inasmuch as more blood streams into the aortic system, and less flows from the veins, there arises an increased fulness of blood in the greater circulation, while the heart and lungs are disburdened of blood. Expiration into compressed air works in a like manner, only more energetically; this is, however, on account of the disturbance of respiration, less capable of being therapeutically utilised.

2. *Inspiration of Rarefied Air.*—The effect of this is quite the reverse: the pressure of the lungs becomes still more strongly negative, with these results. *a.* The pressure in the aortic system is diminished; the pulse loses in tension, and becomes soft. *b.* Less blood flows out of the heart into the aorta; the pulse becomes smaller and less full. *c.* The diminished pressure connected with a widely expanded thorax draws the blood more forcibly from the veins into the right side of the heart; the jugular veins collapse visibly. *d.* Inasmuch as less blood flows from the left side of the heart, and more blood is drawn into the right side, there follows an increased fulness of blood in the chest, and a diminished fulness in the remaining parts of the body.

Similar, only less energetic, is the effect of expiration into rarefied air. The indications, according to these physiological premises, are clear. I will only give here the principal ones. Inspiration of compressed air is indicated where the flow of blood from the lungs and the left side of the heart is impeded, especially in insufficiency or stenosis of the mitral valve and of the aortic valves. In several cases of insufficiency of the mitral valve, with alarming symptoms, I have obtained the most brilliant results from the application of compressed air. Furthermore, compressed air is indicated in chronic inflammatory processes in the lungs, as in phthisis, in bronchial catarrh, and in chronic hæmoptysis. Compressed air works in all these cases like a venesection which is confined to the organs of the chest.

Inspiration of rarefied air is, on the contrary, indicated where there exists an impediment to the flow of blood in the veins, especially in stenosis, or insufficiency in the valves of the right side of the heart. It is further to be employed to bring about a greater fulness of blood in the lungs, especially as a prophylactic means in persons with a consumptive habit,* where at the same time it serves also as the best gymnastic exercise for the strengthening of the muscles of the thorax. In these cases, however, from the grounds at first alluded to, inspiration of compressed air should be combined with it. The contraindications are also suggested by the physiological premises. Rarefied air should not be used in hæmoptysis or disposition thereto, nor in erethic inflammation of the lungs. Compressed air is contraindicated in abnormally increased pressure in the aortic system; in congestion of the brain, where the coats of the vessels are not intact, giving rise to the apprehension of ruptures, and especially in the so-called apoplectic habit.

This may serve as a short sketch of the indications and contraindications for the application of the transportable pneumatic apparatus. I have up to the present time treated about a hundred patients for the above-mentioned affections, and been very well satisfied with the results of the treatment.

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* This agrees with the theory long advanced by me and others concerning the etiology of phthisis, according to which the insufficient fulness of blood in the lungs disposes to cheesification. *Vide* my work, *Die Tuberculose, die Lungenschwindsucht und Scrofulose.* Berlin, 1869. Aug. Hirschwald.

CASE OF POISONING BY CODEIA.*

By A. S. MYRTLE, M.D.,
Consulting Physician to the Harrogate Bath Hospital.

LAST summer I had a run of cases of saccharine diabetes. One female and eight males consulted me, during August and September, suffering from this complaint. Every kind of treatment had been put in force, from skimmed milk to creasote; every system of diet had been adopted with apparently very little success. At last, one gentleman presented himself who had been ill for eighteen months. During that time, he had gone through the faculty at home and abroad; he had visited mineral springs innumerable, and finally arrived at the conclusion that the only remedy which gave him relief, and checked the progress of the disease, was codeia, prescribed for him by Dr. Pavy. He assured me that all other preparations of opium had been tried, and found useless. This was the first time I had heard of codeia being used therapeutically; I asked him how much he took; he did not know; his London chemist had his prescription, and supplied him with pills as required. Of these, he took one night and morning. I thought I had got an useful hint, and determined that the first case which turned up should be put under the influence of this new remedy.

Soon, an old patient came from the North to see me; he had become alarmed, as a physician had told him his urine was wrong. On inquiry, I found he had been subjected to much anxiety, watching, and grief—first, by the long-continued illness and death of his mother from epilepsy, and, secondly, from the death of his brother from diabetes, which had ran its course with unusual rapidity. Since then, he had perceived little wrong with him, except that he felt very much depressed in spirits, disinclined for active exercise, and had periodically been attacked with what he called "the strangest pissing fits". These came on suddenly when in church, whilst out walking or riding, and the amount which he passed at a time was very great. He had not observed any change in appetite; had no thirst, and was, he thought, of his average weight. He did not know under what medical treatment he had been, and ate and drank moderately of anything which came in his way. On examining his urine, I found it of a pale lemon colour, having a fruity smell, and a specific gravity of 1038; it contained a large amount of oxalate of lime in octohedral crystals, and showed abundant evidence of the presence of sugar with the usual tests. I thought of a trial of codeia. I wrote a prescription for pills, each containing four grains of codeia and one-twentieth of a grain of sulphate of strychnia; the patient to take one night and morning. The diet and everything else were as usual. The chemist to whom the prescription was sent very properly called on me, saying that he feared I had made a mistake, as the dose seemed to him excessive; but, as Dr. Gregory (quoted in Squire's *Companion*) had not found it so, I asked if he obtained his codeia from a reliable chemist; and, learning that he got it from Messrs. Smith of Edinburgh, I told him to make up the pills as ordered.

On the following morning, at 10 o'clock, I found my patient standing at his hotel door. He asked me if he might accompany me in my round, and away we went. I began to think codeia in four-grain doses must be a very mild agent indeed; but, on questioning my friend, I discovered that the pills had arrived too late for him to take one the previous evening, and he only had swallowed his first half an hour before I found him that morning. By and bye, he said, "I feel uncommonly jolly, as if I were up to anything. I have such a genial glow all over me". We walked together for two hours. He then left me to write letters. As soon as he began to write, he observed he did not see the letters distinctly. Suddenly, his sight failed him; he felt the room going round with him, and he made for the door, got into the open air, feeling very bewildered, but directing his steps to my house; he knew he met two ladies, recognised their voices, but could not speak to them. At 1.30, I found him in my study, just four hours after he had taken the pill. He was standing, holding on by the back of a chair; he had a terrified look; was exceedingly pale; sweat was standing in large beads on his forehead; his pupils were slightly contracted; the pulse at the wrist was scarcely perceptible; the surface of the body was cold and clammy; his voice was reduced to a whisper. I asked, "Have you vomited?" "Only a mouthful." "How do you feel?" "Sick as death." I at once gave him a tumbler of hot water with brandy and ammonia; this he at once ejected. I repeated the dose in five minutes, and made him lie flat down, wrapping him in warm rugs. In half an hour, he showed signs of improvement, said he was in no way sleepy—just terribly sick, as if he had smoked a lot of bad tobacco. He remained in this state till ten at night; during all this time, if he attempted to move, he began to retch violently. I got him to bed, applied hot bottles to the feet, and covered him well over with blankets. He passed a wretched night, slept none, and was slightly delirious. He got up next morning at nine o'clock, feeling still very sick and ill. His pulse was 56; the surface was cool; the face pale; the pupils much contracted. He had passed about six ounces of urine. He could eat nothing all day. Late at night, he took a cup of tea and some dry toast, and went to bed, slept well, and rose, feeling quite himself, in the morning. I examined his urine of the previous night and morning; he had not passed much. Its specific gravity was 1018; there was no sugar; oxalates were still plentiful.

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* Read before the Leeds and West Riding Medico-Chirurgical Society.

I told him of the mistake I had made; that I wished him to give codeia a fair trial, and that I would reduce the dose to one grain; this proved too much, so I had to reduce it to half a grain. This he has taken night and morning for two months. There has been no return of glucosuria. About the end of December, he wrote:—"Since you nearly did for me, I have only had one slight attack of diuresis, and that, I think, was brought on by exposure to cold. I consider myself quite well now." His medical attendant, Dr. Wilson of Alnwick, has since written me, confirming the above report, and stating that, in his opinion, the case was one of those transient forms of glucosuria which we occasionally meet with, arising from some disturbance of the nervous system. In this I fully concur, at the same time as his brother had so recently died from diabetes, I thought it right to persevere with the treatment for a considerable time after the sugar had disappeared.

In the discussion which followed the reading of this case, I was struck with the general opinion held, that codeia depended solely on the presence of morphia for its effects. Is it so?

The symptoms I observed lead me to infer that, as a therapeutic agent, it forms a connecting link between morphia and nicotine. First, we had a short period of decided vascular excitement, with consequent increased nervous activity and power common to both; then followed a period of depression, with symptoms equally common to both—dimness of sight, nausea and sickness, cold clammy skin, muscular debility, and a manifest and persistent "slowing" of the vital functions. On the other hand, we had no stupor, not even drowsiness; no headache, as with opium; no vomiting, no increased alvine, vesical, or salivary action, as with tobacco. In thirty-six hours, the patient had completely lost all his disagreeable feelings, and was free from all signs of having been poisoned by codeia.

A NEW METHOD OF ADMINISTERING THE MINERAL WATER OF THE ROYAL LEAMINGTON SPA.

By JAMES THOMPSON, M.B.

The visitors to a spa are comprised in two classes: those who can frequent the different pump-rooms, and there drink their quota of water direct from the spring; and those whose personal circumstances, or the nature of their maladies, prevent doing so. There is also a third class, who never come to the spa, but have the water supplied to them in bottles of the ordinary character.

It has often been noted, that the visitors derive much more benefit from the use of the water; and I think this is mainly due to their having the water as soon as drawn. Something must also be allowed for the change of air and scene, and the pleasure resulting from a visit to a town where every surrounding object is a thing of beauty. There must be benefit in exchanging the smoky dusty air of a city for the clear, bright, and health-giving atmosphere of such a town as Leamington, which is a town of gardens, and its sanitary condition closely looked after by competent authorities.

The water of the Royal Pump-Room Well, when drawn fresh from the well, contains nearly four inches of gas in each pint; it consequently is bright, clear, and sparkling, and by most people can be drunk without any feeling of nausea. When it has stood for some time, it loses its clearness and sparkle, and becomes dull, insipid, and somewhat unpalatable.

Now, if it be possible, the invalids ought to be sent to the pump-room for their supply; but if not, what are they to do? Hitherto the custom has been to send over-night for a portion. Sometimes it is carried in a bottle, oftener in a jug; and, when they drink it in the morning, they find it most unpalatable, and a larger quantity to produce normal effect is required than when fresh water is used. The quantity of bottled mineral water now used in England is enormous; and, from information I have received from good authority, I greatly fear that a large quantity of it is spurious.

There is in Leamington a mineral water manufactory on a large scale. The former owner prepared what he called the Leamington Seltzer Water; and, although there was a considerable sale, yet it did not answer, as it was prepared with the water of our weakest spring, and was further reduced in strength by adding distilled water. The present method of preparation was suggested by me to Messrs. Kinnard, and it is likely to prove a great success. The water of the Royal Pump-Room Well, our strongest water, is allowed to stand for forty-eight hours in covered vessels, and is then filtered through flannel; it is then placed in a machine, and carbonic acid gas is forced into it under pressure; and French syphon bottles are filled; these contain sufficient for three days, and remain charged with gas to the last drop. By this treatment, the water becomes most palatable, and can be drunk almost without any perception of its strong saline taste. It will keep good for any length of time, and retain its medicinal qualities. They are most reasonable in price, and can be obtained in any quantities from the chemists. I recommend that a small quantity of hot water be put in the glass before the dose be drawn off into it. A London physician, Dr. Granville, in his work on the *Spas of England and Germany*, laid the seeds of the present disregard of English mineral waters, and drove numbers to the continent. This was suicidal policy—killing the goose that laid the eggs. Now London men praise German springs, and send numbers thither in search for health, which they might with advantage find nearer home. If they cannot come to us, by this method we can send mineral water to them, with the certainty that its virtues are preserved, and that the great medicine of Nature is supplied to them in a pure and unadulterated state.

CLINICAL MEMORANDA.

SIMULTANEOUS EXTIRPATION OF THE EYEBALL, AND OPERATION FOR CATARACT AND HARE-LIP, IN A MAN FIFTY-EIGHT YEARS OF AGE.

I am induced, by a perusal of Sir William Fergusson's interesting paper on hare-lip and cleft palate, to place on record a case in which I operated five weeks ago.

William Briggs, aged 58, of New Whittington, Derbyshire, was brought to me on February 26th, suffering from blindness from cataract in the left eye, the right having been lost from an operation for the same disease some time ago. In addition to this, the patient had an extensive gap about an inch and a half across in the upper lip, which invaded the left nostril, and was continued into a corresponding fissure in the upper jaw and hard and soft palates, the uvula being divided into two symmetrical halves. I at once, with the assistance of my friends Dr. Beverley Morris, physician to the General Hospital, and Mr. Fullagar of Leicester, who happened to be present, administered chloroform, extirpated the right eye, which was painful, removed the cataract in the left, and, after carefully paring the edges of the fissure, brought the two sides of the cheek into apposition by the insertion of long needles and sutures. The strain on the needles was very great; so much so, that my friends expressed great fears as to the result. The patient, however, made an excellent recovery; first-rate vision was restored, and the deformity completely removed. The integrity of the prolabium was perfectly maintained by preserving the lower edges of the flaps and bringing one over the other. The patient is now growing a moustache; and, with a glass eye in the left orbit, is scarcely to be recognised as the deformed sightless creature that he was a few weeks ago.

CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Honorary Surgeon to the Nottingham and Midland Eye Infirmary.

THERAPEUTIC MEMORANDA.

TREATMENT OF TETANUS BY CALABAR BEAN.

In reference to a "Case of Traumatic Tetanus successfully treated by Calabar Bean", reported by Dr. John Cunningham in the British Medical Journal of April 4th, I should like to ask one question. Dr. Cunningham gives us very careful notes of this interesting case, both as regards the symptoms, the dose of the bean given, and the general effects produced; but he unfortunately omits to mention whether the physiological effects of the drug were noticed, and if so, as soon as they were produced, whether the spasms were diminished both in frequency and severity. I think that it would be interesting to know this; as, if contraction of the pupils were produced, and, when this was so, the spasms became less intensified or ceased altogether, it would tend to teach us that the drug should be administered so far; but when the contraction was produced, and the tetanic condition not lessened, then the bean should be laid aside as not suitable for that case.

I remember seeing a case of traumatic tetanus successfully treated by Calabar bean in a provincial hospital (unfortunately, I have not the notes of the case), in which this was strikingly manifest. The bean was administered in increasing doses until the pupils were contracted down to a pin's point; and, as soon as this was so, the spasms ceased. They, however, recurred slightly upon the drug being left off, and when the pupils regained their normal condition, but were speedily brought under control upon the drug being again continued, which was done for several days following, diminishing the dose gradually. The case ultimately recovered perfectly. I may add that I have seen the bean tried in two other cases unsuccessfully; but in neither of these were the physiological effects produced.

Any drug used in the treatment of this terrible malady, after the administration of which recovery ensues, is hailed with joy by the profession; but if, after further trials, the result should not be equally satisfactory, it is often thrown aside as useless; and this may occasionally, perhaps, be due to our own neglect in not watching the effects of the drug sufficiently. I make this suggestion, as perhaps, in some of the cases in which Calabar bean has been used unsuccessfully, the physiological effects were not produced.

W. H. Jalland, F.R.C.S., York.

SELECTIONS FROM JOURNALS.

SURGERY.

Popliteal Aneurism treated by the Application of Ice: Recovery.—A soldier named Manoel F. dos Santos, aged 39, was admitted on October 1st, 1873, into the military hospital in Bahia, under the care of Dr. Constantin Machado. He had in the left popliteal space a swelling of the size of a hen's egg, which presented all the characters of aneurism; it was very painful, and prevented him from walking. The skin over the aneurism was hot, shining, and smooth; the patient said that he had a feeling of heat and tension in the part. It was intended to employ digital pressure, but in the first place to apply ice over the aneurism as a palliative. Accordingly, a bladder of ice was applied constantly for three days, being changed whenever the temperature approached that of the body. At the end of this time, the tumour was found to be solidified, the *bruit* which was at first heard had disappeared, and the swelling had much diminished. The pain, however, remained until the coagulum was absorbed. No other treatment was adopted, and the patient left the hospital on November 28th perfectly cured.—*Gazeta Medica da Bahia*, December 31, 1873.

Lumbar Hernia in a Child.—Dr. W. N. Campbell relates the following case in the *New York Medical Journal* for February. Thomas Whelan, aged 4, was brought to hospital on November 22nd, 1873, for the treatment of an abscess, as the father called it. On examination, there was found a convex curvature of the spinal column, at about the middle of the dorsal vertebra, which was first noticed by his parents two years ago, and which very gradually increased in size. Eighteen months ago, an abscess formed in the left loin between the crest of the ilium and the last rib. After attaining a considerable size, it was lanced by a surgeon in attendance, and much pus discharged therefrom. A poultice was then applied; and it continued to discharge up to the 1st of last May, at which time the poultice was discontinued, and the wound closed. One month following the closure of the wound, another tumour appeared, and gradually increased. The tumour was found to be situated at that point where the quadratus lumborum and latissimus dorsi intersect the external and internal oblique muscles. It was then about the size of a goose-egg, soft and fluctuating to the touch; tympanic resonance was obtained on percussion; and, upon performing taxis forward and inward, it was reduced, followed by a rumbling or gurgling sound, reappearing upon the patient's coughing or making muscular exertion. From these signs, it was diagnosticated to be a lumbar hernia, due, in all probability, to disintegration of the muscular fibres of the muscles, owing to the long continued discharge from the abscess. It was reduced, and a compress and bandage applied. The case was afterwards presented to Professor Mott, at his clinic at Bellevue College, and he confirmed the diagnosis.

Amputation by the Galvanic Cautery.—Within the last two years, Dr. Paul Bruns has performed twelve amputations of the limbs by the galvanic cautery; viz., eight amputations of the thigh, two of the leg, one of the forearm, and one of a finger. The use of the galvano-caustic knife did not prevent hæmorrhage during the operation, while the galvanic wire, when carefully applied, did so. To prevent hæmorrhage, the principal artery of the limb should be compressed, and the back flow of venous blood restrained by a circular ligature. Esmarch's method might be applied with advantage. The galvanic wire is most applicable in amputation by the circular method. The skin, having been cut through, is drawn back; the wire is then applied higher up, and the muscles and periosteum are divided; after which, the bone is sawn through. In the forearm and leg, the wire is passed by the aid of a needle through the interosseous space, and the muscles are divided in two portions. Towards the end of the operation, the current must be somewhat weakened, as the wire is apt to become red hot and cut through the tissues too rapidly. The large arteries must be tied after the operation. The eschar is very thin, but it affords security against secondary hæmorrhage. The shock, pain, and traumatic fever, were very slight in all the cases. The progress presented nothing remarkable; the danger of pyæmia did not appear to be less than after operation by other methods; and the healing process was slow. Bruns considers that the merit of the operation lies in the greater security against hæmorrhage and the small amount of constitutional disturbance.—*Archiv für Klinische Chir.*, vol. xvi; and *Wiener Med. Wochenschrift*, No. 14, 1874.

THERAPEUTICS.

Galvanisation of the Sympathetic in Typhoid Fever.—Glax (*Pester Med. Clin. Presse*, and *Medicin.-Chir. Rundschau*, March 1874) states that, in thirty cases of abdominal typhus under his care, whenever the temperature in the axilla reached 102.2 Fahr., he placed the positive pole of a constant battery of twenty elements on the third cervical vertebra, and the negative pole "on the upper cervical ganglion of the sympathetic nerve", and found "in nearly all cases a remarkable fall of temperature in the course of some hours". Glax believes that in this way the temperature may be reduced.

Local Treatment of Cavities in the Lungs.—In the *Berliner Klinische Wochenschrift*, No. 43 for 1873, Dr. F. Mosler stated that in two cases of advanced phthisis, with cavities lying near the surface of the lungs, he injected a dilute solution of permanganate of potash into the cavities. No reaction followed, and the general condition of the patients appeared to be at once improved. In another case, that of a man aged 49, who had for five years had bronchial dilatation in the upper lobe of the right lung, and who also suffered from amyloid degeneration of the kidney and intestine, he established a fistulous opening in the second intercostal space, and introduced a silver drainage-tube. The operation was not followed by any febrile reaction. There was an abundant purulent discharge through the tube, especially on coughing; and the patient's general health was improved. Some hæmoptysis appeared, which was restrained by the inhalation of a dilute solution of perchloride of iron through the cannula. After this, atomised carbolic acid and tincture of iodine were inhaled in the same way. The pus became more healthy and less abundant, and the pulmonary disease appeared to make no advance; but the patient gradually sank, and died four months after the operation. The inhalation of carbolic acid was continued twice daily to the last. The right pleura was adherent throughout, and at the upper lobe formed a thick almost cartilaginous membrane. The fistulous opening led into a cavity occupying nearly the whole upper lobe, filled with a yellowish creamy fluid; it was lined with a smooth membrane, presenting granulations at some points. The spleen, kidneys, and intestines were in a state of amyloid degeneration. —A similar mode of treating pulmonary cavities has been practised, independently of any knowledge of Dr. Mosler's contribution, by Dr. W. Pepper, Professor of Clinical Medicine in the University of Pennsylvania. In the *Philadelphia Medical Times* for March 14th, he describes three cases of phthisis with vomicæ, which he treated by injecting a few minims of a dilute Lugol's solution of iodine (four minims to an ounce of water). The operation was sometimes followed by transient cough and hæmoptysis. In the first case, that of a man aged 29, marked improvement in the patient's condition followed; the breathing was greatly relieved, the cough diminished, and there was some increase in flesh. In the other two cases, the result is not stated. Dr. Pepper says that the only point which is actually demonstrated by his cases is the possibility of puncturing and injecting pulmonary cavities, without producing mischief: the practical value of this mode of treatment is as yet uncertain. It appears to him that, considering the almost hopeless nature of some of the cases of lung-disease, the proof that a puncture may be made into the lung-tissue, and remedial agents brought into direct contact with the seat of disease, without any serious danger, calls for a patient trial of it.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, March 24th, 1874.

C. J. B. Williams, M.D., F.R.S., President, in the Chair.

ON AN IMPROVED METHOD OF ABSCISSION OF THE ANTERIOR PORTION OF THE EYEBALL. BY ROBERT BRUDENELL CARTER, F.R.C.S.

After mentioning the conditions calling for abscission of the anterior portion of the eyeball, and the way in which the operation once practised was improved by Mr. Critchett, the author related a case in which Critchett's operation was followed by sympathetic ophthalmia and loss of sight. He attributed this result either to traction upon the ciliary nerves in the cicatrix, or to laceration of one of them by one of the needles used to transfix the eye. In order to set aside these dangers, and at the same time to obtain a stump well calculated to carry an artificial eye, he had devised a plan of operating which was described. It consisted of uniting the tendons of the recti muscles by catgut sutures, and then uniting the conjunctival wound over them, no sutures being passed through the ocular tunics themselves. A patient who had been operated upon in this manner was exhibited to the Society.—Mr. **Higgins** said the usual plan at Guy's Hospital was to cut out the anterior portion of the eyeball, and then bring the conjunctival edge together; and they found this a better plan.—Mr. **Brudenell Carter** had had no experience of this, and did not think it would give so good a stump as that formed by the tendons, etc.

RECENT EXPERIENCE OF CHOLERA IN INDIA. BY JAS. MACKAY CUNINGHAM, M.D.

After some introductory observations on the importance of the cholera question, especially at the present time, Dr. **Cuningham** proceeded to remark on the special opportunities afforded by India for the study of cholera, and the great value of the information to be obtained there. He then entered into an examination of the evidence derived from the history of the epidemic of 1872 in Northern India. Two great points had to be determined—first, the influence of human intercourse in spreading the disease; and, secondly, the practical measures to be adopted for protection. 1. The evidence as regards human intercourse was considered with reference to the geographical distribution of cholera in India; the great areas of prevalence and exemption; the experience of the same tract in different epidemics; the endemic area, the seasonal and periodic rise and fall of cholera within this area; and the singular immunity of certain places. Further, with reference to this question, Dr. Cuningham dwelt upon the detailed evidence afforded by the history of one hundred outbreaks in 1872. There was an entire absence of all evidence of communication of the disease, and the previous considerations were fatal, Dr. Cunningham believed, to this doctrine. The epidemic was not propagated along highways of communication, and did not travel any quicker in these days of railways than it did in olden times. Singular evidence against the contagiousness of the disease was derived from the St. Peter's College outbreak, many cases having been sent thence into various localities without, in one single instance, disseminating the disease. The experience of attendants on the sick was against all suggestion of contagion, a small proportion of those only being attacked, and there was an absence of all evidence of contagion in regard to those who were attacked. As to indirect contagion, the facts bearing on the water theory, as illustrated by the outbreak at Peshawur and Mean Meer and other places, were wholly against its accuracy. Dr. Cuningham dwelt on the importance of local conditions in connection with the singular localisation of the disease, as illustrated by the outbreaks at St. Peter's College, and amongst the troops at Kussoulie, in the camps at Mean Meer, etc.; and he urged the necessity for studying these local conditions much more closely. The incidence of the outbreak as regards time among different sections of the community next received attention. 2. In considering the practical measures to be adopted to afford protection from cholera, the impossibility of carrying out an efficient quarantine was considered, and the great evils attending any attempt at it shown by the experience of Upper India on this point. The primary importance of sanitary improvements was next urged, and a strong opinion was expressed on the tendency of the contagion views to interfere with progress in this respect.

Dr. **Hardie** had had experience of cholera in Mauritius during two epidemics, and in both cases it had been imported by ships bringing coolies from Calcutta. In a previous epidemic, it was introduced in the same way, through the quarantine rules being broken. He did not think India was a good place to experiment upon cholera. In the epidemics he had seen, if there were immunity, he thought it was on the estates where the people were supplied with water from wells. He thought the water-streams were the great cause of its spread.—Sir **William Gull** was interested to find that fresh statements added nothing to what Dr. Baly had already said. He thought it was to be regretted that the report of the Royal College of Physicians was so little known and referred to. Occasionally water was a means of diffusion. During the last epidemic, a cholera-hospital was established at Whitechapel, under the care of Dr. Sutton. The disease never spread to the nurses or the attendants, for the reason, he thought, that, as soon as a patient entered, his clothes were taken away, the patient sponged with Condy's fluid, and the hair cut. He did not believe in the evidence of the contagiousness of cholera. He thought the statement that it was spread by the evacuations was a good working theory, as it acted by frightening people, but proof of it as a scientific fact was wanting. He believed it always came by ship, but sporadic cases were always met with before an outbreak. He referred to the outbreak of Asiatic cholera in Mr. Druit's farm in Surrey for poor children, in the epidemic of 1848. About half of the children died, and it was at first supposed that their deaths had been hastened by bad food, poison, etc., and Mr. Druit died broken-hearted on account of the way in which he was judged by public opinion. After a time, it was clearly seen that it was the beginning of the outbreak. At present, there was no scientific theory of the spread by contagion and evacuations. It was singular how heights above the sea-level had to do with the origin of cholera. Cholera did not descend streams, but ascended them. Sanitary improvement fortified the body against epidemics by means of good air, ventilation, and cleanliness; it also removed telluric influences, as damp, dirt, etc., and so improved the health of the people.—Dr. **Buchanan** thought the remarks made about cholera in the first part of the paper were equally applicable to fever, both typhus and typhoid. When Dr. Cuningham said he looked to India for evidence, he would ask him to look afresh at that brought forward in England. He did not think the circumstances in India were favourable for the investigation of cholera. If we wished to study measles or scarlet fever, would we go to a large place like London, or to a remote village, or to a place where its introduction is easily ascertained? Could outbreaks of yellow fever be as well worked out in the West Indies as the outbreak at Swansea was? With regard to the arrest of cholera, he thought by preventing filth from being out of its place we did a great deal. He regarded atmospheric influence and telluric influence as inoperative.—Mr. **Netten Radcliffe** said that, with regard to the contagiousness of cholera, and the so-called water theory, Dr. Cuningham's views were founded on fallacies. The "contagion" of which he spoke was not the "contagion" understood in this country; the "water-theory" had hardly the faintest resemblance to what was meant here by the term. Dr. Cuningham judged of the contagion of cholera as if it were operative in the same way as the contagion of small-pox, and were, moreover, some self-operative agency acting irrespectively of conditions. Such a doctrine of the contagiousness of cholera had no place in English teaching, so far as Mr. Radcliffe was aware. The very characteristic of etiological study in this country for many years, in respect to contagious diseases, had been, and still was, the determination of the conditions under which the particular contagions of the several diseases operated. To argue that because the contagion of a disease did not operate unconditionally, therefore contagion did not exist, was much the same thing as to argue against the germinative power potentially present in a potato or a grain of wheat, because germination did not occur and growth follow except the potato or the grain of wheat were placed in certain well understood conditions. The water-theory was used to explain certain facts of localisation alone. Dr. Cuningham spoke of the theory as inconsistent with the geographical distribution of the disease, as being negatived by the fact that bodies of troops widely separated from each other, and drinking from different sources of water, had been nevertheless severely attacked with cholera, and so forth. Such arguments proved that Dr. Cuningham was not dealing with the water-theory understood here, but with something far different. Even in one particular instance—the St. Peter's College, Agra—where an outbreak had occurred which would have led most English inquirers to make minute investigation into the sources of the water-supply, such inquiry, so far as the detailed report permitted a judgment to be made, had missed the very point to be inquired about. Mr. Radcliffe referred briefly to Dr. Cuningham's observations as to the absence of any evidence in India that a quickened traffic had accelerated the movements of cholera, and pointed out that the data given did not contain the materials for a judgment. He asked if the facts could be set aside that were obtained from the study of the great migrations of 1832, 1848, and 1865, in which, for example, the question of time of carriage from East Europe to America was a simple matter of observation. The first cargo of cholera carried to America in 1832 was carried in a sailing ship; the first cargo carried in 1866 was carried in a quick-sailing steamer.—Dr. FAYRER did not think that Dr. Cuningham had shown a desire to underrate English labour. He was surprised to hear that India was not the place to study cholera. Dr. Cuningham had not dealt with opinions, but had mentioned facts. He believed that cholera was due to some "influence", not a poison. With regard to contagion, he thought there was as much evidence to prove it as there was against it.—Dr. BURDON SANDERSON did not agree with Dr. Buchanan that India was not the place to investigate cholera; for, as to the question of etiology, it was better to proceed by the law of exceptions; but then cholera was so widely spread that its existence in a place was not an exception, so it was difficult to apply the rule. But Dr. Cuningham rested on the immunity of places; that was the exception. So those who asserted that personal communication was the cause influencing the spread of cholera in India, and those who maintained that cholera spread up a stream, and spread downwards by contaminating the water, both had to contend with the absence of cholera in places. He thought cholera was a disease of local origin, and, to go further, it attached itself to organic matter in a state of decomposition.—Dr. CUNINGHAM, in reply, said that, with regard to the etiology of cholera in India, there was an area in Lower Bengal where cholera was constantly present, and there were rises and falls of the disease, and beyond that area there were isolated cases, and epidemics prevailed. The supporters of contagion should take up these facts and grapple with them. As to Dr. Hardie's epidemics, supposed to be due to human intercourse, we had only to put against it that emigrants had gone from Calcutta to Mauritius for many years, and cholera was always present at Calcutta, and yet the epidemics of which Dr. Hardie spoke were the only ones which had occurred. The history of cholera in India was that it ascended streams, and did not descend them. The work of Sir W. Gull and Dr. Baly was well known in India, but he thought it was very little known in England. The doctrine of contagion was not harmless; all that was said of the water-theory showed that there was no evidence in support of it. Dr. Buchanan said that the circumstances in India were not favourable for the study of the disease; but he (Dr. Cuningham) thought that it was quite as easy to do this in India as in England. Whether the water-theory was the means of contagion, usually or rarely, was a matter of no importance; the great question was, was there evidence of a single case in India or England that cholera spread by the evacuations of cholera patients? The evidence he had brought forward with regard to the outbreak of cholera was as good as any evidence for any outbreak of disease. Twelve or fifteen compounds had been attacked on or about the same day, and the people drew their water from different sources. With regard to the diffusion of cholera to-day, as compared with that of former days, depending upon the increased facility of communication, he would state that in 1817 a wave of cholera passed over India, and it took about seven months; in 1870, another wave passed over India, and it took three years to travel from and to the same points; though the means of traffic by rail, good roads, etc., were multiplied manifold. With regard to the outbreak of cholera at St. Peter's School, Agra, he would state that, of twenty-four day-scholars who drank the same water, all escaped except one, and he was the only one who resided in the same enclosure. Here, he thought, no water-theory could explain the circumstances.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, MARCH 11TH, 1874.

GAVIN MILROY, M.D., F.R.C.P., Vice-President, in the Chair.

On Errors in the Usual Method of Investigating the Causes of Epidemics. By Inspector-General ROBERT LAWSON, F.R.C.S.—The following is a summary of the points taken up. 1. The inductive method must be followed in epidemiological as in physical investigations; but we cannot isolate the various factors, nor determine their properties by experiment independently of the particular combination before us; we can only infer the existence of the cause from the appearance of the resulting disease, and have no certain knowledge of their existence in time or place unless we see the disease arise. 2. In epidemiology, negative evidence is as important as affirmative in guiding to correct conclusions; for if any factor necessary to the result have been overlooked, this can only be detected by comparing closely the antecedent in the negative instances with those in the affirmative. 3. It is necessary to embrace the action of what have been denominated "epidemic causes", or the epidemic constitution, among the influential factors in the spread of epidemics (this was illustrated by the late outbreak of small-pox). 4. It is often necessary to exclude the operation of local causes to permit of a correct conclusion being arrived at where there may be a question of importation (this was illustrated by the yellow fever in H.M.S. *Bristol* at Sierra Leone in 1866). 5. It is necessary to decide the light in which cases of sporadic malignant cholera are to be viewed when there has been no trace of importation, before any certainty can be attained as to the various local and personal causes assigned for that disease when in the epidemic form. The author said that investigation as to the causation of disease involved fewer constants and a greater number of variables than similar operations in physical science; hence a stricter adherence to the inductive method was necessary. Probabilities and possibilities, without the basis of certainty, should not be set forth as well established truths. When evidence supported the combination of antecedents required by hypothesis in the causation of disease, it was called positive; and negative when the particular combination was not followed by the disease. This exception should not be looked upon as of less value than the other instances, for the hypothesis might have omitted some essential factor, or have included some non-essential; and to elicit these, the antecedents both in the positive and negative instances must be compared. The one was not less important than the other, and neither could be neglected if scientific accuracy were to be attained. Even in so contagious a disease as small-pox, some general cause beyond the introduction of the virus was required to account for the periodic recurrence of epidemics. This pointed to some factor of occasional operation, extensive enough to embrace France, Germany, Holland, England, and Scotland, at the same time—namely, at the end of 1870. Philadelphia and New York suffered in 1871. Yellow fever would not spread in H.M.S. *Bristol* in the absence of local causes. This ship arrived at Sierra Leone in December 1865, with a crew of 535 men, and anchored five miles from the coast. Yellow fever had appeared in the *Isis*, receiving ship. Four officers and 112 men were sent from the *Bristol* to assist in removing the *Isis* to a healthier anchorage; they were thus occupied on December 28th and 29th, but returned to their own ship for the night. Fever commenced among the men of this party on December 31st, and by January 6th, 37 were attacked, of whom 21 died from the 3rd to the 10th, and subsequently two others at Ascension. Those persons who only visited the *Isis* were also attacked, but none among the more than four hundred on board who did not were seized, not even one of the 24 men employed as nurses to attend on the sick, nor either of the five medical officers. This fever, so contagious in the infected locality, lost this property when the ship was removed from it. Sporadic cholera generally, without rice-water purging and suppression of urine, sometimes had both these characters, yet did not become epidemic. Until it could be shown that essential difference separated these cases from those met with in an epidemic, no theory as to the cause of the latter which did not also account for the former could be considered as scientifically correct or as entitled to confidence.—The CHAIRMAN said that the questions taken up by Mr. Lawson lay at the very root of all investigations in epidemiology. The foremost difficulty was to obtain exact and unmistakable evidence on which to found first conclusions. The present session had given an instance of differences remaining to be settled. The excremental pollution of water had been very generally accepted as a main cause of cholera, and the channels and media likely to be thence infected were chiefly searched to disclose the secret of its spread; but now, after all the evidence of English writers, Dr. Cuningham said that there was no sufficient ground for maintaining this view. Again, did we not too frequently imagine that the existence of one case of an epidemic disease necessarily comes from a preceding one, so that we did not proceed to inquire how this case arose, but to search for the one it came from?—Dr. BUCHANAN said that some confusion existed as to the terms positive and negative evidence. Negative evidence meant evidence to the contrary, and not absence of all evidence. The two terms expressed but one thing, the amount of belief that ought to be commanded by the subject. Epidemiologists had the advantage of working from a larger number of facts than was possible in many branches of medicine; and it was not necessary to base conclusions on the opinions of the teachers of the time. By attaining to the highly probable, the objects of research were satisfied without seeking for absolute certainty; between the probability being so strong as to be almost certain and the probability being so slight as to be extremely remote, lay our positive and negative evidence: they merged into each other. The highly probable was the positive evidence, it extended from even chances to affirmation; negative evidence meant only less probability, and extended from even chances to denial. It was most desirable to get a measure of these probabilities. If, in the one case, we could say the probability was six to one, and in the other, one in five hundred, we should have a much better idea of what the evidence ought really to be called. Then, as to the word "cause", what was often so set down might be considered as a factor in a cause, or one of the causes; or we might be content to consider it as a frequent antecedent, and be able to state with accuracy how frequent. Evidence as to causation more particularly might be dealt with in this way, and could be worked out with a rather more advanced mathematics than was at present available in the course of medical studies. In reference to some investigations in which this line of examination was followed, the caution was given that a spurious appearance of accuracy might be arrived at unless the mathematical processes were applied with the utmost strictness as to logical premises. Before conceding the existence of "epidemic constitution" as a cause of disease, allowance ought to be made for a number of better understood conditions. When measles, introduced into a remote island, attacked every inhabitant under the age of thirty, nobody would talk of this "epidemic constitution" after they had heard the story that, thirty years before, there had been a similar introduction with similar results, and since then there had been no importation of measles; and similarly with regard to the epidemic of small-pox now adduced in illustration of this so-called "constitution", too little account appeared to have been taken of the accumulation of susceptible individuals in the intervals of epidemics. Dr. Buchanan directed attention to this consideration as furnishing ample reason why infectious diseases should, after a period of quiescence, attack an increasing number of people until epidemic proportions were attained. It made all the difference whether the dozen people who were exposed to infection from each particular patient were or were not themselves susceptible. Fewer persons would be susceptible immediately after a general outbreak of the infectious disease; more persons would, for various reasons, be susceptible a few years later: new people would have been born, new people imported, old personal immunities have been worn out; and, in the case of small-pox, a new accumulation of unvaccinated persons would have grown up. There was more difficulty in understanding why an epidemic should ever cease until it had attacked every member of a community; but even this seemed capable of at least a partial explanation, if we took into account the reduction which the disease itself was continually effecting in the numbers of the susceptible, and the fact that there must be some individuals whom infection never reaches, or who were capable of resisting it. After the influence of well known circumstances like these have been measured and allowed for, then the supposed epidemic constitution as a cause of disease may arise for consideration.—Mr. NETTEN RADCLIFFE differed widely from Mr. Lawson in the view he took of induction as applied to epidemiology. Instead of regarding "inference" and "probability" as of slight value, or despising "theory" and "hypothesis", he looked upon these as necessary parts and instruments of research, and upon an "induction of probability" as a sufficient result. Much of the so-called "negative evidence" against the excremental pollution of water in Dr. Cuningham's report was valueless. Only one instance purely negative was recorded; in other cases, evidence was not found, for the simple reason that it was not looked for with the care necessary for its detection. As to the relationship between cases of sporadic and epidemic cholera, it was not necessary to suspend our researches into the conditions under which the two forms of disease were developed, until their precise pathological relationship had been determined.—Dr. GRIEVE gave instances of increased individual susceptibility to small-pox, and showed how the war in France and the siege of Paris had sent over to England many infected persons.—Dr. DICKSON called attention to the distinctions recently drawn between malarious and contagious yellow fever, and thought the cases in the *Bristol* differed from those in the well known instance of the *Eclair*.—Inspector-General LAWSON, in reply, said many of the remarks made had no direct bearing on the points he had submitted, and he would confine his observations to those which had. The evidence as to the fever in the *Eclair* did not permit of the influence of local causes being separated; consequently it was quite unsuited for settling the question of the contagiousness or non-contagiousness of yellow fever. As to the suggestion of Dr. Dickson, that the fever in the *Bristol* was what has been called "malarious yellow fever", and not the "specific yellow fever", Dr. Aitken, who had specially dwelt on this distinction, said that in the former the urine was not suppressed, and continued free from blood or albumen, while he gave these as characteristic signs of the latter, and, in the cases in the *Bristol*, these were prominent features. These, with black vomit and the rapid course and high mortality of the disease, left no doubt of its having been true yellow fever, though in some cases it presented remissions, and it showed no indication of contagion in the *Bristol*. The opinion of Drs. Buchanan and Grieve, that the diffusion of small-pox in 1870 in this country was chiefly dependent upon increased susceptibility, though complemented by the statement of the latter, that the outbreak in London, which was characterised by an unusual number of hæmorrhagic cases, was due to importation from Paris previously to the siege, quite failed to account for the prevalence of the disease in the south of France early in 1870, or for its extensive spread and nearly simultaneous increase, in the British Islands, Holland, north of France, Germany, and the United States, as well as elsewhere in the end of 1870 and early in 1871; while the hæmorrhagic form was as widely diffused. To explain these facts, one or more factors of equally extended operation were required; in short, what had been called "epidemic constitution". Mathematics could not be applied to the investigation of epidemics, until some hypothesis had been found as to the peculiar relation to be investigated; and, if the hypothesis were erroneous, the result would be equally so, and would only lead to further error.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, APRIL 7TH, 1874.

SIR WM. JENNER, Bart., M.D., F.R.S., President, in the Chair.

DISCUSSION ON CANCER.

THE discussion on Mr. Campbell De Morgan's paper on Cancer was resumed.

Dr. MOXON: The course of the debate, hitherto, Sir, has been rather surprising to me, because of the sweet and pleasant general agreement that one has found pervading the atmosphere. I could only compare it, not certainly to opponents bringing forward in any form opposite views, but rather to rival painters representing the same scene, one pointing to one part and saying, "This is preferable", and another indicating another corner, and saying, "Nay, direct your eyes here". But it was not with that impression that I approached the subject of cancer. To my mind there was something to discuss, especially as to the origin of cancer. It is true, when Mr. De Morgan brought forward his very eloquent paper, he did embrace views in a sort of Pantheon —if I may so speak—almost disregarding their natural oppositions and incompatibilities. I was scarcely prepared to find all the subsequent speakers equally bringing forward the opposite sides of the question as though they could lie down together. It may be crudeness and incapacity on my part to perceive the ways in which opinions may shade into each other and become identical, however opposed, as red and blue are naturally; but to me it has always appeared that the local and the general view—localism and generalism—are essentially opposite, that they are not compatible, and cannot be held by the same person at the same time. As I understand the question, it may be put in this way: Does the first cancer that appears in the patient's body generate the cancers which appear afterwards? does it precede them in every way? or, on the other hand, is there a general state of the whole system which is ready to put out cancer anywhere, and puts out the first in the same way as it afterwards puts out the second and third? It seems to me that no one can hold those two views at the same time; one of them excludes the other. But then it might be that that opposition, although sharply definable, is nevertheless unimportant. Surely, Sir, we cannot conceive that. It must be that that is the division under which all practical surgical differences must range themselves. If a cancer rise as a little patch in a person previously healthy, and then expand itself throughout the frame, so that, poisoned by that one spot, the life of the patient soon becomes hopeless through the effects of that spot upon remote parts, then surely the surgeon will have recourse to the knife and as quickly as possible remove the first spot that appears. And if, as Sir James Paget says, after removing 500 he finds 499 recur, then he says "Let me remove it earlier". He would even, like the Israelites of old, have published abroad the first sign of such a scourge, that people might, from the very first moment of its appearance, come forward and let the surgeon perform. On that view I can quite understand Mr. Jonathan Hutchinson's strong speech. He seems to me to have been the only pure localist who has as yet given us his opinions; and in his readiness to come forward he spoke like a good surgeon. If I remember rightly, he argued in favour of his view because it would lead us to operate, although pathological faith without works is dead. Taking the other view, and supposing that the general system is first charged with cancer, and that all the cancers that appear are but out-puts of this general cancerous store, why should we operate at all? Should not we rather leave what exists alone, lest, by removing it, we should bring about a worse evil? That surely is the great question that we are here to discuss; and the distinction between those views is absolute, and cannot be bridged over. You must either take one side or the other of the question, or you must drop it altogether. But unfortunately there is another road, and you are not obliged to drop it altogether. You may adopt some doubtful ambiguous word, and cover with that word the essential difference that there is between those two views; and a word has been brought in which has largely played that part in the discussion—that is, the word "constitutional". I heard in all the speeches the word constitutional used as if it were opposite to local. Now, Sir, I must protest with all my power against such a use of the word. It has been gravely argued here that if, when any person is subjected to a common kind of injury, his tissues react in an unusual way, he must have a constitutional peculiarity. That argument is either a truism or a fallacy. If by it you mean that, when a part subjected to an ordinary injury, if it act peculiarly, it must be peculiar; that is a truism. But if you therefore conclude that the whole frame would, under similar circumstances, act in the same way, then your conclusion is a fallacy. There is no opposition whatever between constitutional and local. What, for instance, can be more constitutional than one's great toe or one's liver? What is constitution but (as I understood Sir William Gull to put it) the putting out in different localities things which were enfolded in the germ? Thus, to become local is really the very essence of being constitutional. I would even say that nothing is constitutional that is not local. But, without dwelling upon that, let me say that I am only objecting to the use of the term constitutional, which, I conceive, must haze into limbo the whole question while we continue to use it in that ambiguous sense. But there is a good question before us, and it is this. Drop the word "constitutional" altogether; recognise that cancer is a disease which ultimately kills by becoming general, and which at first is local; and then the question is, Does the general condition precede and cause the local, or does the local condition precede and cause the general? Both of these views cannot be true; and the word constitutional, in its vague double meaning, had better be dropped out of the question altogether. That, I say, is a good question, because a realisable and a soluble question; and, although we may not be able to solve it now, yet I hope that the good and proper work of this Society—the bringing forward of items of fact which shall lead up to some conclusions—may tend in that direction, so that in time this soluble question may be solved. At present the mode in which the question is treated I will describe in this way. Some hold to the local view and others to the general; never allowing it to appear (through a politeness or gentleness to each other's views) that there is any actual divergence between them. One takes up his position for the local view, another for the general view, and each tries to press the origination of cancer for his own point, the local or the general. So they resort to a competition who shall show the earliest appearance; whether the localist shall show the earliest appearance in the spot, or whether the generalist shall show that cancer appears earliest in the whole frame. Now, I believe that cancer appears earliest in a certain locality, and that the danger of cancer consists in the extension from that locality; that cancer becomes general and fatal through the influence of a part first cancerous. In other words, I am strictly a localist. I will, therefore, very shortly place before the Society those arguments, or those facts and bearings, which, I think, are capable of supporting that view. No one can be cognisant of the interesting facts that have been from time to time brought forward in this room without following one easily through these propositions; first, that cancer spreads in the part (we are not likely to forget that); secondly, that cancer runs along the lymphatics to the glands; thirdly, that cancer makes its way along the blood-vessels to organs remote, through the medium of the circulation. These are facts which are certain: there is no hypothesis about them. Let that thought govern your ideas, and then what room is there for any notion that a general state of cancer precedes a process of that kind? If it be at all probable that cancers come in spots, run along the lymphatics, and go away to remote parts, where is the room for any general carcinosis? I will put it in this way. If any one, conceiving himself to be a generalist, allow me this, that, whatever is pervading the general system, something must have happened in a part, and through that something which has happened in a part the general system is afterwards affected; that it is the affected part and the subsequent results on the general system that cause and constitute carcinosis,—then, I say, he is a localist, and however great he might be, and however eloquent, I should claim him as such. I said that cancer extends in the part, runs along the lymphatics, and goes to remote organs in the circulation. But there is another kind of evidence for which, if I had Sir James Paget's eloquence, I should certainly claim a very special kind and form of recognition from the members of the Society. I should like them to approach it in a peculiarly receptive attitude of mind, because it wants some delicacy to feel all its exquisite bearings. Let me give this as an instance. A man gets a cancer in his rectum; you examine the cancer, and you find it is a big one. He has also cancers in his liver; you examine those and you find they are little ones. The great cancer in the rectum is obviously prior in time to the minute development in his liver; the one certainly precedes the other: but, when you come to examine the cancers, what do you find? You find that the rectum cancer is rectum-tissue. I am sure I may appeal to the experience of many pathologists here when I say that we do find cases of cancer in the colon and rectum whose structure is really that of the Lieberkühn's follicles of the mucous membrane of the gut. Well, that would not have been wonderful if, when we went to the liver, we found that the cancer exploding in the liver had taken the shape of liver-tissue just as, when exploding in the rectum, it had taken the shape of rectum-tissue. The generalist, if he think that there be any general state of cancer which comes out locally according to the nature of the part, must expect to find rectum-cancer in the rectum and liver-cancer in the liver. But, instead of that, I have repeatedly seen rectum-cancer in the liver. I do not hesitate to say so—I have seen Lieberkühn's follicles of exquisite construction in the liver itself. Lest any one should doubt me, and think that I am drawing on my own imagination, I will bring forward a very common instance. Ten months ago, there was a man in Guy's Hospital under my care with a monster tumour in the arm near the shoulder. The poor fellow went to the bad, and died. When we examined him, we found in his lungs other small tumours. The bony tumour of his arm proved, on microscopic examination, to be osteoid chondroma, according to Virchow's nomenclature; the lumps in the lungs were bony too. There was a vast mass in the arm, and there were little bits in the lung. Obviously, the arm-disease had preceded the lung-disease. And what had grown in the lung? Why, bone; and it was in bone that the disease commenced. If it were a general cancer, pouring out cancer in the two parts, developing according to the part, we should have had lung in the lung, and bone in the bone, instead of bone in both cases. Looking at these facts, how can the conclusion be resisted, that it was in bone that the cancer arose, and that the cancer must be interpreted in this way, that it was the acquisition on the part of the bone of a power of instilling its own nature upon the lung? I should like to use Mr. Simon's words: they are words that I have used for a long while. He spoke of a sort of spermatic influence; and the term is a very good one. It is more like generation than anything else. The bone became spermatic to the lung, so that it sent off its elements and colonised the lung with bone; and the lung became bone through a kind of spermatic influence from bone. I am putting it very hardly. I say, then, that another very powerful argument in favour of the local origin of cancer is this, that the first cancer that appears has a likeness of the part in which it appears, and that secondary cancers arising from the generalisation have the likeness of that first cancer; and those who doubt that they came from the first cancer must show us why they have that likeness. Then there is another point which ought to be specifically, boldly, and clearly stated. I have here a little drawing, which I made in 1866, to show that in the process of cancerous change a transformation of the individual elements is traceable. I mean that when, as in that instance, liver becomes cancerous, you can see a liver-cell turn into a cancer-cell. Of course, you cannot watch the individual liver-cell. If we had the universal periscope, we might, no doubt, see what actually took place; but we are obliged instead to see a liver-cell as one perfect thing and a cancer-cell as another perfect thing, and then, by our mind's eye, to perceive the gradations between the liver-cell and the cancer-cell—gradations so exquisite that you cannot see where any break in nature occurs. That is surely a very strong argument. If you can find, as in this case, that the process extends from cancer to the liver, and if you watch the change and see the cells changed as they stand, that is a strong argument in favour of the whole process being due to the influence of the original cancer. But what have we as opposed to this, which I think a very sufficient argument in proof of the local origin of cancer? For I would say that, if those facts can be proved in reference to all cancers, then there is no room whatever for any suggestion of general carcinosis; it takes the wind out of its sails; it is not wanted. When you prove that from the first cancer all that we call cancerous change and cancerous generalisation does arise, there is no room for any other hypothesis; you have occupied the field; and whoever comes with another hypothesis, knocking at the door, is too late. But, unfortunately, it is not all so clear as that, because, through the necessary imperfection of many *post mortem* examinations, cases do continually crop up in which all this cannot be made out; and thus there exists a sort of limbo of imperfectly observed cases upon which the man who believes in general carcinosis may seize; he may then bring forward his arguments in support of that view, and try to invade the whole field from that doubtful corner. And what are his arguments? I do not like to touch upon the arguments which Sir James Paget so beautifully brought forward. I was delighted, as we all were, with his speech; and I was so impressed by it for a time that it seemed to me that cancer must come not only generally but even out of the blood. I came into the Society with no such belief, and it was nearly a fortnight before I could even venture to take up the paper and look at Sir James Paget's speech to see what it really was. It then seemed to me (it was a poetic moment, and I was by the sea-side at the time) that it was like a beautiful cloud of a dying faith, and that when one held the cold hand of reason against it it condensed into a very few drops. This is, shortly, all that Sir James Paget advanced. He said that cancer is hereditary; and then, in the next breath, he said, "so also are enchondromata, fatty tumours". Well, we dispose of that at once by saying this—inasmuch as we are in search of a distinction between the simple tumours and the cancerous, what is the use of bringing in any feature which is common to both? How can what is common to both explain the peculiarities of one? But then Sir James Paget says, it is not only hereditary, but it is hereditary in a very peculiar way; and the peculiar way was this, if I remember rightly, that the cancer does not only strike upon certain parts, but it spreads itself over a variety of organs in the organisations it successively attacks in the family. Now, I am obliged to shuffle a little in meeting that. First, let me say, I was not in the least prepared to find that Sir James Paget had come to the conclusion, that of every three persons who have suffered from cancer, one, at least, has been hereditarily tainted; because, that very morning, I had been in conversation with my distinguished colleague Mr. Birkett on that same point, and he left me with this impression (which I trust he will take the opportunity of contradicting if I have misunderstood him), that with all his care and pains—and we all know what his care and pains are—after searching through the family history of numerous persons who had come to him with cancer, he was not able to say with any confidence that cancer was specially hereditary at all. This is very astounding, but not more so than that Mr. Erichsen and Mr. Hutchinson should say they never saw pyæmia in private practice, and that Sir James Paget and Mr. Hewett should declare that they had seen it repeatedly as frequently as in hospitals. This leads us to the conclusion that individual experience is not to be accepted as establishing an universal proposition. I regret if I should seem to say anything in disparagement of the importance and accuracy of Sir James Paget's observations; nothing could be further from my thoughts; it is only in justice to my position that I feel bound to say what I do. But I have another thing to mention. It will be in the recollection of all the members of the Society that, on the first meeting of the discussion, Mr. Hutchinson drew attention to the very interesting fact (I think he also claimed Mr. De Morgan as having observed it likewise), that warts appear in cancerous families. Well, if warts appear, and that is a new thing just observed—and we are still in a developing world—may not fatty tumours soon appear, and may it not likewise be shown that sarcomata, and I know not what, are also found in cancerous families? If, so, then our proposition will take this form; that equally with non-malignant and malignant tumours you have this peculiar development in all parts. Then I shall lay down my syllogism again, and say, what applies equally to the non-malignant and to the malignant can in no degree explain the peculiarities of the malignant. The last point that Sir James Paget brought forward was that cancer must be general because it so constantly recurs. Well, but the localists pride themselves on the perfection with which they not only explain the recurrence, but actually trace the way in which it does recur, and show how you can make it recur—by leaving a little bit in when you operate, by leaving a patch of gland, by operating so late that the lungs are already affected, and so forth. Surely that cannot be an argument in favour of the general origin of cancer—I mean of its arising from the general conditions, when the localists profess to be able to explain the whole of it. Sir James Paget said that cancer must be general, because a chance wound or injury produces cancer in parts in the same way, or by an analogous process with that process in which we observe that tubercles, syphilitic or other admittedly constitutional conditions, likewise develop from unusual injuries. That is a long sentence; but what I mean is this, that there is such a parallelism between tubercle and cancer that, if you hold tubercle to be constitutional, you must also hold cancer to be so. Now, sir, it is not three years since Mr. Simon, sitting in that chair, showed us proofs that tubercle arises locally. And have we not had specimen after specimen brought forward to prove that people get tubercles through old local patches of dirty, cheesy remainders, bronchial abscesses, duodenal ulcers, and so on? All kinds of odd evidence we have had heaped up to show that tubercle comes as an accidental development from a really local disorder. I should be much more inclined to go with Mr. Simon's strictly philosophical view that he gave us in his most able and philosophical speech, when he classed cancer with tubercle. For myself, I would throw cancer, and syphilis, and tubercle together as disorders, which become generalised from a local origin, and very rapidly become so generalised. I am very sorry to have occupied the time of the Society for such a long time, but before closing my speech I should like to point out how wide are the bearings of the question we are discussing. Especially it strikes me that there is a most interesting and important analogy to fevers, the great epidemic fevers. Is any member of the Epidemiological Society present? One hears so little of the epidemiology of the epidemiologists, that one would be delighted if they would come forward and explain to us whether, when in the body corporate fever bursts out, it arises in any local unit of the community as a distinct disorder, and spreads from him contagiously, or whether it infects the body corporate as a body, and bursts out in Jones and Thompson, and their successors, as out of the general into the particular. Surely there must be a close analogy between the two questions. How vague an analogy one can, of course, easily see. I can, in my own mind, feel how long it must be before we can adopt a general formula that will solve these questions, but I feel satisfied that when the solution of the question comes, some general law governing the whole must be discovered.

Mr. ERICHSEN: I have listened with the greatest interest to the remarks that have been so admirably put before the Society by Dr. Moxon, a great number of which, I confess, were quite new to me, as I daresay they are to many members present, and have tended to confirm in my mind the opinion that I have always entertained, sometimes vacillating, as necessarily an opinion of that kind must be, as to the localisation of cancer; and I must confess that I range myself in that distinct category in which Dr. Moxon wishes to include those who enter into the discussion on the side of the localists. But it would, sir, I think, be altogether irrelevant and useless, at so late a period in the discussion as this, to go over a ground that has been traversed to and fro by many of the preceding speakers with regard to that question of the localisation or generalisation, if we may take Dr. Moxon's term rather than constitutionalism, of cancer. But there are one or two points in connection with that subject of cancer that, so far as I recollect, have not altogether been touched upon with the importance that they deserve; and, if I allude to them, it is because I think they have a very marked bearing upon the recurrence of cancer, and that they tend very much to involve the whole subject of cancer in a considerable haze of difficulty and doubt, so far as its solution into the question of localisation or generalisation in its primary origin is concerned. Now, the first of these points to which I wish to allude is the extreme vascularity, not of the cancerous tumour itself, but of the tissue that surrounds that cancerous tumour. It is well known to all operating surgeons that, in removing a cancer, say a scirrhus of the breast, even though it be of small size—not bigger than a walnut—the amount of hæmorrhage to be expected is very considerably greater than in the removal of a tumour of a simple character, say adenoma, a dozen times that magnitude; that you may remove an adenoma as big as a cocoa-nut and have fewer vessels to secure, than you will after the removal of cancer not bigger than a walnut. In fact, very small cancers often furnish a very large quantity of blood. There is an active hyperæmia around the cancerous growth itself, and that hyperæmia may be looked upon to a certain extent as an argument in favour of the primary localisation of cancer. It must arise from one of two conditions. It must either arise from the irritation produced by the cancer as a foreign body lying in the tissues in which it grows, and amongst which it is developed; or it must arise in consequence of the demand made upon these tissues by the active inherent vitality of a self-supporting organism growing in the midst of them, which requires a large afflux of arterial blood for its nourishment, for its development, and for its perfection. So far as the first supposition is concerned, it is scarcely tenable, because we find tumours infinitely larger, harder, more irritating, so far as their mere mechanical presence is concerned, than cancerous growths without any of this great vascularisation of the tissues around it. I think, therefore, that we must look upon this active hyperæmia of the tissues around a cancer as an evidence of the great demand made by that self-supporting organism upon the tissues in the midst of which it is lying, and that so far this condition may be looked upon as favouring to a certain extent the idea of the local origin of cancer. But it has another effect, and it is this: that it tends, I believe, very rapidly in the disease to wash the cancerous elements into the general circulation, and hence it is that one commonly finds the constitutional condition, that constitutional carcinosis or cachexia, marked very early in the disease, almost as soon as the local disease is recognised, contemporaneously sometimes with the recognition of the local disease; and this condition of the circulation around the cancerous tumours is greatly favoured also by that peculiarity of the cancerous growth, that it is uncapsuled. That, I think, is one of the peculiarities of a cancerous growth, which not only tends also greatly to favour the general constitutional infection, and that very early in the disease, so tending to confuse somewhat the idea of the constitutional and local origin of the affection; but this want of an enveloping capsule also tends to the speedy recurrence after removal. In consequence of that want of an enveloping capsule, there is no limitation to a cancer from the very first moment of its development. If we take the smallest nodules of cancer that we surgically meet with, those little granular bodies that are scattered sometimes through the skin in the neighbourhood of a cancerous growth, and take out one of these, we shall find that it never shells out, it never separates like almost any other kind of tumour, it is never surrounded by a capsule, but it invariably spreads into the neighbouring tissues, and is intimately incorporated with them. If we were to go further back, no doubt we should probably find the same thing; in fact, if we go back to the primary elements of a cancerous growth—and one cannot conceive a cancerous growth existing except in the form of stroma and cell, and the resulting cancer-juices—if we go back to the very first commencement of cancer in this way, we find nothing to prevent the extrusion of any second cell that may form; we find nothing to prevent that migratory cell from travelling widely into areolar space, which we have had so eloquently described; that migratory cell, which one might term the *Juif errant* of histologists, which goes travelling on from space to space, until at last it finds a resting-place certainly where it developes into a new growth, and where it undergoes a process of self-multiplication, and so contaminates the system. From the very commencement of local cancer, this process—from the want of an enveloping membrane, from the want of any barrier of any kind to shut off the cancerous growth from the neighbouring tissues—this process in all probability has commenced, and is proceeding, and hence it is that we have so little success in surgery in preventing the recurrence of cancer; because, although I hesitate to accept Sir James Paget's statement that the number of cases in which cancer does not recur is not more than one in five hundred, it is impossible for any surgeon not to feel that they must be approximately near the mark. Before we can make a diagnosis of cancer, before we can persuade the patient to undergo an operation, before the operation itself can be performed, these processes of washing away of cancer-structure, of the travelling into the areolar spaces by these migratory cells, and the transfusion and diffusion of cancer-juices, with the intrusion, at all events, of the cancer-elements into the lymphatics in the neighbourhood, into the veins in all probability, carried by them just like the embola in pyæmia, and deposited just like embola in those very organs in which pyæmic abscesses are so frequently deposited; all those processes have already begun to take place, have been in active operation, partly owing, perhaps, to this rapid and abundant wash of blood around, if not actually through the cancer itself, a wash of blood unrestrained by any enveloping membrane or any separating barriers in the healthy tissues, such barriers as shut out septic poison, and the absorption of putrescent matters, or matters that may contaminate the system in other diseases. In looking to this general question of the localisation or the generalisation of cancer, there are yet one or two points to which I would wish very briefly to refer; and the first is that to which Dr. Moxon has already given attention, namely, that of the hereditariness of cancer. Now, there undoubtedly we do get into a condition of ambiguity and of diversity of opinion. Velpeau, more than twenty years ago, in his great book on *Diseases of the Breast*, gave, as the result of his observations, the very figures which Sir James Paget gave the other night, namely, that cancer is hereditary in one case in three. Sir James Paget has recently come to the same conclusion; that conclusion, undoubtedly, is very different from what is maintained by other surgeons. I can give no opinion personally upon the matter, because I have never made out the statistics, and they are extremely difficult to make out; but the fact, at all events, remains certain, that it is very doubtful how far cancer is hereditary. But, supposing it be hereditary in one case in three, we have still two-thirds of the cases unaccounted for by any hereditariness of taint; that of itself leaves a very large margin of cases, which, if we take hereditariness as synonymous with or in any way implying general infection or constitutional infection of the system, cannot be brought into that category. But I quite agree with Dr. Moxon and also with some of the speakers who preceded, especially with the observations laid down by Mr. de Morgan, that it is very necessary to separate the two conditions; that an hereditary condition is not by any means a constitutional state. We have seen, and we know, from the transmission of feature, from the transmission of deformity, and the transmission of simple tumour, wart, or what not, that, unless the term be strained beyond the meaning we usually attach to it, it cannot be looked upon as synonymous with a constitutional condition, although in some cases it undoubtedly may be so. There was one point to which Sir James Paget alluded with, I may venture to say, great sagacity, and indeed it was a strong point, namely, that the hereditary tendency will skip a generation in consequence of the parent in that generation not having attained the cancerous age. I may not put the point quite correctly, but it was as nearly as possible to the effect, that a person might transmit the tendency to cancer, although the cancer might never develop in him in consequence of his dying before it could do so. That, no doubt, is the case. But I take it that it may be so with any local condition that is not cancerous. It might be exactly the same with premature baldness; a person with a family tendency to premature baldness, coming on, say, at the age of 30, might, if he died at the age of 28, transmit that tendency to his offspring—a purely local condition—without ever suffering from it himself. As to hereditariness, there is still so much diversity of opinion among the surgeons on that point, and so much evidence that hereditariness is not necessarily by any means a constitutional condition, that we cannot attach too much importance to that as our evidence of the constitutional nature of cancer. There is one other point which I do not think has been alluded to; it is a very important point, and one in the working out of which I think a great deal may be done to trace the origin of cancer; I mean the geographical distribution of the disease. Mr. Haviland has shown, in the cancer-chart which he published, corrected from the records of the tables of the Registrar-General, that there are cancer-fields in England where cancer predominates to an inordinate extent, and that these cancer-fields are associated with certain local peculiarities of soil—geological peculiarities. It is well known, no doubt, to many members of the Society that, in those districts where the primitive rocks and the earlier formations principally exist, cancer is comparatively seldom met with; whereas, as you descend the river courses, and get into the tertiary formation, and especially into low-lying alluvial lands subjected to overflowing, and other conditions of that kind, you find cancers developed to a much greater extent. That subject is as yet not worked out sufficiently. I think it is a very promising field to work in order to determine the real origin of cancers, of which we as yet know absolutely nothing. No doubt the geographical distribution of cancer is an argument that cuts in both directions—against localists and for them; against them, because it might be supposed that a general constitutional condition was induced by residence in those localities; it might, on the other hand, be looked upon as favourable to localists, on the supposition that some organic element, in some way, was introduced into the system, which, directly applied to a part, gave rise to the starting-point, to the first early germ, as it were, of cancer. It is of no use to add hypothesis to hypothesis in these discussions. I merely indicate that question of the geographical distribution of cancer as being one that I think does promise, when worked out, to yield some good fruit for the future. No doubt, cancer is closely allied, so far as its general appearance and course are concerned, to ordinary syphilis. There is no disease with which the resemblance is so perfect in the mind of any surgeon as syphilis; and cancer, just like syphilis, appears to affect certain constitutions, beginning locally, so that it becomes fixed in the constitution in such a manner that it scarcely can be eradicated. We find, with syphilis, that there are different constitutions affected very differently by the same kind of poison; that, in some constitutions, a poison runs on in the most virulent manner, and assumes the most active form, notwithstanding any treatment adopted to restrain it, whilst in others it is comparatively somewhat innocuous; and it really appears as if it were something the same in cancer. Let cancer begin from a local irritation in some constitutions, and it will run on in the most virulent manner, without let or hindrance, whatever is done, whether operated upon or not; nothing seems to exercise any influence upon it. Even if it be operated upon, the local recurrence is of the most rapid and the most virulent kind. It would appear that, if cancer be local, as I believe it to be, there are certain constitutions that afford a far more fertile soil for the development of that local poison, and in which it grows and spreads, and through which it developes itself with a degree of vigour one does not see in other constitutions; and there is a certain kind of frame that one gets accustomed, especially in middle-aged people, to see—whether in men or women—stout and ruddy, and fairly healthy-looking, that does at least come to the surgeon's mind to be something like a typical constitution in which cancer is apt to develope, and in which, if once it be developed, it will run its course unchecked under any treatment, whether it be local or constitutional.

Dr. Crisp: The older we grow, sir, the more we are wedded to the opinions that we formed in early life. I took a good deal of trouble to record the statistics of cancer many years ago, as it occurred in a great many cases, and I confess I was utterly astonished to hear one remark made by Mr. De Morgan with regard to sex. He said, to show that cancer is not a blood-disease, "How happens it that it is pre-eminently prevalent in women?" and then he went on to say that, taking a given number of cases of cancer, we should have probably 90 per cent. of them in the uterus and in the breast. Now, I know from statistics that I have collected, that that was utterly and entirely fallacious; I knew the differences between the sexes was not anything like what Mr. De Morgan supposes. Taking our own *Transactions*, I have made an accurate analysis of 353 cases there recorded, and I must say, *en passant*, they do not carry out Dr. Moxon's views that bone is transmitted from one thing to another, and other cells from one part to another. I believe, if those cases be carefully examined, no such inference can be drawn. Some cases might favour Dr. Moxon's view; but the generality do not. Now, taking the cases published in our own *Transactions*, to which I attach very little importance—I beg your pardon, I mean importance in this sense as regards age, because it is well known that the cases quoted by Mr. De Morgan—cancer of the uterus and cancer of the breast—are seldom brought here, because they are common cases—but, even taking the 353 cases mentioned in our own *Transactions*, there are something like 30 or 40 more males than females. But, let us take better evidence than this. I made an analysis of the Registrar-General's returns since 1838; and I find that, out of 64,391 cases of cancer, 18,059 were males, and 42,137 females. Taking into account the active function of the breast and of the uterus, and, even when in abeyance, the disturbance to which those organs are constantly exposed, I do not think it is so very wonderful that we should have more cancer in females than in males. One melancholy fact from these returns is this, that whilst in 1838 there were only 2,448 cases, in the year ending 1870 there were 9,508, there having been a regular increase every year with the exception of two. Even taking into account the increase of the population, this is an enormous increase in the proportion. I happen to know in England two especially of these cancer-breeding places, where, perhaps, Mr. Erichsen might attribute some influence to the locality. But I doubt very much whether locality has much to do with it. You know that in country places people constantly marry within a circle. One man who happens to have a cancerous taint may produce five or six cases of cancer, and, as they seldom go far from the locality, the prevalence of cancer may be more readily accounted for in that way than by any influence that locality or soil may exert. Then, with regard to age, these statistics and those of our own *Transactions* do not quite square with the notion of Sir James Paget, that cancer is a disease of degeneracy and old age. Of these 64,391 cases, 27,806 were under forty-five years of age, and a vast number were under thirty; so that, although Sir James Paget is, perhaps, right in the main, the statement needs some qualification. Now, with regard to the question of hereditary or constitutional taint. Is cancer a blood-disease? I think there never was a greater misnomer than to speak of "blood-disease", because, after all, we know very little about blood-disease. I suppose no disease that affects the human body does so without the blood being altered in some way or other, and therefore the term "constitutional", objected to by Dr. Moxon, is, I think, about the best that could be used. During my somewhat long life, I have had the opportunity of attending a large number of cancerous families. Three or four sisters have died of cancer, and, perhaps, one sister has escaped. Let me put it in this way, to show that children are born with a tendency to cancerous disease. One woman with a tendency, whose mother has died of cancer, gets a blow on her breast; in all probability that is followed by cancer. Another woman who has not this tendency may get twenty blows on her breast, and you cannot produce cancer. So, I believe, one might multiply examples to a great extent. Sir Benjamin Brodie, whose authority I am sure all will respect, came to the conclusion before he died, that he would never again remove a cancerous breast without first laying before the patient the objections which his experience showed him to exist with regard to that operation, namely, that, having removed five hundred or six hundred breasts, and perhaps more, he found the practice rather tended to shorten life. Another question raised by Mr. De Morgan was that of parasitism. He does not class that amongst the causes of cancer. I confess, on looking at cancer and at some of the allied structures in the vegetable kingdom and in some of the lower animals, I think that it is positively a parasitic disease, and may be called so. We have foreign cells, it is true, some of them resembling normal cells, but, if we could positively investigate thoroughly those cells, we might find them very different from what we suppose. Therefore, it is not to be assumed, because a cell, epithelial for example, happens to have a resemblance to a normal cell, that it is really in a normal condition. We have a disease preying upon a body, producing cell-growth and ultimately destroying it, as in many of the lower animals we have parasites producing the same effect; and I am rather disposed to think that hereafter the parasitic theory will not be so lightly treated as it is at present. I intended to have brought a large number of preparations of cancer in the lower animals, and I adopted the ascending scale, as I always have done, going through the vegetable kingdom and working upwards to man; but time will scarcely allow me to touch upon this matter at present. I think I had better on a future occasion, with the Society's permission, bring these specimens forward, and then make my remarks about the lower animals. I may just mention a few circumstances connected with the lower animals. Cancer is not at all an uncommon disease amongst our domestic animals. In wild animals, as far as I know, there is no case on record; and I believe, although our evidence is very imperfect about uncivilised man, that amongst them cancer would also be very rare. Possibly some gentleman may give information upon that subject. There is one very curious thing which bears materially on Mr. Darwin's opinion. I have now examined something like 230 of the quadrumana, and have never yet found a case of cancer. I have brought forward here the tongue of a chimpanzee, which was sphacelated, but not cancerous. I have never yet in a monkey seen a case of cancer. Another remarkable thing about these animals, supposed to be so nearly allied to ourselves, is that they have no infantile disease. You know the dog has the distemper almost as certainly as, perhaps more certainly than, a child would have measles. You know that the horse has the strangles and the lampers, diseases peculiar to young animals, but, as far as I know, the monkey never has. There is one important matter with regard to the hereditary nature of cancer in the lower animals, though it is comparatively rare. There are several cases where a bitch has had a cancerous breast, and that cancerous taint has been communicated to her pup, just as children born of cancerous parents have a something in their constitutions, in their bodies, that is born with them; and, if they be placed under certain conditions and under certain circumstances, that cancerous taint comes out. I think that that is as common sense a view of the matter as the one entertained by Dr. Moxon.

Dr. MOXON: There is a very short telling argument which I may put in this way in reference especially to age. The argument of the last speaker is that old age is hereditary; cancer belongs to old age; therefore cancer is hereditary. Perhaps Dr. Crisp's monkeys were all young monkeys.

Dr. CRISP: I do not understand; it is beyond my comprehension.

The PRESIDENT: Were the monkeys young monkeys?

Dr. CRISP: We have had a few monkeys brought up at the Zoological Gardens, and we have watched them for a certain time. They are generally tuberculous; they die of tubercle. We have watched them long enough to know that there is no special disease that is peculiar to monkeys as with children.

The PRESIDENT: Do you know the ordinary age of those monkeys which attain old age?

Dr. CRISP: It is not known how long a monkey will live. Indeed, we know very little about the age of wild animals in a state of nature.

Mr. HOWARD MARSH: There are a few remarks I am anxious to make to the Society if time will allow. It does seem to me that Dr. Moxon and Mr. Erichsen have both taken up the explanation or the theory of the explanation of the spreading of cancer, rather than of its primary development. The discussion the other night tended in the direction of finding out, if possible, in what way cancer commences to be present in the system at all; and Dr. Moxon and Mr. Erichsen appear to have accepted the position that cancer is already there, and then have gone on to show how it spreads. Really, if they would allow me to say so, we had all that thoroughly explained the other night in Mr. Arnott's very lucid remarks and illustrations. I do not think any of us doubt that cancer does spread in the way these two gentlemen have described, after it has once been developed in a primary state. The question seems to me to be, How is it developed in a primary state? and whence does it come? That was the point chiefly discussed at the last meeting of the Society. It seemed to me one argument to which one ought to take exception, was an argument which Sir William Gull brought forward. He said we must look at the ovum in its very first commencement; and we must see how cancer, or the tendency to cancer, is conveyed to that. Sir William Gull said, in the first place, cancer cannot be in the ovum a blood-disease, because in the ovum, at its earliest beginning, there is no blood present. But surely one may answer to that, that although there is no blood, in the same sense there are no limbs there; but, just as the limbs are present prospectively or in the future in the ovum, so is the blood. Therefore one cannot see, if there be a tendency in the ovum to the formation of cancer, why it should not pass into the blood, just as it might into the limbs. Another argument that Sir William Gull used, which, I confess, seemed to me not quite secure, was this: he said cancer might be constitutional in the ovum, but afterwards it could not be constitutional in the developed body; for, as he said, we must believe in locality somewhere; and therefore, however constitutional or all-pervading the tendency to cancer may be in the ovum, yet afterwards, when the several limbs and several parts and organs had been differentiated and brought out, we must believe the cancer-tendency finds its position in some one of these definite places. But surely the blood in that sense is a locality; and one does not see why, if we must believe that cancer is localised in one of these positions, it should not pass into the blood as well as into the limbs. Perhaps we may get some little light upon this question if we look at specific cases—at their phenomena—and try if we can explain them. There are three cases of a very remarkable nature, bearing upon the question, published in Sir James Paget's book. A man injured his fibula, or perhaps broke it; and almost immediately, although he had been quite healthy up to that time, he became subject to cancer at the seat of the injury. A boy was struck in the eye by an oyster-shell; and immediately after that, in the course of three or four days, a swelling developed, and it was clear that he had a fungous cancer growing within the orbit. He died in a few days. Another boy fell and wrenched his knee, and, within a few days after the injury had been inflicted, the boy became subject to cancer of the knee. Dr. Moxon has thrown such dismal dust in my eyes by his definitions and his handlings of the terms "local" and "constitutional", that I do not in the least know where I am; but it seems to me that, if by locality we mean that cancer is fixed in a particular spot, or, in other words, that there is a certain spot in the body where that person is subject to cancer, it would mean local; and, if we may accept the term constitutional in the sense that Mr. De Morgan defined it and Sir James Paget used it—namely, as all-pervading—how are we to explain these cases upon the local view? I do not think they can be explained unless we take into consideration a coincidence which makes the argument a kind of stumbling-block. If these particular people had cancer situated in only one spot of the body, it must have been this particular spot which was struck in each case. This is a singular coincidence, to say the least, that these people were struck at the very spot at which they were subject to cancer. That is a very striking coincidence, at all events. On the other hand, it seems very easy to explain these cases in the opposite way. Sir James Paget holds—and I do myself—that there are two factors in the production of cancer, the constitutional factor and the local factor. In other words, there is the seed, the general tendency; and then the fitting condition of the part, the appropriate soil. It seems to me that these cases are clear enough if we believe that these people had a general tendency to cancer, which they had perhaps inherited; and that, upon the receipt of the injury, the tissues injured were so altered that they became there and then an appropriate soil for the development of the disease. It seems to me that these cases are readily explained in that way. Mr. De Morgan mentioned the other night, in his paper, what no doubt is quite true, that it is very rare indeed to find cancer of both the mammæ in the same patient. It might interest him, perhaps, to know that there are now at St. Bartholomew's Hospital two women who are subject to a cancer of each breast. I will only mention one case, that of a woman forty-five years old, who became subject to a cancer of her breast just after Christmas; and along with that she was seized at the very first with symptoms of illness—of wasting, languor, and cachexia. In a week or two, cancer appeared in the opposite breast. She is now, I may say, dying of general disease. At all events, she has now cancer of her liver and many of her other organs. That seems to me to be a case which shows that there must be a general tendency to the disease.

The discussion was adjourned.

MANCHESTER MEDICAL SOCIETY.

NOVEMBER 5TH, 1873.

D. LLOYD ROBERTS, M.D., President, in the Chair.

Instruments for Physical Diagnosis.—Dr. RANSOME exhibited Dr. Peter's Plessigraph, an instrument for percussion and for marking the limits of dulness, etc.; also a Stethograph which he had invented for tracing on glass or paper the upward and forward movements of any point on the surface of the chest.

Abnormal Tapeworm.—Mr. CULLINGWORTH showed an abnormal tapeworm from a patient at St. Mary's Hospital, a married woman, aged 40, who had passed joints from time to time for two years. The worm was three yards long, and had a crest or ridge running along its whole length in the middle line, so that each joint, viewed endwise or in section, appeared three-branched. So far, it corresponded with a specimen in the Middlesex Hospital Museum, and named by Cobbold *tænia lophosoma*; but it differed in one very important point, viz., that the genital pores were almost universally situated in the centre of the crest of each segment, instead of at the lateral margin. The head of the worm had not been found.

Ankylosis of Jaw: Operation.—Mr. WHITEHEAD showed a girl, aged 10, upon whom he had operated for osseous ankylosis of the jaw. The patient had scarlet fever six years previously to her admission into the Royal Infirmary; and on the second day of the fever an abscess formed behind and below the pinna of her right ear, which did not open for six weeks. The abscess was well in two weeks, but gradually the movements of the jaw became more and more retarded until the teeth became permanently closed, and she had to depend upon what food she could work between the edges of her lower teeth. An attempt was made, under chloroform, to force open the jaw by means of a couple of screw gags inserted after the extraction of some teeth. The jaw remaining immovable, an incision was made down to the bone, first on the right side and then on the left, across the neck of the condyles. The bone was sawn through, and the operation was completed by forcible fracture of the remainder. A false joint was soon established, and the girl, when shown, could open her mouth nearly to the full extent and perform all the functions of the jaw.

Granular Contracted Kidney in a Child Six Years of Age.—Dr. BARLOW read a paper on the case of a child, aged, at death, five years and eleven months, whose first symptoms, noticed two years before death, were frequent micturition and the passage of a large quantity of urine (between three and four pints in the twenty-four hours). The prominent symptoms were peculiar brownish cachectic appearance of the skin, anomalous dyspeptic symptoms, deafness, etc. No albumen was found in the urine in the early stage (twelve months before death), but shortly before death the quantity of urine passed diminished to one pint in the twenty-four hours, and the amount of albumen was large. There was no œdema at all, and the child died in uræmic convulsions, without a trace of dropsy. On *post mortem* examination, the lungs were found to be emphysematous, the heart hypertrophied, the spleen small, hard, and firm, with evident thickening of the fibrous capsule. The liver was apparently normal. The kidneys were small, contracted and granular, the right much smaller than the left, and in the larger were found one or two small cysts of the size of a hemp-seed. The microscopic appearances showed almost total disappearance of true glandular structure; and the replacement by fibroid substance, and the contrast between this and sections of a healthy child's kidney, was shown to the meeting. The fibrous stroma of the liver was also found to be increased, when examined microscopically and compared with a healthy child's liver. The spleen showed increase of its fibrous stroma. Dr. Barlow believed the case to be unique in point of age. The nearest in that point was the case of a child, aged 9, mentioned by Sir W. Gull and Dr. Sutton.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, JANUARY 24TH, 1874.

ROBERT D. LYONS, M.D., President, in the Chair.

Lesions of Enteric Fever.—Dr. STOKES showed some of the abdominal viscera and the lungs of a girl, aged 16, admitted, with enteric fever, to the Meath Hospital, on January 15th. She died on the 20th. The fever was of a severe type, with weak pulse and rapid action of the heart, the sounds of which were distant and feeble. Some diarrhœa had prevailed for two days before admission. Only one rose-spot was seen on the chest at first, but a few others subsequently became visible. The diarrhœa increased on the day before death. Temperature was generally high, rising on one occasion to 105.8 deg.; the evening rise was especially well marked. Quinine had no effect in lowering the temperature. The heart's sounds finally became inaudible, owing to (1) their feebleness, and (2), the existence of an intense bronchial *râle*. On the day of death, the heart's impulse was peculiarly jerking. The chief *post mortem* appearances were (1), ulceration of the solitary and agminated glands of the ileum, (2) tumefaction of the mesenteric glands, and (3), consolidation of the upper lobe of the right lung, with localised and limited consolidations in the left lung. Dr. Stokes referred to the importance of studying the prevailing "epidemic character" of essential fever, and of investigating the points of agreement between its two leading forms—typhus and enteric. Both possessed general and local characters, which were subject to the law of periodicity, and to variability in degree. In either the local symptoms might be attended or unattended with organic change—a reactive irritation being set up in the first instance. Both were contagious, although in different degrees, and the principles of treatment were in both the same. The strength was to be supported, local complications were to be met as they arose, and the physician was to wait until, in obedience to the mysterious law of periodicity, the disease would spontaneously subside.

Ankylosis of Knee.—Dr. W. THOMSON showed the ankylosed bones of the knee-joint of a girl, aged 21, who had been exposed to cold. Synovitis set in, with pain and swelling of the joints, followed, in a month, by startings of the limb. In five months, total destruction of the joint had occurred, and firm bony ankylosis had taken place, the leg unfortunately being flexed at the knee at an angle of 90 deg. By Buck's operation, he had removed a wedge-shaped piece of bone, corresponding to the deformity. Not a trace of cartilage remained about the joint, and the patella, dislocated outwards, was perfectly fixed, and firmly adherent to the outer condyle of the femur. Esmarch's method was adopted with complete success—not a drop of blood being lost during the operation.

Catarrhal Pneumonia and Intestinal Scrofulosis.—Dr. A. W. FOOT exhibited the lungs of a young man, aged 23, who had died of pulmonary disease of ten months' duration. The lungs presented the appearances of cheesy pneumonia; a large multilocular vomica occupied a considerable portion of the left upper lobe. The history of the case was that of catarrhal pneumonia, ending in phthisis; a sister had died, at the age of 21, of consumption. The immediate cause of death was a recent attack of inflammation of the inferior right lobe, the least phthisical portion of the organs. Intestinal scrofulosis was evidenced by most characteristic calyciform ulcerations of the solitary and agminated glands in the small intestines, especially those of the verniform appendix. The right suprarenal capsule, and its investing membrane, were studded with minute cheesy nodules. The only true typical tubercles discoverable were on the phrenic peritoneum, contiguous to the coronary ligament of the liver.

Renal Disease: Acute Œdema of Glottis.—Dr. HAYDEN exhibited the viscera of a man who had been admitted to the Mater Misericordiæ Hospital, on January 1st, with bronchitis and emphysema. He died on the 16th, after an attack of extreme dyspnœa. The urine had a specific gravity of 1011, and contained albumen in considerable quantity. After death, the larynx presented patches of ulceration, and there was general œdema about the glottis. The kidneys were reduced in size, with increase of fibrous stroma. The left ventricle of the heart was hypertrophied, but not dilated.

Aneurisms of the Aorta.—The PRESIDENT showed the chest-wall, heart, and aorta of a man, aged 42, a labourer, who had been kicked by a horse in the middle of the chest. Four months afterwards he noticed a tumour, gradually enlarging to the size of an orange, and pushing itself forward. On examination, an aneurism was found at the upper part of the sternum. He had severe lancinating pains in front of the chest. There was no dull, aching, or boring pain in the back. He was very sleepless. No remarkable difference in the radial pulses was noticed. There was no variation in the pupils. The other physical signs of aneurism were present. Hypodermic injections of half-a-grain of hydrochlorate of morphia, night and morning, alone relieved the pain, in about ten minutes; the relief lasted at first for six hours. For the last two months of his life he had three such injections daily. His debility increased, and the blood degenerated—a well-marked hæmorrhagic tendency being observed. At no time was there any considerable expectoration of blood. Œdema of the right side, arm, and neck set in, with evidences of chronic pleuritis, and effusion into the right thorax. He died on January 23rd. The blood was everywhere diffluent. The primary sac of the aneurism was within the chest—its point of departure being the external aspect of the ascending aorta, two inches above its origin. Here the internal and middle coats had probably been ruptured by the kick. One end of this sac passed through the sternum, by an aperture an inch and a half in diameter, and so communicated with the external tumour. The right lung was compressed by pleural effusion, and both costal and visceral pleuræ were thickened. There was some traces of pericarditis, with purpuric spots on the pericardium. Lying under and behind the left ala of the diaphragm was a second large aneurism, passing through the left crus downwards into the abdominal, and upwards into the thoracic, cavity. Posteriorly, this sac had pressed upon and eroded the bodies of the last three dorsal and first two lumbar vertebræ. The remainder of the aorta was largely atheromatous. The President laid stress on the following points:—1. The origin of the first aneurism, from injury inflicted, probably when the vessel was already diseased; 2. The acceleration of death by nerve-lesion, caused by pressure, affecting the respiration; 3. The impossibility of inducing coagulation of the blood, owing to its diffluent state, and an intolerance of iodide of potassium. The sphygmographic tracings were normal.

Amyloid Degeneration of Kidneys.—Dr. HAYDEN presented the kidneys, etc., of a man, aged 35, who had been emaciated with dry cough, varicose ulcers of legs, constant vomiting, and diarrhœa. He died on January 19th. The kidneys were very large, and in a state of amyloid degeneration. The liver was enlarged. The lungs showed marks of old localised pleuro-pneumonia, with compensatory emphysema, and of recent lobular pneumonia. There was thrombosis of the heart. The features of interest were the absence of œdema or anasarca, and the coincidence of irritability of the stomach with amyloid degeneration of the kidneys.

SATURDAY, JANUARY 31ST, 1874.

ROBERT D. LYONS, M.D., President, in the Chair.

Renal and Vesical Calculi.—Dr. T. EVELYN LITTLE showed numerous specimens of calculi from the urinary tract of a corpulent man, aged 75, of whose case there was no clinical history. There were *post mortem* evidences of suppurative pyelitis in both kidneys. The pelvis of the left kidney was dilated into a sac of irregular shape. In the upper, posterior, and external portion the investing membrane was adherent, and close by there was a perinephritic abscess. The mucous membrane, although in places ulcerated, was not very much diseased. In the sac was a small, smooth, oval calculus, with bevelled edges. In the right kidney were several small cysts, and a large branched calculus, moulded by the infundibula and pelvis. This, and numerous smaller calculi, presented many facets. The mucous membrane was much inflamed. Both ureters were pervious. In neither kidney was the glandular structure destroyed, in proportion to the disease present in the pelvis. A large soft calculus lay in the bladder, which was small, with hypertrophy of its muscular wall. The prostate gland was slightly enlarged laterally. The calculi consisted, for the most part, of ammoniaco-magnesian phosphate, with phosphate of lime. None of them had a central nucleus.

Bronchitis, with Fatty Degeneration of Heart.—Dr. NIXON exhibited some of the viscera from the body of a woman, aged 65, who had been the subject of bronchitis. While under observation she caught cold, and capillary bronchitis, with general œdema, set in. There was now a double pulsation in the jugular veins, sufficiently strong to give a sphymographic tracing, and simultaneously an apex cardiac murmur became developed, being most intense in the space between the fifth and sixth ribs. Orthopnœa followed, and the patient died. The liver presented the well-known "nutmeg" appearances. The kidneys were cirrhosed, their capsule somewhat adherent and thickened. The right ventricle of the heart was dilated; the walls of the left ventricle were thin, but without dilatation of this cavity. The tricuspid orifice was greatly enlarged; the mitral opening was normal in size, although its edges were thickened. There was advanced fatty degeneration of the heart generally. The musculus papillaris, attached to the anterior curtain of the mitral valve, was biventral; and in that adjoining its posterior curtain there was a fibrous nodule, continuous with the chordæ tendineæ. There was no trace of aneurismal dilatation throughout the very atheromatous aorta.

Encysted Hydrocele.—Dr. W. G. SMITH presented a specimen from the body of a man, already spoken of by Dr. Little. An ovoid swelling was found above the testicle, to which it was attached at one point. There was no connection between the hydrocele and the vas deferens. The fluid was full of spermatozoa, and free from cholesterin. The tumour sprang from the globus major of the epididymis.

Bones from Diseased Knee-Joint.—Dr. R. McDONNELL brought forward the surfaces of the femur and tibia, which he had removed that morning by resection, in consequence of long-continued disease of the knee-joint. The patient was a very scrofulous lad, with superficial lupus of the face. There had been no painful startings, or pain in moving the limb. The cartilage had quite disappeared from the head of the tibia, and from one femoral condyle. From the surface of the other condyle, it had been raised by bony granulations, which were eroding the fimbriated edges of the synovial membrane. The presence of osteitic "granulations" (as they might be called), on one aspect of the joint, and of pulpy thickening of the synovial membrane on the other, was an interesting pathological feature. The operation was performed by Esmarch's method.

COLUMN FOR THE CURIOUS.

LARGE CALCULUS.—The following account of a calculus of gigantic magnitude is copied from the preface, by a Mr. Gouge, to an old book of sermons by the Rev. Nicholas Byfield, of Isleworth, who lived in the time of Queen Elizabeth and James I. The book was published, after his death, by the editor, Mr. Gouge, to whom we are indebted for the details of this remarkable case, and is dated 1623.

"It appears that he carried a torturing stone in his bladder fifteen years together and upward. I have heard it credibly reported that, fifteen years before his death, he was by a skilfull chirurgion searched; and that, upon that search, there was a stone found to bee in his bladder; whereupon hee used such meanes as were prescribed to him for his case, and found such help thereby, as he thought; that either the chirurgion which searcht him was deceived; or that the meanes which he used, had dissolved the stone. But time which manifesteth all things, shewed, that neither his chirurgion was deceived, nor yet his stone dissolved; for, it continued to growe bigger and bigger, till at length it came to bee of an incredible greatnes. After his death, hee was opened, and the stone taken out; and being weighed, found to be 33 *ounces and more in weight;* and in measure about the edge, *fifteen inches and a halfe;* about the length, *above* 13 *inches;* about the breadth, *almost thirteen inches:* it was of a solid substance; to look upon, like to a flint. There are many eie-witnesses besides who can iustifie the truth hearof. A wonderfull work of God it was, that he should bee able to carry such a stone in his bladder, and withall to doo the things which he did."—J. M. WINN.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

Subscriptions to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. Francis Fowke, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, APRIL 11TH, 1874.

HOW COLDS ARE CAUGHT.

There are several well-known processes by which a cold may be caught. As a disease, there is nothing so common; and yet it is only very recently that anything like an approach to a knowledge of its pathology has been attained. There is now, however, a large accumulation of evidence which points very strongly in the direction that "taking cold" is actually "being cold".

Rosenthal has very carefully investigated the relations of the body-heat, and has demonstrated the existence of a central heat-producing area and an external heat-radiating surface. A rise in temperature is due to the disturbance of the balance normally existing betwixt these two antagonistic areas. An excessive heat-production may produce fever; or this may be due to an impairment in the cooling processes, so that heat accumulates. Precisely the opposite of this leads to a lowering of the body-temperature; if the heat be lost more rapidly than it is produced, then a "chill" results.

Let us see how this applies to colds, so frequently caught from a wetting. The clothes we wear are good non-conductors of heat, and so prevent the loss of body-heat which would occur without them. But let them become moist or saturated with water, and then they become heat-conductors of a much more active character, and a rapid and excessive loss of body-heat follows. Nothing is more certain, however, than that prolonged exposure in wet clothes is commonly followed by no evil results; that is, so long as there is also active exercise. The loss of heat is then met by increased production of heat, and no harm results. But let the urchin who has been drenched on his way to school sit in his wet clothes during school-hours, and a cold follows. No matter how inured to exposure the person may be who, when drenched, remains quiet and inert in his wet clothes, he takes a cold. Here there is an increased loss without a corresponding production of heat, and the temperature of the body is lowered, or the person "catches cold".

The effect of exercise in producing heat is well known. Unless the surrounding air be of a low temperature and the clothes light, the skin soon glows with the warm blood circulating in it, and then comes perspiration with its cooling action. Here there is a direct loss of heat induced to meet the increased production of heat. Exercise, then, in wet clothes, produces more or less a new balance, and obviates the evil consequences which would otherwise result.

The loss of heat is more certainly induced if the skin be previously glowing and the circulation through the skin, the cooling area, be active. Thus a person leaves a ball-room with his cutaneous vessels dilated, and a rapid loss of body-heat follows, unless there be a thick great coat or a brisk walk; if the clothes become moistened by rain or be saturated with perspiration, the radiation of heat is still more marked. Such is the causation of the cold commonly caught after leaving a heated ball-room. It is probable that exhaustion is not without its effect in lowering the tonicity of the vessels, and so those of the skin do not readily contract and arrest the loss of heat.

Rosenthal found that a rabbit exposed to a temperature of 100 degs. Fahr., for some time had a lowering of the body-temperature of no less than 2 degs. for two or three days afterwards. The dilated cutaneous vessels had not sufficiently recovered their tone to contract and arrest the loss of heat. Those who live in superheated rooms readily take cold on exposure. There exists a condition of the cutaneous vessels which gives a tendency to lose heat, and less exciting causes will induce a cold.

A damp bed gives a cold, because the moist bed-clothes are much better conductors of heat than are the same clothes when dry. The temperature of the body is lowered, and a cold results. Long exposure in bathing leads to similar consequences. The second feeling of cold in bathing tells that the body is becoming chilled, and that the production of heat is insufficient to meet the loss. A run on the river-bank, or a brisk walk after dressing, commonly restores the lost balance.

The plan of permitting the wet clothes to dry on the wearer is very objectionable. The abstraction of heat from the body by the evaporation of the moisture in the clothes produces a marked depression of the body-temperature, and a severe cold. This is most strikingly seen in the effects of a wetting in the tropics. The smart shower or downpour is quickly followed by a hot sun and a breeze, and the loss of heat under these circumstances is considerable. The person is "chilled to the bone", and the effects are felt for a long time afterwards. The effects of the evaporation under these circumstances is illustrated by the tropical plan of placing water in a vessel of porous clay, wrapping a wet cloth round it, and exposing it to a breeze. The water becomes distinctly cold.

The effect of a strong impression is equivalent to a longer action which is not so marked; and Béhier, in the treatment of hyperpyrexia by the cold bath, found that either a long exposure or very cold water were necessary to produce a marked impression in the hyperpyretic condition. So a sudden sharp cooling, and a longer and slower process, alike produce those lowered temperatures which lead to severe and often fatal consequences.

But if "taking cold" is "being cold" how, it may be asked, does a feverish condition result? It is the normal course of a cold to cause a high temperature and then to defervesce. This is due to a want of promptness in the regulatory arrangements.

The question of the increased production of body-heat to meet great loss of heat has been much disputed. Liebermeister, Roehrig, and Zuntz, maintain that such is the case, while Winternitz and Senator dispute it. There can be no doubt that the enormous amounts of fat devoured by the Esquimaux are consumed and go to the production of body-heat. For, however much, by the use of furs, etc., he may reduce the loss of heat by the skin, there is still the loss entailed by respiration, by the hot expired air, to be accounted for.

On exposure to cold, the skin ordinarily becomes cool and marbly, from contraction of the cutaneous vessels; so the loss of heat is checked, and the blood is kept in the internal parts, the heat-producing area. A cold bath, or exposure to cold, often causes a rise of temperature in the internal parts; and Liebermeister found that, in a cold bath, not only the loss but also the production of heat is increased, the production being in inverse proportion to the temperature of the bath. The amount of blood on the skin, the cooling surface, is diminished on exposure to cold, and so the bulk of blood in the heat-producing area is increased, and, by this combined action, a sufficient body-temperature is maintained.

Where there are an increased loss and an increased production of heat simultaneously, they neutralise each other. Where there is much muscular exercise, there is perspiration; where there is much loss of heat, there is increased production of heat. In those inured to exposure, an immediate increase in the production of heat probably exists. In others, a lack of promptness in the heat-producing processes occurs, a delay indeed, and then the chill and lowered temperature are followed by a time of increased production of heat, and a feverish condition results. Instead of the evolution of heat being instituted at the time of the excessive loss of heat, it comes on slowly and forms a reactionary disturbance—an oscillation of the balance; being much depressed, it rocks to an equal extent in the opposite direction. Habit endows the system with an educated power of maintaining the balance; disuse lessens the power. The more people take care, in the common way, against cold, the more susceptible they become, and the less exposure is sufficient to disturb their more mobile body-balance.

Instead of feeling any surprise that a chill is followed by subsequent fever, it is what we might *à priori* expect.

It does not follow, however, that, because there is great loss of heat, there is also a keen sensation of cold. In fact, the large flow of warm blood to the skin, or extremities, prevents the sensation of cold ; which sensation is often acute when the internal temperature is normal, or even higher. Compare the cold hand, gloved or ungloved, with the glowing hands of the snow-baller ; and yet, surely there is more actual loss of heat with the latter than with the former? Some people assert that it is impossible that they could have caught cold, as their hands and feet were warm. Precisely so ; to maintain the temperature of the extremities, the body-temperature generally was lowered. On the other hand, a frost-bitten limb may be the price of a life. If the warm blood had not retreated to the central area, death from general loss of temperature might have resulted ; the maintenance of the temperature of the periphery would probably have lowered the body-heat beyond the danger-point.

Alcohol has been abandoned in Arctic regions. It dilates the cutaneous vessels and increased the loss of body-heat. The drunken man perishes of cold when the abstainer survives.

When the exposure follows a long continued warmth, the cutaneous vessels do not contract, but become dilated or paralysed, and then a large bulk of warm blood courses through the cooling surface, and a great loss of body-heat is entailed. Not only so, but the current of chilled blood passes inwards to the right heart and the lungs. Inflammations of the lungs are common along with severe colds ; and this is possibly the explanation. Such inflammation is specially liable to occur if at the same time cold air be inspired. The cold respired air and the current of chilled blood together produce those vaso-motor disturbances in the lungs which, in their graver aspects, are known as pneumonia.

At other times, the weakest spot of the organism, the point of least resistance, habitually suffers when the system is chilled and the hyperæmia of the internal parts becomes excessive or uncontrollable.

Let us now see how far we can elucidate the frequency of affections of the respiratory tract co-existent with severe colds by the foregoing explanation. When cold air is respired, it is more than probable that there is instituted a condition of protective hyperæmia of the lining of the respiratory tract. The air we breathe is normally heated by the vascular lining of the turbinated bones and other parts of the respiratory tract ; and excessive hyperæmia of these parts, in the system lowered by a great loss of the general body-heat, becomes, in all probability, the nasal catarrh with which we are familiar. Or the pharynx or larynx may suffer in a similar manner. This is rendered all the more probable by the fact that a nasal catarrh and affections of the lungs or bronchia are not found together ; except when the nose has become so "stuffed" that it is no longer available for respiratory purposes, and then the air breathed through the mouth is imperfectly warmed, and we have bronchial or pneumonic mischief, as we have after tracheotomy. Bronchitis and pneumonia are very common in children who breathe much by the mouth, so that the respired air is insufficiently warmed ; especially is this the case in cold and miserable children who cry much.

There would appear to be a species of antagonism betwixt inflammations of the external and internal portions of the respiratory tract, and they are rarely found together ; nor is this unintelligible after the foregoing considerations. That the hyperæmia of the respiratory organs is protective, like the glow of the snow-baller's hands, we cannot doubt ; but if this be disturbed by general body-chill, and in the lungs still more by the cold blood coming in from the cutaneous surface, it is not improbable that the hyperæmia may pass into inflammation.

The practical considerations which are the outcomes of this review of the pathology of cold are these. Never to wear wet clothes after active muscular exertion has ceased, but to change them at once ; to meet the loss of the body-heat by warm fluids and dry clothes ; to avoid long sustained loss of heat which is not met by increased production of heat ; to increase the tonicity of the vessels of the skin by cold-baths, etc., so educating them to contract readily on exposure—by a partial adoption, indeed, of the "hardening" plan ; to avoid too warm and debilitating rooms and temperatures ; to take especial care against too great loss of heat when the skin is glowing ; and to prevent the inspiration of cold air by the mouth by some protecting agent, as a respirator. We can readily understand how a respirator should be an effective protection against winter bronchitis in those so disposed.

The relations of the production and loss of heat are not alike in different persons. Some have a high production and little loss of heat, and such persons bear exposure well ; they do not readily catch cold, and are commonly too warm. Others, again, bear cold badly ; they lose heat quickly ; and in winter they are chilled with cold. Old people bear cold ill ; their heat-producing power is low. Children are susceptible to cold from their comparatively large surface, or cooling area. The anæmic bear exposure ill, from deficiency of red blood-corpuscles and consequent impairment of the chemical interchanges. The convalescent easily takes cold, from the system not having recovered its resistive power, and from lack of promptness in the regulatory arrangements.

THE EXCESSIVE MORTALITY OF CHILDREN.

MR. JOHN LIDDLE, in his last quarterly report on the sanitary condition of the Whitechapel district, discusses the causes and remedies of the excessive mortality of children in the metropolis at length, and with characteristic ability.

The causes of the large mortality of children in the metropolis may, he considers, be to some extent accounted for—

1. By the general ignorance of the principles of the laws of health.
2. By improper nursing of children, and leaving them in the charge of young children, who are not sufficiently robust to carry them properly in the streets. Even when in charge of the mother, they are exposed without sufficient covering to protect them from the cold and damp.
3. By the ignorance of mothers, as regards the absolute necessity of their infants breathing pure air, as is too frequently shown by the keeping closed the window and door of the living and sleeping-room.
4. By hereditary disease in many children.
5. By the intemperance of parents, who, from repeated drunkenness, are unable to attend to their children.
6. By the deficiency of food.
7. By the use of improper food.
8. By the neglect of offspring, especially of those which are illegitimate.
9. By the want of artificial warmth.
10. By the overcrowding of rooms.
11. By the administering to children of opium, and other narcotics.
12. By the defective sanitary condition of the localities occupied by the poor.
13. Numerous deaths of children, who are born of drunken parents, are caused by convulsions, and other diseases of the nervous system.

Some of the causes of the large amount of mortality of infants under one, and of children under five, having been stated above, it is a question of great importance to all persons who are ratepayers, and especially to those who are not only ratepayers, but who devote much time and money in the promotion of charitable and philanthropic objects, to inquire how this excessive death-rate can be diminished. It is a question well worthy of consideration, whether it would not be much better to expend money in the prevention of disease and of early death, than in mitigating those sufferings of the poor which are occasioned by sickness and poverty. Large sums of money are constantly being spent in the very questionable benefit of erecting buildings for the houseless poor, in the distribution of articles of food to the necessitous, in the supply of coals, blankets, etc., which might, probably, be better applied to the prevention of the numerous evils incidental to poverty.

For the purpose of ameliorating some of the evils which he thus enumerates, he proceeds to consider what can be done by the Local Sanitary Boards, by private individuals, and by charitable institutions, by Boards of Guardians, and by the Metropolitan Board of Works.

Something may be done by the several Local Sanitary Boards to benefit the health of the poor, so as to enable them to perform, in a better manner, such work as they may be able to procure:—

1. By causing all the narrow courts and streets to be cleansed daily, and the pavements in all the narrow and confined places to be kept in good repair. And here, Mr. Liddle asks, is it reasonable to expect the poor to keep the interior of their houses clean, when the narrow places in the vicinity are in a filthy state? It is, in his opinion, of far more importance to the health of the district to keep the localities where the poor reside in a cleanly state, than the wide thoroughfares. The stench arising, while some of these localities are being swept, in damp weather, is sometimes most abominable and sickening, for the majority of the poor inhabitants throw all their slops and filth into the public ways; and, when these are stirred up by the scavenger, the nuisance may be readily conceived.

2. By causing a constant and strict supervision to be given by the sanitary officers to the condition of the interior of the houses of the poor, so that overcrowding may be prevented, and the ventilation of the rooms, where defective, improved.

3. By the prompt removal of all nuisances likely to injure the health of the people.

4. By insisting that all the places occupied by the poor shall be supplied with water on the constant service, so as to do away with the butts and cisterns now in use therein.

The existing evils which are in operation, in producing the low moral and physical condition of the people, may be, to some extent, alleviated by private individuals, or by charitable associations:—

1. By purchasing some of the worst property in the most crowded districts, and so improving the sanitary arrangements in the houses as will enable the occupiers to live in decency, and engender feelings of self-respect. This suggestion can only be carried out by the new owners making frequent visits to each tenement, and kindly giving to each family a few words of advice on those subjects which relate to health; and if the accommodation in such houses be better than, and as cheap as, that in the contiguous houses, the tenants will readily put in practice the lessons they receive, for they will be informed that, unless cleanliness be observed, the parties must remove.

2. By using efforts to get the children of school age instructed in some of the elementary schools, and, if possible, to remove them from the contaminating influences of their homes.

3. By giving instruction to the parents in the proper management of children.

4. By discouraging the too prevalent custom of investing money in burial-clubs; and, instead thereof, endeavouring to induce the heads of poor families to become members of provident dispensaries, where, in time of sickness, medical attendance will be afforded. The extension of these institutions will be the means of inducing feelings of self-respect among the poor, by enabling them to procure, from their own resources, the needed assistance, instead of causing them to apply to the workhouse authorities; for we find that the first step in the downward path to pauperism is, when sickness occurs in a member of a family, that application is made at the workhouse for an order for the union medical officer; then, they having once found their way to the workhouse, and thereby become paupers, the downward course is continued. This example is followed, and thus the whole locality soon becomes pauperised.

5. By endeavouring to induce the poor, in times of prosperity, to invest small amounts in penny savings' banks.

6. As regards drunkenness, and the two-fold evils mentioned as consequent thereon, the only plan that can be suggested for diminishing this evil is to instruct the people by intercourse and example, and to remove the children to schools.

How far Boards of Guardians can contribute in carrying out the amelioration of the destitute class living in the unhealthy localities, by industrial schools, is a question which Mr. Liddle leaves for their consideration. If the children be left to the guidance of their parents, they will probably become paupers.

The best plan of improving densely crowded localities, which presents itself to his mind, is for the Metropolitan Board of Works to obtain powers for the compulsory purchase of lands and houses which are unfit for habitation, and sell the ground, either to private individuals or public companies, for the purpose of erecting suitable houses for the use of the working-classes, according to plans prepared by their surveyor, and approved of by the Board.

So long as the poor are suffered to remain huddled together in the several narrow courts and alleys in London, into which no other persons, except the police, relieving officers, medical officers of the union, and sanitary officers, enter, little or no improvement can be expected to take place in the moral, physical, or intellectual condition of the people. It is necessary to the well-being of a community that the rich and the poor should live in accessible proximity to each other, and should not be separated in the manner they now are in London—the wealthy occupying the wide thoroughfares, and the poor the bye and narrow places on each side of them, so as to be out of sight, and, alas! too frequently, out of mind. So long as this state of things exists, the poor and ignorant have little prospect of becoming improved; whereas, if the habitations and localities of the poor were thrown open to public view, by widening some of these confined places, the inhabitants thereof would profit by the example of their richer brethren. Much has recently been done in Glasgow, under the powers of the renewed Improvement Act, 1871, which enable the Lord Provost, Magistrates, and Council of the city, for the purposes of this Act, to take houses and lands compulsorily, to make new streets, to alter old ones, to purchase lands and houses by agreement, to erect new buildings, to dispose of land by lease or feu for building purposes, etc. By these powers, the authorities have extirpated seats of contagious fever, and have greatly improved the moral and physical condition of the people; and this has been done without inflicting any suffering upon the poor.

M. VILLEMIN has been elected a member of the Section of Medical Pathology in the Academy of Medicine, Paris. At the final scrutiny, he obtained 43 votes, M. Jaccoud having 34.

MR. WILDERS has been elected co-Professor of Forensic Medicine in Queen's College, Birmingham. Mr. Wilders has been for several years one of the Professors of Materia Medica, and is one of the surgeons to Queen's Hospital.

THE "Alumni Society" of the College of Physicians and Surgeons of New York are endeavouring to raise by subscription a fund of 100,000 dollars, for the purposes of establishing laboratories for the prosecution of chemical, physiological, and pathological experiments, and of founding a chair of Pathological Anatomy in the College.

DR. F. RIEGEL, of Würzburg, has accepted an invitation to the post of Director of the Medical Department of the City Hospital in Cologne. His acceptance was conditional on compliance with the condition proposed by him, that a physiological and chemical laboratory, and other means of carrying on scientific and clinical work, should be attached to the hospital.

STREET-NOMENCLATURE IN FRANCE.

THE Mayor of Bordeaux a short time ago addressed a letter to the President of the Society of Medicine and Surgery in that city, stating that it was the intention of the authorities to name some streets after distinguished natives, and asking for the names of some eminent medical Bordelais. The Society has, in reply, transmitted the names of Desault, Aran, Cazeaux, and Desgranges. Bordeaux already possesses streets bearing the names of Magendie, Guérin, Gratiolet, etc.

DEATH FROM CHLOROFORM.

We hear that a man died under chloroform last week at University College Hospital. He had scarcely become unconscious, when his pulse suddenly failed, and all efforts to restore him were unsuccessful. A tumour in the parotid region was about to be explored with the aspirator.

A MISDESCRIPTION.

In the proceedings of the Central Criminal Court this week, is reported the case of a person, described as Edward Butler Wright, aged 30, who was condemned to twelve months' imprisonment, for inhumanity and misconduct, in leaving unattended a woman in difficult labour, who subsequently died. We find, upon inquiry, that no such name appears on the "Medical Students' Register of the General Medical Council in England".

THE NURSING AT KING'S COLLEGE HOSPITAL.

In referring lately to the subject of nursing at King's College Hospital, we alluded to a rumour that the Secretary had a feeling against the system in use, which might possibly have tinctured his reports on the subject of nursing to the Council. We learn, on the best authority, and we have the greatest pleasure in stating it, that this has not been the case. We are assured, by a distinguished member of the Council, that the Secretary has always shown the utmost partiality and delicacy of feeling in dealing with this difficult subject; and we hasten to do him the justice to make public that avowal. That the duties and position of a secretary of a hospital nursed by a sisterhood are often extremely difficult and delicate, every one who has any knowledge of the subject will very readily admit.

INVALIDS FROM THE GOLD COAST.

We learn, on inquiry, that all the invalid soldiers at Netley from the Gold Coast are progressing favourably towards convalescence. Captain Butler (now Major Butler), whose energy, courage, and tact in his mission to Akim are so much praised by the special correspondent of the *Times* in his final letter on the war published on the 6th instant, and whose life is mentioned in the same letter to have been in a most precarious condition during the voyage home, was received at Netley in a very debilitated condition. His state on admission, indeed, appears to have been the source of great anxiety to his medical attendants; but we are happy to hear that all unfavourable symptoms are now gradually disappearing. The *Victor Emmanuel* hospital ship, on which there were many severe cases of dysentery and fever, and some of serious wounds, when she left the Gold Coast, may be expected to reach our shores in a few days. She left St. Vincent on the 21st of March, and letters written on that date mention that the officers on board expected the vessel to arrive in England about the 15th of April. The recent strong winds may not improbably bring her home a few days earlier than was then anticipated.

THE PRESERVATION OF FOOD.

At the meeting of the Academy of Medicine in Paris on March 31, M. Poggiale read a report which had been made to the Sanitary Council of the Department of the Seine, on a process for preserving meat proposed by M. Tellier, a civil engineer. The process consists in keeping the chamber or vessel containing the meat at a temperature of about 30 or 32 deg. Fahr. M. Tellier objects to ice, as it gives off moisture, and does not lower the temperature sufficiently or uniformly; he prefers dry air, or rather fluid currents at a temperature of 14 to 17.5 deg. Fahr. In his establishment at Auteuil, the cold is produced by the evaporation and condensation of methylic ether. The apparatus consists of a *frigorifère* in which the ether is evaporated, a condenser kept cool by a stream of water, and a force-pump. The ether-vapour, escaping from the *frigorifère* at a tension of about one and a half atmospheres and a temperature of —5.8 deg. Fahr., is subjected in the condenser to a pressure of six, seven, or eight atmospheres. The vapour is thus liquefied, and the fluid returns into the *frigorifère* without any sensible loss. This alternation of the gaseous and fluid states is constantly maintained, and produces cold. M. Poggiale had seen at Auteuil mutton, hare, partridge, pheasants, etc., in a perfect state of preservation, though they had been kept for weeks and even months. Some of the meat and game was roasted and eaten, and was found to be excellent. These observations were confirmed by MM. Bouley and Péligot. M. Poggiale exhibited some specimens to the Academy, all which were in good condition; and, in reply to a question from M. Blot, he said that they would remain good for three or four days, like ordinary meat. The game, however, was stated by M. Poggiale and M. Bouley to lose its flavour to a considerable extent. Ordinary butcher's meat is less affected in this way. It is said that M. Tellier proposes to form a vast establishment for the preservation of food in South America.

THE DWELLINGS OF THE POOR.

We noticed last week the memorial upon this subject which has been addressed by the College of Physicians to the Prime Minister. We have since received a copy of a similar memorial which is about to be presented to the Home Secretary by the Charity Organisation Society. These two memorials have, we believe, been drawn up in concert, and aim at substantially the same benefit to society; but, while the one represents the medical feeling of the country, the other emanates from a body of social reformers and philanthropists. Both bodies alike feel that, until something effectual is done to improve the dwellings of the poor, it is vain to talk either of sanitary improvement or of social and moral reformation. A man's home—the physical and social atmosphere which habitually surrounds him—cannot fail to have the most important influence upon his health and character; and, until this atmosphere is cleansed and purified, we must expect that all our sanitary laws and all our social reforms will meet with only a very partial success. We are glad to see the College of Physicians taking the lead in this appeal to the Government, and we trust the appeal will not be made in vain.

THE MEDICAL DEPARTMENT IN THE ASHANTEE WAR.

The manner in which the medical arrangements for the Ashantee war were planned and executed, and the support given to the medical officers by Sir Garnet Wolseley, are thus summarised in the concluding letter of the special correspondent of the *Times* on the 6th instant.

> "Sir G. Wolseley deserves much credit for the manner in which he supported the medical profession, and the personal attention he paid to hygiene. Deputy Surgeon-General Home organised the medical campaign, displaying forethought and wisdom almost amounting to genius. The arrangements he made were well carried out by his successor, Surgeon-Major Mackinnon, C.B. Surgeon-Major Waters, already well known in connection with sanitary improvements at Sierra Leone, joined the expedition as Mackinnon's professional assistant. Both these distinguished officers went to the front on battle-days, and dressed wounds under fire. A young surgeon named Atkins deserves to be specially mentioned. Attached to Major Russell's regiment, he remained always in the bush from the time of his arrival (in the *Ambriz*) till the end of the campaign, and was more often under fire than any other medical man. There were others who did honour to their noble profession."

This tribute of praise is no more than is deserved. Unless the sanitary organisation had been well considered, the medical preparations and supplies ample and appropriate, and the duties of the executive medical officers carried out with zeal and intelligence, it is not improbable that the comparatively small European force at Sir Garnet's disposal would have become so reduced in numbers from the effects of sickness, that Coomassie itself would never have been reached. The war just happily concluded was essentially, as has been often stated, a "doctor's war"—that is, a war in which the most judicious and complete sanitary precautions were of the first importance to ensure the success of the undertaking. We have been glad, therefore, to see the rewards which have been given to medical officers who held prominent positions in the campaign; and we have reason to believe that some further rewards to other officers of the medical department will be shortly forthcoming. We confess that we felt some disappointment that precedent did not allow the House of Commons to include the medical department in its vote of thanks. As the occasion was almost unprecedented, so we think precedent might for once have been set aside, and the case treated on its own merits. All honour to Dr. Lush and to Colonel North for the manner in which they called attention to the omission. It is not to be forgotten that, in fighting in the African bush, the medical officer with the troops is as much exposed to the fire and treachery of the enemy as the troops themselves; he runs the same risks from the effects of the pestilential climate; and very often, when the day's march is over, the fighting done, and others can lie down to rest, his most anxious and arduous work begins. It is most satisfactory, then, that the medical officers, both administrative and executive, should in the late war have performed their responsible duties with that perfect success with which all have admitted them to have been attended.

ARMY MEDICAL SCHOOL AT NETLEY.

THE summer session of the Army Medical School at Netley opened on the 1st instant. An excellent introductory address was delivered on the occasion by Professor Parkes, F.R.S., in the presence of the military and medical staff of the establishment. The number of candidates for commissions who have joined is forty-five: eleven for the Royal Navy, sixteen for the Army, and eighteen for the Indian Medical Service. A limited number of surgeons of the Indian and Naval Medical Services have also joined the School for the session.

TRICHINOSIS.

THE German periodicals report several cases of trichinosis. In Hasselbusch, early in March, a lady, her servant, and eight other persons were infected by eating a small quantity of raw pork. Several children also in Rapendorf are said to have been attacked with trichinosis in consequence of the use of some sausages given them by their companions in Hasselbusch. In Lissa, five persons in a merchant's house have been attacked with trichinosis. They had partaken of a ham, which, according to all accounts, was well pickled and smoked, and boiled for two hours. From further inquiries, it was ascertained that the remainder of the ham was full of trichinæ. Its vendor was ill from the same cause.

PRIZES OF THE ACADEMY OF MEDICINE.

THE award of prizes—or, to speak more correctly, the award regarding prizes—for the year 1873 by the Academy of Medicine in Paris gives the following results. The Academy prize of 1000 *francs* (£40) falls to Dr. Gustave Puel of Figeac (Lot) for his essay on the subject proposed, viz., "The History of Resection of Bones in their Continuity after Gunshot Wounds (Resection of Joints not included)." There was no competition for the Portal prize of 1000 *francs* (subject, "The State of the Bones, especially the Vertebræ, in Cancer of the Viscera"); nor for the Civrieux prize of 900 *francs*, on "The Transient Mental Disturbances which occur during Convalescence from Acute Diseases". For the Capuron prize of 3000 *francs* for the best unpublished work on any subject in obstetrical science, there were four competitors, but none of the essays came up to the standard; and the same fate attended the single essay sent in by a candidate for the Barbier prize of 3000 *francs* for the discovery of the means of curing some incurable disease. The Godard prize of 1000 *francs* was not awarded; but a recompense of 700 *francs* was given to Dr. Poncet for his essay on *Mal Perforant*, and one of 300 *francs* to Dr. Felizet for his Anatomical and Experimental Researches on Fractures of the Skull. The Amussat prize of 1000 *francs*, for researches tending to the improvement of surgical therapeutics, was awarded to Dr. Jacques Reverdin of Geneva, for his essay on Skin-grafting. The Itard triennial prize of 2700 *francs* was not awarded; but Dr. Armieux received a recompense of 1000 *francs* for his Medical Studies of Barèges, and Dr. Deroubaix of Brussels one of 500 *francs* for his treatise on Uro-genital Fistulæ in the Female. The prizes bequeathed by the Marquis d'Ourches, of 20,000 *francs* for the discovery of a sure and simple means of recognising the signs of real death, capable of general use, and of 5000 *francs* for the discovery of the means of ascertaining death by electricity or other scientific means, were competed for by one hundred and two candidates. The larger prize was not awarded; the smaller one was divided as follows: 2000 *francs* to Dr. J. E. Molland, 1000 *francs* each to Dr. Linas and Dr. P. Durand, and 500 *francs* each to Dr. Martenot (of Cordova) and Dr. J. F. Larcher. Drs. Crimosel (of Tillors), Ernest Weber, Paul Levasseur, and Poncet, received honourable mention. The following are the subjects for 1874 and 1875. *Prize of the Academy* (1000 *francs*); 1874, the best unpublished work in experimental physiology; 1875, "The Treatment of Aneurism by the various modes of Compression." *Portal Prize* (2000 *francs*); each year, the best essay on some question in pathological anatomy. *Civrieux Prize* (900 *francs*); 1874, "The Part taken by the Nervous System in the production of Glycosuria"; 1875, "On Insomnia." *Barbier Prize* (2000 *francs* in 1874 and 3000 *francs* in 1875); the discovery of the means of curing diseases generally regarded as incurable. *Godard Prize* (1000 *francs*); 1874, the best work on internal pathology; 1875, the best work on external pathology. *Orfila Prize* (2000 *francs*); 1874, "Aconitine and Aconite." *Rufz de Lavison Prize* (2000 *francs*); 1874, "The Determination by Facts of the Changes in Function and the Organic Lesions in Man and Animals which may be attributed to Change of Climate." *Saint Lager Prize* (1500 *francs*); each year, "The production of Thyroid Tumours in Animals by the Administration of Substances derived from the Water or Soil of Countries where Goître is endemic." *Falret Prize* (1000 *francs*); 1874, "On Insanity and its relation with Epilepsy." *Capuron Prize* (3000 *francs*); 1875, the best unpublished work on some question in obstetric science. *Amussat Prize* (1000 *francs*); 1875, the treatise on anatomical and experimental researches which shall have realised or prepared the way for the most important advance in surgery. *Lefèvre Prize* (3000 *francs*); 1875, "On Melancholia in its relation to General Paralysis." *Argenteuil Prize* (8000 *francs*); 1875, the greatest improvement in the treatment of stricture or other diseases of the urinary organs during the preceding six years. The Committee on the hygiene of infancy offers in 1875 a prize of 1200 *francs*, of which the following is the subject: "Determine the statistics of the mortality of children under one year of age; 1. According to age—*i.e.*, from week to week during the first month, then from one to three months, from three to six, from six to nine, and from nine to twelve months; 2. According to sex; 3. According to civil condition; 4. According to age; 5. According to locality; 6. According to the months of the year." Essays on the various subjects must be written in French or Latin, and sent in before March 1st.

DR. FENWICK OF MONTREAL.

DR. G. E. FENWICK of Montreal, the senior editor of the *Canada Medical Journal*, has lately received a most gratifying mark of esteem at the hands of his professional brethren. He has for some time been unfortunately incapacitated for the performance of his duties by severe illness; and, on his being advised to remove to a warmer climate, his medical friends at once determined that he should receive some expression of their sympathy and esteem. Accordingly, on February 5th, he was presented with the sum of 1000 dollars, together with an address engrossed on parchment, and signed by fifty-five medical practitioners of Montreal.

UNITED TWINS.

To the recorded cases of united twins, another has recently been added by Dr. D. M. Heywood, of Taylor's Island, Maryland. He reports in the *Philadelphia Medical and Surgical Reporter* for March 21st, that he was called on February 4th to attend in labour the wife of one Thomas Travers, a coloured man. Labour had commenced six hours previously; the head of a child had been for some time protruding externally. Not being able to move it in any direction, Dr. Heywood succeeded with some difficulty in bringing down two left hands. Concluding from this that the case was one of twins, he made a further examination, and ascertained that the children were firmly connected, the upper one lying crosswise above the pelvis. Separation by an instrument being evidently a tedious if not impossible process, and dangerous to the mother, he applied traction by means of a cord placed round the neck of the presenting child, which had been dead for some time; and, after some trouble, succeeded in effecting delivery. The woman bore the operation well; there was but little hæmorrhage, no rupture of the perinæum; and recovery was complete within three weeks. The children were females, well formed and perfect in every respect, eighteen inches in length, and weighing about fourteen pounds. They were joined facing each other from a point just below the nipples to the umbilical cord; and the strength of the connecting band was such that there was but a slight rupture at the upper portion, though it must have borne nearly the whole of the strain in the delivery of the second fœtus.

THE MEDICAL EXAMINATION OF SAILORS.

MR. HARRY LEACH, Medical Officer of Health for the Port of London, writes to the *Times* on this subject as follows.

The subject of "unseaworthy sailors", as contrasted with that of "unseaworthy ships", appears just now to attract considerable attention; and the one is so intimately connected with the other, that the quality of the vital material of a ship's belongings would appear to come fairly within the scope of the Royal Commission now sitting, when exhaustive evidence has been taken as to the inanimate components of the vessel. Abundant evidence can be obtained of the bad sanitary condition of sailors at the present time; and I have been very recently informed by Mr. Johnson Smith, surgeon to the *Dreadnought* Seamen's Hospital, that the number of single cases of scurvy admitted into that institution has lately been on the increase, indicating pretty clearly not so much improper or deficient diet afloat or bad hygienic conditions, as that the subjects of the disease have commenced the voyage in a bad state of health, and, therefore, specially obnoxious to the inroads of the malady. The sanitary clauses of the Duke of Richmond's Act, passed in 1867, have, as to anti-scorbutics and crew spaces, done a vast deal of good; but the permissive clause relating to the medical inspection has, with two or three trifling exceptions, never been brought into operation. All who know anything about the quantity and quality of sailors, engineers, firemen, and other workers afloat at the present time, will naturally enough declare, and perhaps rightly, that a compulsory and universal medical examination of seamen before signing articles would be next to impossible, because the supply would at once fall short of the demand. I submit, however, as a middle course, the following propositions.

1. That when a medical officer is borne on a ship's books, such officer should always be present at the shipping-office when articles are signed, to advise the master or mate as to the choice of his men.
2. That the shipping-master should be officially empowered to secure the attendance of a medical inspector, when requested to do so by the owner or master of any ship, in order to advise the latter on sanitary matters in the choice of his crew.
3. That the Board of Trade (representing the emigration-office) should require the crews of all vessels carrying emigrants to be examined by their own medical inspectors.

The adoption of these suggestions would not necessarily lead to the wholesale examination of any one ship's crew, for if a sailor presented himself in, superficially speaking, a suspicious state of health, the master or mate might, on the advice of a doctor, give the option of a medical examination, declining to take him without such a test. Much would, of course, depend upon the acumen of the medical inspector; but I believe that, in the majority of cases, the physically unfit seamen would be eliminated from the sound men without much difficulty.

MEDICAL GRADUATES IN PHILADELPHIA.

THE hundred and eighth "commencement" of the medical department of the University of Philadelphia was held on March 12th, when the degree of Doctor of Medicine was conferred on one hundred and twenty-one gentlemen. Prizes of 100 dollars each were awarded to Dr. C. F. Frowert for an essay on the Physiological Antagonists of Physostigma, and to Dr. J. R. Haynes for an essay on Ligatures. On the 11th, a similar ceremony took place in the Jefferson Medical College, when one hundred and fifty-nine candidates received the title of Doctor. After the conferring of the degrees and the award of several prizes, Dr. Addinell Hewson, on behalf of the Association of Alumni, presented to the trustees of the College a handsome portrait of Professor Joseph Pancoast. On March 13th, eighteen ladies received their degrees from the Women's Medical College in Philadelphia.

SCIENTIFIC MEDICINE IN GERMANY AND ELSEWHERE.

THE *Philadelphia Medical Times* contrasts, in a recent number, the different manner in which the study of scientific medicine is encouraged in Germany and in America.

"In a late number of the *Edinburgh Medical Journal* is an account of the physiological laboratory under the care of Professor Ludwig at Leipzig, an account which we commend to the attention of those who wonder or are annoyed at the little recognition that American scientific medicine receives abroad. The laboratory is built so as to surround three sides of a rectangle, with a court-yard in the centre, and is about one hundred and twenty feet in each direction. It is furnished with various rooms for chemical, histological, and physiological work, with an aviary, frog-ponds, stables, rooms for small animals, etc.: all necessary apparatus, from a steam-engine to prepare blood-serum, to a table and automatic respiratory bellows for curarised animals, is in profusion. Here students are received, and, after a little training, are put to work under the direction of Professor Ludwig, who is thus enabled to multiply, as it were, his hands, and thereby do far more justice to his brain-power than if he had to work out all his ideas himself. The result is already seven goodly volumes of valuable researches—a result which alone is more than America has produced in the century. Leipzig, a town about the size of Providence, contributes to the world in a single year more in physiology that is worth the looking at than does America in a decade—not because the German intellect is superior to the American, but because the Germans elect professors who are workers, and would eject as a *lusus naturæ* one who did not continue to work whilst holding his position, and because the Germans encourage young men, and give them training and opportunities for work and guidance in their early flights."

THE ADDRESS AND TESTIMONIAL TO DR. MURCHISON.

IN consequence of the premature death of the late Dr. John Murray, great delay in presenting this address has occurred. It is now, however, decided to present it on Saturday, the 18th instant, at Dr. Murchison's house, 79, Wimpole Street, at 3 P.M., when Sir Thomas Watson will act as spokesman. Saturday, the 11th instant, will be the last day for receiving subscriptions to the address and contributions to the Testimonial Fund, which should be sent to Mr. W. D. Christie, C.B., 32, Dorset Square, N.W.

IRELAND.

THE DUBLIN WATER-WORKS INQUIRY.

THE decision of the Irish Local Government Board upon the question of the pollution of the rivers supplying the Vartry Lake, to which we referred in detail some weeks since, was communicated to the Rathdrum Board of Guardians on March 31. The decision is far from satisfactory, as it shows the utter powerlessness of the central authority in a matter in which, above all others, the public had a right to expect, from recent legislation, that the Local Government Board had the most ample powers. The result of this is best shown by the following extract.

"As to the proposed compulsion of the guardians of the Rathdrum union to adopt a system of drainage and sewerage at the expense of the poor-rate, which would enable the lost supply of water to be restored to the reservoir, it is not in either of these capacities that the Board of Guardians can be absolutely called on to do so, and any order of the Local Government Board to that effect would be liable to be disobeyed with impunity. As the nuisance authority for Roundwood, the guardians could not be required by the Local Government Board to abate the nuisance which has already been abated, and neither as nuisance or sewer authority for Roundwood, could they be required by the Local Government Board to restore to the Corporation of Dublin the lost supply of water.

"Whether legal remedies exist otherwise than through the exercise of the powers of the Local Government Board the board does not know; but it trusts that the present inquiry may tend to the avoidance of litigation between the parties, and in that hope they undertook to cause it to be made."

The Local Government Board, which is the chief sanitary authority for Ireland, "does not know whether legal remedies exist, otherwise than through the exercise of the powers of the Local Government Board". We should be surprised if the Local Government Board did know, for sanitary law in Ireland is in pretty much the same state as in England, which Mr. Michael described, in our last week's issue, "as a jumble of statutes". A better argument in favour of sanitary reform could not exist than this judgment of the Irish Local Government Board, which has cost much money to obtain, and is not worth the paper it is written upon. We shall return to the question of sanitary reform in Ireland at an early opportunity.

THE KING AND QUEEN'S COLLEGE OF PHYSICIANS AND FEMALE PRACTITIONERS OF MIDWIFERY.

AT a meeting of the King and Queen's College of Physicians in Ireland, held on Saturday last, April 4, the following resolutions were finally adopted and passed as College bye-laws, regulating the admission of female candidates for the College license to practise midwifery.

Qualifications: Age, not less than twenty-one years; certificates of character.—*Preliminary Examination:* Reading, writing, and arithmetic.—*Course of Instruction:* Six months' attendance on systematic lectures on midwifery, and not less than six months' attendance on bedside instruction in a lying-in hospital or maternity recognised by the College.—*Subjects for the Examination:* Midwifery, not including operations, and nursetending.—*Examination Fee:* One guinea.—*Form of Midwife's License:* We, the President and Fellows of the King and Queen's College of Physicians in Ireland, having duly examined —— in midwifery and nursetending, and having found her to possess a competent knowledge of the same, do hereby license and authorise the said —— to exercise the calling of a midwife and nursetender.

From the foregoing regulations, it is evident that the license granted to women will be different from that at present granted to men, who must be registered medical practitioners. It is a legal question whether the College can grant two different kinds of midwifery license. The charter only empowers the College to license females in midwifery, and men (and possibly women, too) in medicine; the midwifery qualification of the Irish College of Physicians is a registrable qualification. So, we presume, a female licentiate in midwifery can place her name on the *Register*, if she so desire. The College, by a large majority, refuses to take a legal opinion upon these questions, believing, we think rightly, that it is for the licentiates themselves to raise the question of their legal status.

PRESENTATION.

ON Thursday, the 2nd instant, a deputation of the students of the Ledwich school of Medicine, and of St. Vincent's Hospital, Dublin, waited on Dr. O'Leary, M.P., at his residence, and presented him with an address and handsome epergne, on the occasion of his being elected to represent Drogheda in the Imperial Parliament.

A NEW BULB STRICTURE SOUND.

A CORRESPONDENT writes: Last week, I had an opportunity of seeing Mr. B. Wills Richardson, of the Adelaide Hospital, Dublin, use his new stricture-sound for exploring the urethra from behind. The instrument is an ingenious one, and will explore a stricture in either direction, but chiefly from behind forwards, with the object of insuring accuracy in the extent of incision made with the urethrotome, especially with the one that cuts from behind forwards. The instrument is a bulbed sound, made of steel, the bulb being composed of half bulbs articulated with the extremity of a stylet which plays in a granulated cannula. These bulbs are either closed or divaricated by means of a milled screw-nut placed at the handle end of the sound; the amount of divarication being ascertained by examining the movement of an index point attached to the stylet. The size of the bulb, when closed, is equivalent to No. 6 of Weiss's gauge, and when separated fully, their longest diameter equals No. 13 of the same gauge. For enlarging a stricture by a gradual dilatation from behind, this instrument is also of considerable service. There is at present in the hospital a patient who, on admission, only allowed a No. 4 gauge to pass, but now permits, after one week's treatment, No. 9 easily; a practical proof that it answers all the purposes necessary when this method of treating a stricture is considered advisable.

THE ADDENDUM TO THE BRITISH "PHARMACOPŒIA".

II.

As might have been expected, considerable interest was excited by the announcement that, at the meeting of the Pharmaceutical Society on Wednesday, April 1st, the preparations comprised in the recently published additions to the *British Pharmacopœia* would be placed on the table and made the subject of a critical discussion. The meeting was unusually well attended; and, after some short papers had been disposed of, Mr. Umney proceeded to treat of the thirty-four new remedies and substances as follows.

The introduction of *Acetic Ether* was commended, as well as the formula given for its preparation; but objection was taken to the fact that it is only ordered to be rectified after digesting with calcium chloride, since the product thus obtained would almost infallibly retain free acetic acid. On examining three samples of commercial acetic ether, Mr. Umney had found in one of them as much as 10 per cent. of free acetic acid; this was the one of the three which agreed with the specific gravity indicated in the Appendix. He considered it was an important omission that rectification over alkaline carbonate had not been prescribed as a means of removing this impurity, as directed in the French *Codex*. Some exception was also taken to the data given in the additions as regards the characters and tests of this preparation.

As regards *Nitrate of Ammonia*, Mr. Umney directed attention to the circumstance that commercial samples of this salt often contain chlorides, and consequently would then yield nitrous oxide contaminated with the irritating vapour of ammonium chloride. Hence the importance of the test with nitrate of silver, for ascertaining whether the salt was of proper purity.

The chief point referred to concerning *Nitrite of Amyl* was the necessity of preparing from true amylic alcohol, and not, as has been sometimes the case, from fusel oil, which often only contains a small amount of this alcohol, together with others which yield distinct ethers probably of quite different physiological properties. The possible presence of prussic acid in each crude product was also indicated. Hence it might have been well to define in the additions the proper characteristics of the material from which amylic nitrite should be prepared.

Aqua Chloroformi was instanced as probably one of the best additions to the *Pharmacopœia*, since it would serve to do away with much of the inconvenience due to the sparing solubility of chloric ether, as well as to the varying nature of the preparations known by this name.

The *Oxide of Bismuth*, now made officinal, was considered by Mr. Umney to be a gain, since it admits of bismuthic preparations being made free from the impurities commonly present in the solution made as hitherto ordered.

The two *Hypophosphites of Lime and Soda* have so long been recognised as important medicinal agents, that their admission to the *Pharmacopœia* was almost a matter of course, though it was suggested that there is still a want of some formulæ for convenient modes of administering these salts, such, for instance, as the syrupus ferri hypophosphitis, now in some demand.

In speaking of phosphorus preparations, Mr. Umney drew attention to the advantages, in certain cases, of using a phosphoric acid solution of greater strength than the 10 per cent. solution now officinal. He would employ, in such cases, a solution containing at least 50 per cent., as described by Mr. Carteighe in the *Pharmaceutical Journal* of March 26, 1871.

In further reference to the element phosphorus, which is now playing such a prominent part in the medical treatment of our present "high pressure" days, Mr. Umney asked how it was that a preparation so popular as that known by the name of Parrish's Syrup should not have an officinal formula, as well as the citro-tartrate of soda, which was introduced in imitation of a similarly well known popular preparation, and to keep pace with the public taste for physic.

Similarly imitative are the mustard leaves (*Charta Sinapis*) now made officinal, and perhaps not likely at once to be prepared so elegantly as those of French manufacture.

While approving of the direction that *Chloral Hydrate* should, for medicinal purposes, be used in the state of definite crystals, Mr. Umney mentioned that it would have been desirable to indicate the particular liquid from which it should be crystallised. This is more especially the case, since the use of alcohol for the purpose, though convenient in certain respects, would have the disadvantage of furnishing crystals of alcoholate of chloral—a substance of very different medical properties.

The need of such a preparation as the *Fluid Extract of Liquorice* was regarded as being a sufficient reason for its introduction into the *Pharmacopœia;* but some surprise was expressed that the starting-point in its preparation should be liquorice in powder instead of the extract, and that the promised use of glycerine and proof spirit had been discarded; but, though it was thought that there would be little lamentation over, or escape from, the glycerine mania prevalent across the Atlantic, doubt was expressed as to the preservative action of so little as 11 per cent. of rectified spirit in preventing acetous fermentation. The omission to indicate the proper specific gravity of the preparation was pointed out as a defect.

Of the *Yellow Oxide of Mercury* little was to be said, except to note its convenience for preparing the oleates of mercury now used by some practitioners for hypodermic injection, and likely to find greater favour when they have been more extensively tried.

The *Solution of Morphia* ordered for hypodermic use was objected to, on the ground that it was not likely that its preparation by a good manipulator could be generally ensured, although the process was theoretically sound, and likely to furnish uniform results. A solution prepared direct from acetate of morphia, even with all its faults, was held to be more probably satisfactory, more especially when required hurriedly. Again: regret was expressed that this opportunity of introducing the adoption of the decimal system had been allowed to slip; for, since it might be held that, at least for all things new in medicine, we had made up our minds to count by ten rather than by twelve, we might have, in this instance, had a solution of one grain in ten minims, and then the Continental pharmacist would more readily have been able to dispense an English prescription ordering this preparation.

Larch Bark was next alluded to, and it was mentioned that there are two or three spurious larch barks to be found in the trade.

The use of chloroform in the preparation of *Liquor Gutta-percha* is also ordered in the United States *Pharmacopœia*; but it was suggested that, had benzol been officinal, it would have answered the purpose equally well. The carbonate of lead acts as a mechanical purifier.

Liquor Magnesiæ Citratis is introduced as a preparation containing true citrate of magnesia; the process is a modification of the French for purgative lemonade, acid carbonate of potash being ordered instead of the corresponding soda-salt as in the *Codex*. The pressure of the carbonic acid generated is not so great as in ordinary lemonade, but is sufficient to make a palatable drink. Mr. Umney would have preferred the use of simple syrup and tincture of fresh lemon-peel to the syrup of lemons ordered.

Oleum Phosphoratum was criticised as containing 0.74 per cent. of phosphorus, instead of being 0.1 per cent. solution. It was also stated to be "straw-coloured", and not "colourless".

The necessity of following the officinal directions for the preparation of *Pepsine*, especially in washing and scraping, was mentioned. The quantity of coagulated albumen to be dissolved as a test was thought by the speaker to be a correct one, although the time allowed, at any rate for calf's pepsine, was not quite long enough.

The directions for the new *Phosphorus Pill* were said to give a satisfactory result, but the process was rather tedious. Mr. Umney found the mass to increase 13 per cent. in weight by absorption of water. The product will then contain about 1 per cent. of phosphorus.

Pilula Scammonii Composita, the new non-aloetic cathartic mass, was described as elegant, but rather expensive; and it was suggested that essence of ginger might have been substituted by the oleo-resin of ginger, which is officinal in the United States *Pharmacopœia*.

The omission of sulphur, which is ordered in the *Compound Liquorice Powder* of the German *Pharmacopœia*, was noted in the new English preparation; but the speaker remarked, that no doubt the Committee had strong reasons for its rejection.

The introduction of *Sapo Animalis* into the *Pharmacopœia* was described as a wise step, and a strong opinion was expressed in favour of its substitution for the hard soap made with olive-oil, formerly ordered in the preparation of linimentum potassii iodidi cum sapone.

The new juices—the expressed juices of *Belladonna* and *Henbane*, mixed with spirit—were spoken of with approval. Fresh belladonna herb had been found to yield 60 per cent. of expressed juice, and henbane herb 70 per cent.; the specific gravity being about ·990 to ·997.

Of the formulæ for the *Suppositories*, Mr. Umney stated that that for the carbolic acid and soap suppository did not work well, the quantity of moisture being insufficient. He would prefer to omit the starch, and use equal parts of curd-soap and curd-soap in powder. The formula for the suppository of morphia and soap yielded a suppository weighing 16½ grains, and that for the suppository of tannic acid and soap one weighing 23½ grains. The latter two, through the presence of glycerine, it was thought, might become slightly adhesive on exposure to damp air.

The *Syrupus Chloral* was emphatically condemned, as not being, to a pharmacist's eye, a syrup at all, the specific gravity being only 1.280. Mr. Umney suggested a syrup containing less water and more simple syrup, having a specific gravity of about 1.320; and, if the sugar were objected to, a simple solution of chloral in water, ten grains to the drachm.

With respect to the *Tincture of Fresh Orange-peel*, it was remarked that there appeared to be an error in ordering the maceration in a pint of spirit, and then, at the conclusion of the operation, the addition of sufficient spirit to make up a pint, as the product, instead of decreasing, increased about 10 per cent. in volume. In making *Tincture of Larch-bark*, there is a loss of about 10 per cent. by volume of spirit. It was also mentioned, that hitherto proof spirit has usually been used for the latter preparation.

Finally, Mr. Umney alluded to two preparations "conspicuous by their absence"—the acetum and oxymel of ipecacuanha—which, it had been stated over and over again, were to have had a place in the Appendix. Mr. Umney suggested that, if these had been found unstable, an aceto-alcoholic fluid extract should be prepared and investigated, with a view to its use in future editions, either as a fluid extract, or as a syrup made by dilution of the fluid extract.

Many of the objections urged by Mr. Umney seem to indicate the necessity of giving greater prominence to the element of practical pharmacy in the Pharmacopœia Committee of the Medical Council. This has long been done in other countries, and the adoption of such a course would certainly be advantageous here; for, though it is true that the decision as to the medicines to be comprised in the *Pharmacopœia* must always remain with those who have to prescribe their use, still questions as to the best means of preparing them for various purposes call greatly for the aid of the practical pharmacist, who, being daily occupied in such work, is enabled to bring to bear the results of his experience, so as to advantageously promote the objects of the physician. If this were properly done, we should then, perhaps, hear less of complaints that officinal formulæ were inferior to other methods of preparation. The material services which Professor Redwood has already rendered in this direction may, perhaps, not without advantage, be supplemented by the aid of other pharmacists.

THE SOHO HOSPITAL FOR WOMEN.

THE following statement has been issued by the retiring members of the medical staff of the Hospital for Women, Soho Square. It is signed by Dr. Alfred Meadows, Messrs. C. Heath, John Scott, and T. Edgelow, and Drs. Edis and Squarey. Appended to it are copies of the correspondence with the Hospital Committee.

We, the undersigned, think it due to the public and the profession that the following correspondence and statement of facts relating to our resignation of office in the Hospital for Women, Soho Square, should be published, in order that the position taken by the Committee and ourselves may be understood.

It will be observed that the dispute refers to two subjects: first, the nursing of the hospital; and, secondly, an alteration in the bye-law regulating the tenure of office of the honorary medical officers.

Without attempting any lengthy statement, it may be sufficient to say, in regard to the first question, that for several years past this subject had been constantly under the consideration of the medical staff, who had long felt that the nursing was far from satisfactory; that there was no proper supervision; that young girls and old women were put in positions for which they had no vocation, no training, and no qualification from experience or otherwise. Formerly, the nursing was in great part under the control of the staff, who looked to the matron to carry out their directions in this respect: she, however, had also to consult the General and Ladies' Committees; and it is not, perhaps, much to be wondered at that, being the servant of so many, she was obedient only to those from whom she derived her position. Gross neglect and lamentable inefficiency, with their necessarily disastrous consequences, naturally led to remonstrances from the staff; but the desire of the matron to make all things smooth with the Committee, led her to disregard the warnings of the medical officers, and, being supposed by the Committee to know her work, they were influenced more by the opinion she gave than by our experience of its effects. Previously to this, other minor differences arose between the Committee and the staff on questions which we felt were peculiarly within our province; such, for instance, as the class of persons who were to be regarded as fit recipients of the charity, the amount which those who paid should pay, questions relating to medical expenditure, and the like. Hence arose a feeling of antagonism on the part of the General Committee, and an impression that the staff were taking too much upon themselves in the general management of the hospital.

At length matters reached a crisis: cases of severe internal inflammation were directly traced to gross neglect in the nursing; the whole hospital became unhealthy from dirt and mismanagement; loud complaints of neglect were made by the patients; the matron either could not or would not satisfy the just requirements of the staff; and, accordingly, with a deep conviction of the gravity of the question, the Medical Committee requested Dr. Gairdner, on his retiring from the office of house-physician in November last, to present a report giving his experiences of the nursing and general internal management of the hospital. This was the first step in the dispute which has culminated in our resignations. Dr. Gairdner's report was thoroughly investigated by us, and finally sent to the Committee.

On this subject, Dr. Protheroe Smith sent a letter to the Medical Committee. The reply of the Committee caused us equal surprise and regret, for we all felt that not only was our request reasonable and proper, but that, being responsible for the lives of our patients, the conscientious discharge of our duties required acquiescence in it. Our first impulse, then, was to tender our resignations; but, after grave deliberation, we decided to remonstrate with the Committee, and to lodge with them a protest casting the responsibility of the future on their shoulders. This led to the appointment of a Subcommittee; no intimation, however, of this has ever been sent to us, but only a formal resolution, accompanied by no letter, asking for *written* evidence to be placed before the General Committee in support of the charges we had preferred, but which the Committee had previously declared had "little or no foundation".

About this time we heard, on good authority, that one or more of the staff had become particularly obnoxious to certain of the General Committee, and, apparently in order to effect their speedy removal, they secured an alteration in the bye-law which regulates the term of office of the honorary medical officers, so as to enable them to carry out this intention, and that, too, within twelve days of the time when notice of the alteration was received. The new bye-law was received by the staff on the 19th December, and was to come into operation on the 31st.

This *coup de main* was, however, frustrated by an intimation made to the Committee, that as the staff had been appointed for *two years* in the previous January, the contemplated action was illegal. Accordingly, the Committee met hastily, and so far rescinded their resolution as to postpone its application to the time when it could be legally enforced. The terms of the amended bye-law were, however, still objectionable; and it was, moreover, so evident that what we had regarded as a mere matter of form, was now to be a living reality—viz., periodical re-election, with the possibility and even probability of non-election—a formal proceeding which, in years gone by, had, indeed, been often entirely overlooked, some of the staff having never heard even of its existence, that we felt our position exceeding uncertain and insecure. In this opinion we were confirmed by the fact which was brought to our knowledge, that on a former occasion, several years ago, the Committee had so dismissed, by not re-electing, one of the physicians—the late Dr. Tanner.

Accordingly, we decided that, pending the settlement of this new question, that of the nursing had better be postponed, especially as the Committee had expressed themselves perfectly satisfied with the present *régime*, until it might be considered by those (our successors) who would have the responsibility of its experience.

Our remonstrances, and, finally, our threat of resignation, which was most unwillingly made, in reference to this alteration in the bye-law, were of no avail. The Committee referred us to other hospitals where a similar regulation existed; but they overlooked the fact, that in all of them the rule in question held good, not only in regard to the medical staff, but also to all other officers and committees. Besides which, in those institutions there is an appeal beyond the Committee to the general body of governors; whereas at Soho, not only is there no appeal, but the rule in question applies only to the staff, and the Committee are responsible to no one, for *they elect themselves, and the governors have no voice in the matter!* Moreover, we believe there is no instance on record where this power of dismissal by non-election has ever been exercised except in the one case already referred to at Soho.

At last, when the Committee found that we had determined to resign, they acceded to our request so far as to propose that the new bye-law should not apply to the existing holders of office; and although this proposal would have made our tenure of office permanent, inasmuch as the old bye-law had been swept away for the new, which was not to apply to us (a result which, we are informed, however, the Committee did not contemplate), yet the offer itself was made in terms so offensive and insulting, and accompanied by such imputations on our professional honour, that its acceptance was thereby rendered impossible; especially as it was now apparent that to return to work with a Committee so constituted, and with such a disposition towards an honorary medical staff, would be to place ourselves in a position wherein we were liable at any time to have the stigma of a dismissal cast upon us.

In conclusion, as it has come to our knowledge that a rumour is current, to the effect that some religious question is at the bottom of the whole dispute, we desire to give this rumour the most emphatic contradiction, and to state most distinctly that throughout the whole discussion not one word on this subject has ever been uttered. How such an idea has originated we do not know, and can only imagine that it has been circulated by some who are anxious to divert attention from the professional bearing of the question.

We cannot conclude this statement without expressing our regret at the conduct of the Committee, and our surprise that they should have treated the staff—some of whom have been officers of the hospital for a great many years—with such scant courtesy and consideration. We regret very much that the charity should suffer by this action, and after years of faithful service and much hard work for the welfare of the institution, we are sorry to have had our resignations forced upon us as they have been; nor can we believe that the true interests of the charity, as is declared by the Committee, required such meddling legislation.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the Freemason's Tavern, Great Queen Street, Lincoln's Inn Fields, London, on Friday, the 17th day of April next, at 3 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

37, Great Queen Street, London, March 31st, 1874.

BATH AND BRISTOL BRANCH.

THE next meeting of the session will be held at the York House, Bath, on Thursday evening, April 16th, at 7 o'clock; E. L. Fox, M.D., President, in the Chair.

R. S. FOWLER,
EDMUND C. BOARD, } *Honorary Secretaries.*

Bath, March 26th, 1874.

NORTHERN BRANCH.

THE spring meeting of the Northern Branch will be held at Bishop Cosin's Library, Durham, on Thursday, April 30th, at 2.45 P.M.

The President, Dr. Heath, will deliver an address, entitled "Reminiscences of a Visit to Vienna and Zurich."

The following papers have been promised.

1. On a Rare Form of Dislocation of the Hip-Joint. By Dr. Heath.
2. Notes of a Case of Injury to the Knee-Joint. By W. L. Emmerson, Esq.
3. Report of a Case of Paracentesis Thoracis. By Dr. Philipson.

Gentlemen who are desirous of reading papers or exhibiting specimens are requested to communicate with the Secretary at their earliest convenience. G. H. PHILIPSON, M.D., *Hon. Sec.*

Newcastle-upon-Tyne, March 30th, 1874.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THERE will be only one meeting this spring, which will be held at Gravesend, on Friday, May 29th (D.V.); A. SHEWEN, M.B.Lond., in the Chair.

FREDERICK JAMES BROWN, M.D., *Hon. Sec.*

Rochester, March 30th, 1874.

WEST SOMERSET BRANCH: SPRING MEETING.

THE spring meeting of this Branch was held at the Royal Clarence Hotel, Bridgwater, on Thursday, April 2nd, at 5.15 P.M.; GEORGE GILLETT, Esq., President, in the Chair.

The Secretary produced letters of regret from twenty-five members who were unable to be present.

Discussion on Chloral Hydrate.—The question on which the members of the Branch were invited to give their opinion, viz., as to the relative value of Chloral Hydrate and Opium, in allaying pain and inducing sleep, was introduced by the President. Written answers from Dr. Cordwent, Dr. Mackay, Mr. Stephens, and Mr. Collyns were read. The members present severally stated their opinions, which were of a diversified character; and an animated discussion resulted.

Cases.—1. Mr. F. J. PARSONS (Bridgwater) read a short paper on

Two Cases of Stone in the Bladder, a disease of rare occurrence in the neighbourhood. Both his cases had occurred within a short time of each other, and the patients came from the same parish. In the one case lithotomy, and in the other lithotrity had been successfully resorted to.

2. Mr. PARSONS also related a case of very severe Salivation from Pregnancy, in which he had been obliged to induce abortion to save the patient.

CORRESPONDENCE.

INSTRUCTION OF MIDWIVES.

SIR,—We all remember the Old Bailey instructions to counsel, "No case—abuse plaintiff's attorney". Either unable or unwilling to answer my objections to State recognition of a class of imperfectly educated practititioners, Dr. Aveling, having condemned my arguments as "illogical and desultory", now accuses me "of wishing to turn midwives into the workhouse and of unconsciously working against the interests of the general practitioner, etc."

I will reply to my friend Dr. Aveling in his own words: "His intentions, I know, are the very best, but, in this instance, his enthusiasm exceeds his discretion". I take strong exception to the doctrine taught by Dr. Aveling, viz., that "most intelligent practitioners" are so selfish and mercenary, that, "having used the poor for their own purposes, in establishing their reputation, as soon as they have gained their object, they hand over to the midwife all those patients who cannot afford to pay remunerative midwifery fees". He tells us "that a man who has been up all night, or detained all day at a labour, is often either tempted or obliged to neglect his other work", but seems to argue that, while this is a serious objection to what he calls "low midwifery practice" (a term against which I protest, as applied to the work of the humblest practitioner), it is no insurmountable obstacle to the more remunerative practice in the higher social scale.

Dr. Aveling does well in recommending young men to attend a large number of labours; and, as there is a constant succession of young men growing up, why suggest the necessity for transferring this useful source of experience to imperfectly educated women? As to the honour which the obstetric department of medicine is to derive from the attempt to "meliorate midwives", how stands the case at present?

The scheme of the Obstetrical Society has been before the profession for some two years, and I suppose its most sanguine advocates will scarcely pronounce it to have proved a success; in fact, its failure is implied in the subsequent attempt, on the part of the British Medical Association, to substitute for voluntary efforts, a compulsory basis, and this latter has been already condemned by one of the largest and most influential of the Branches.—I am, etc. A. B. STEELE.

Liverpool, March 28, 1874.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

HASTINGS AND ST. LEONARD'S WATER-SUPPLY.

FOR some time past, the water-supply for Hastings and St. Leonard's has been unsatisfactory, and, as its quantity is to a large extent dependent on a surface-supply, the dry autumn and winter which have just passed have caused renewed anxiety for the coming summer season. In the poorer districts, the supply has been decidedly deficient, and, even in the best houses fronting the sea, a full supply is rarely obtained when the town is full of visitors, and when it is most required. The water is also of an inferior quality. According to the *Hastings Chronicle*, visitors who have chosen St. Leonard's as a winter resort have, in consequence of the impure water-supply, been compelled to leave it; and analysis has shown that it contains about three times as much matter, of animal and vegetable origin, as occurs in the average of potable waters supplied to our large towns—a standard of comparison which is by no means high. Years ago, some of the leading inhabitants did all they could to induce the authorities to seek a fresh source of supply, but their efforts were unavailing, and even at the present time the Water Committee is stated to be unwilling to act. One thing, however, appears to be dreaded, and that is a falling off in the prosperity of the place, which is almost sure to result if the present unsatisfactory circumstances gain too much publicity. The facts cannot, in our opinion, be too widely made known.

THE POOR-LAW SYSTEM.

AT a meeting of the Victoria Discussion Society, held on Thursday week, Sir C. Trevelyan, Bart., in the Chair, Dr. Platt read a paper upon the subject of the administration of our Poor-laws. From his position of Poor-law Medical Officer, he said that the conviction had forced itself upon him that our Poor-law system was based upon wrong principles; and that by withholding aid where it was most needed, we increased the ranks of pauperism. The manner in which the sick were treated, he argued, was a most fruitful source of pauperism. The object should be to treat the sick poor at their homes; the doctor should have full power to order what he thought necessary, and the relieving officer should be bound to obey the order of the medical officer in supplying the sick person with whatever he (the medical officer) thought necessary.

ADULTERATION PROSECUTION.

AT the Leeds Borough Police Court, six dealers in milk have been charged with having sold adulterated milk. The average proportion of water added was 12 per cent. In one case, where the proportion was as much as 27 per cent., Mr. Bruce (stipendiary magistrate) imposed a penalty of 60s. and costs; in the other cases, of 40s. and costs each. The defendants were unanimous in denying that they had added the water to the milk, alleging that the admixture took place before the milk came under their control. Mr. Bruce, however, informed them that that did not relieve them of responsibility, as they had the option of having the milk supplied to them analysed. These are the first prosecutions of the kind in Leeds under the Adulteration of Food Act.

MEDICAL OFFICERS OF HEALTH.

A CORRESPONDENT of the Plymouth *Lantern* writes:

"Sir,—The town council of Brighton has elected Dr. Taaffe, medical officer of health for the borough, at a salary of £200 a year. Dr. Littleton has just been elected medical officer of health for Plymouth, at a salary of £50 a year; a remarkable difference, certainly, in the pecuniary estimate of the value of such services, as such would not be more arduous or more time-taking in Brighton than in Plymouth. I can only conjecture one must be *overpaid*, or the other *underpaid;* but which of these suppositions is the correct one? I shall be glad to have an authoritative opinion on the matter to present to the readers of the *Lantern.*"

REPORTS OF MEDICAL OFFICERS OF HEALTH.

MONMOUTH.—Dr. Willis, the Medical Officer of Health for the Monmouth rural sanitary district, reports that the death-rate during the latter half of 1873, was fourteen per 1,000 living; but, although this district has enjoyed a comparatively small general mortality, the conditions which tend to bring about high death-rates, and which favour the spread of infectious diseases, are by no means absent. In the West Dean or Forest District, enteric fever caused a large amount of sickness and some mortality last spring; some of the villages, which are mostly inhabited by miners and iron- and tin-workers, appear to be destitute of every proper sanitary arrangement, and pools fouled by human excreta are used for drinking purposes. All this was brought under the notice of the sanitary authority some time ago, but, as frequently happens, nothing whatever has been done in the matter. No time could, however, be more favourable than the present one for effecting improvements in the sanitary conditions under which the working classes of such districts live; trade is extremely prosperous, and the owners of property are better able than ever to provide decent accommodation and proper homes for those whom they employ. In some colliery districts great sanitary improvements are being made, but from the report before us, it is evident that no change for the better is taking place in the West Dean coal-field.

CHERTSEY.—Mr. E. L. Jacob, the newly appointed Medical Officer of Health to a combined district in Surrey, has issued reports on the sanitary condition of two villages in the Chertsey rural sanitary district. The first relates to the village of Hersham, which lies upon a bed of gravel overlying London clay. No means by which this porous subsoil could be polluted appear to have been neglected. The village is practically undrained; the slops and liquid refuse being poured into the subsoil either directly or indirectly by means of porous cesspools; privies with leaky cesspits, undrained piggeries, and heaps of refuse still further add to the prevailing pollution, and it is from this same soil that the water-supply of the village is procured, by means of shallow surface-wells. As a natural consequence, the place is unhealthy, and it has already been the seat of an outbreak of enteric fever. The village of

Byfleet very much resembles Hersham in its sanitary arrangements, the main point of difference between the two lying in the disposal of the sewage, which in Hersham is into cesspools, whereas in Byfleet it is conveyed into the ditches and water-courses, with which the village abounds. In these it stagnates, and causes serious nuisance. The sanitary defects prevailing in these villages are very clearly indicated in the reports, and the remedies which they require are obvious An improved system of disposal of excrement, such as either the dry earth closet or the ash closet proposed by Mr. Jacob, should be substituted for the present privy with pit; a system of drainage for the removal of all house-slops and liquid refuse should be laid down; the provision of a wholesome water-supply is required; and, in conjunction with these steps, all cesspools should be finally abolished.

Reading.—The death-rate for the borough of Reading, during the past six months, has been 17.7 per 1,000 inhabitants, and the town has been remarkably free from the prevalence of any infectious diseases. Dr. J. Shea reports, however, that the infantile mortality is large, a result which he attributes to the want of proper sanitary measures in the more crowded and poorer parts of the town, where improved ventilation, regular cleansing of premises, and more frequent removal of refuse are required. He also calls the attention of the sanitary authority to the necessity of passing new bye-laws, for it appears that, at present, back-to-back houses can be, and are constructed; that no standard of cubic space has been adopted with a view of dealing with overcrowding; and, above all, it is essential that definite regulations should be laid down, which will enable the authority to control all connections with the new system of sewers, in such a way as to prevent the injurious effects which must necessarily result if they be so made as to allow the escape of sewer-air into the houses.

MILITARY AND NAVAL MEDICAL SERVICES.

SURGEON-MAJOR WYATT.

We have to announce, with great regret, the death of Surgeon-Major John Wyatt, C.B., of the Coldstream Guards. Mr. Wyatt had long been in a declining state of health, and had done little if any regimental duty for nearly two years. His death, therefore, which took place on the 2nd instant at Bournemouth, although sudden, can hardly be said to have been unexpected. A highly complimentary regimental order has been issued, and the honours of military burial were accorded. The funeral was largely attended.

THE REGIMENTAL SYSTEM IN THE ASHANTEE WAR.

We should like to draw the attention of our readers to one result of the unification system which has been clearly brought out by the late war. In former campaigns, the surgeon of a regiment actively engaged and well pushed to the front was tolerably certain of picking up some share of whatever was going in the way of rewards, and usually got a C.B.; but the very liberal honours bestowed on our medical brethren from Ashantee were exclusively given to the staff, and the regimental officers have received nothing for their laborious and responsible duties. We do not mention this for the purpose of making any complaint, for the arrangement may be for the good of the service in every way; but it is well known that all the most distinguished officers now serving in the department gained their first rewards as well as professional credit by regimental duty in the field.

CHANGES IN THE ARMY MEDICAL DEPARTMENT.

We believe it is now finally settled that, in consequence of the succession of Sir William Muir to the supreme position at Whitehall Yard, he will be succeeded by Deputy Surgeon-General Rutherford, M.D., C.B., as head of the sanitary department; and that Dr. Rutherford's duties in connection with the medical branch will be taken up by Deputy Surgeon-General Monro, M.D., C.B. This officer, who is at present acting as Principal Medical Officer at Devonport, has had nearly twenty-nine years of full-pay service, including the Crimean and Indian campaigns, and has proved himself popular and efficient both in the regimental and administrative ranks. We also understand that two promotions will shortly take place to the rank of Surgeon-General, and that these will be conferred on Deputy Surgeons-General Gordon and Rutherford, who have well earned the distinction by the able performance of special and varied duties. Some rearrangement of stations being rendered necessary by these changes, we believe we are correct in stating that, in the first place, the medical command at Gibraltar is to be in future that of a Surgeon-General, and that Surgeon-General Balfour will shortly go there from Netley. He will be succeeded at the Royal Victoria Hospital by Dr. Fraser from Aldershot; and he, in his turn, will be relieved at that station by Dr. Gordon, C.B. We are not in a position to state what further changes may be in contemplation; but these promotions will, at all events, having the effect of absorbing Deputy Surgeons-General Home and Mackinnon, and preventing the necessity which might have arisen for placing these officers temporarily on the half-pay list.

THE PROSPECTS OF PROMOTION IN THE ARMY MEDICAL DEPARTMENT.

We understand that, previously to his retirement, Sir Galbraith Logan was offered another seven years' tour of duty as Director-General. It is not unnatural, however, to suppose that he felt the necessity for rest, after more than forty years' active service; but the flattering proposal was declined, we believe, mainly on the ground that his further retention of office would interfere with the promotion of others. We feel sure that so excellent an example will be appreciated as it deserves; for any prospect of advancement to the higher grades of the department is impossible to the great mass of medical officers now serving. Among the many plans which have been proposed to remedy this evil, we may specially draw attention to one which has for its object the limitation of service in the ranks of surgeon and deputy surgeon-general to five and twenty years respectively. In conjunction with a strict observance of the rule for compulsory retirement after a certain age, this would no doubt work well in stimulating the sluggish flow of promotion, and removing some of that hopeless feeling which must now attach to the future prospects of all junior officers. Some such plan as this would have prevented the overwhelming claims of interest from placing a surgeon-general for the second time in possession of the great pecuniary prize in India; and Sir Galbraith Logan has, therefore, added a most honourable termination to his honourable career, by sacrificing his own interests to those of the profession.

OBITUARY.

JOHN L. H. McFARLANE, M.B.

Few recent events have created more sorrow, not only in the professional, but in the general community of Edinburgh, than the premature death of this promising young physician, who died, in the Royal Infirmary, on March 17th. He was the second son of the late Dr. John McFarlane, of Montego Bay, Jamaica, who, in his day, was well known as a demonstrator in the anatomical classes of Mr. Lizars. The subject of the present notice was born in Jamaica, came to Edinburgh as a child, received his general education in Edinburgh, and pursued his medical studies in the University of the Scottish metropolis, where he took his Bachelor's Degree in August last. After his graduation, he became Resident Physician in the Royal Infirmary, under Dr. Haldane, and in that capacity showed a rare aptitude for clinical work and observation, with which essential qualities he combined a kindliness of manner and gentleness of demeanour to the patients, which made him a favourite with them all. At the same time, his thoroughly gentlemanly deportment and genial humour led all the other residents in the hospital, and all who were brought in contact with him, to esteem, or rather to love him, as a personal friend.

To the students of the University, and also to the general community, he was known in a character very different from that of the earnest clinical student. He was, *facile princeps*, the athlete of the University, or rather of the youth of Edinburgh; and there were few records of deeds of prowess in athletic exercises, in or near Edinburgh, in which McFarlane did not appear in a foremost place. When he had taken his degree, he applied himself to clinical and practical work, with the same indomitable energy which had enabled him to carry off so many prizes in the athletic arena. Up to the day when he was prostrated by the accident, which was the prelude to his fatal illness, he was not only energetically carrying on his clinical duty in Dr. Haldane's wards, but was occupying his leisure hours with medico-chemical work in Professor Maclagan's Laboratory in the University.

At a football match, in February, he met with a severe fall, which injured his right knee-joint, and laid him up in bed. Probably owing to the exposure which his fall in the field entailed upon him, when overheated, he was attacked with sharp rheumatic fever, in the course of which well-marked pericarditis showed itself. Under active treatment, however, the rheumatic fever and its concomitants were subdued, and he appeared to be convalescent, when he was attacked with violent vomiting, followed by hæmatemesis, and he gradually sank, retaining to the end his consciousness and mental tranquillity.

John McFarlane, though one of those many young men to whom personal distinction and professional success were ruling objects of ambition, had been too well brought up to have any hostility to the considerations which refer to the life to come; and, therefore, when the hopes of the Christian faith were more closely brought home to him during his illness, he gladly welcomed them, and, with perfect calmness and peace, resigned himself to that fate which he saw to be inevitable.

The regard and esteem in which he was held was manifested at his funeral. About four hundred students preceded the hearse, which was followed by the resident physicians and surgeons of the Royal Infirmary, the rest of the *cortège* consisting of the mourning coaches containing his personal friends, and the carriages of Professors of the University, and medical and surgical officers of the hospital.

FREDERICK WOODMAN, M.D., L.R.C.P.

Dr. Frederick Woodman, who died at Deal, on March 15, at the early age of 34, was the third son of the late Mr. William Woodman, surgeon, of Exeter; and following in the steps of his two elder brothers, commenced his professional career at the Exeter Hospital as dresser to Mr. James, then one of the most distinguished of our provincial surgeons. Thence he went to Guy's, where, in 1862, he took the first prize of his year (value £40). Having taken the usual qualifications, and graduated at St. Andrews, he was for a short time assistant medical officer at the Wyke House Asylum. He then accepted a commission as assistant-surgeon in charge of the steamship *Kwantung*, in the Anglo-Chinese navy. After the unexpected collapse of this perfectly-equipped little force, the *Kwantung* was ordered to Bombay to be sold, and on arriving there, early in January, 1864, it was found that the transport *Queen of the North* (crowded with invalids and time-expired men), was detained by the illness of the surgeon, and Dr. Woodman consented to take his place. Cholera was then prevalent at Bombay, and it speedily broke out on board the ship; and between February 8 and February 13, thirty-nine persons were attacked with it, besides very many with diarrhœa. In all there were twenty-six deaths. On the arrival of the ship at Portsmouth, a military court of inquiry was held; and the finding of the court, which was very complimentary, was conveyed to Dr. Woodman, by the Commander-in-Chief, in most flattering terms, fully appreciating his services, and approving of all that he had done. Soon after his return to England, Dr. Woodman succeeded to a practice at Deal, where he continued to reside until his death. This was caused by myelitis, obscure symptoms of which had existed for about two years; they were, however, thought to be only rheumatic. Shortly before Christmas he felt quite well, but there was still a stiffness in the lumbar region. Early in January he became rapidly worse, and was obliged to give up work. Paraplegia and disordered sensation came on very quickly, but after a few days gradually improved; double vision, however, and other signs of affection of the upper part of the spinal cord supervened, and he sank at last apparently from disorder of assimilation. There was no general paralysis, and he maintained his consciousness until within a few hours of his death.

His brother practitioners have united in expressing to his widow their sense of the loss they experience in the death of one for whom they had so much regard, and with whom they had worked with such unanimity and cordiality. His funeral was attended by a large number of people of all classes, who were anxious to show their respect to his memory.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

Dr. Bradbury's Lectures.—The Linacre Lecturer on Physic gives notice that he will resume his lectures on Pathology, at the Old Anatomical Schools, on Tuesday, April 14th, at 10 A.M., and continue them on every succeeding Tuesday, at the same hour, throughout the term. The subject of the lectures for the Easter Term will be the Pathology of Absorption, Nutrition and Secretion (skin and kidneys).

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 2nd, 1874.

Barlow, Thomas Carey, Dalston
Davies, Elijah Knox, Brimscombe Court, Gloucestershire
Rudduck, John Burton, Epping, Essex
Simmonds, William Allason, Gravesend, Kent

MEDICAL VACANCIES.

The following vacancies are announced:—

ARDEE UNION, co. Louth—Medical Officer for the Dunleer Dispensary District: £120 per annum.

BALLINASLOE DISTRICT LUNATIC ASYLUM—Visiting Physician: £100 per annum. Applications, 13th instant, to Dr. Eaton, Resident Medical Superintendent.

BOOTLE BOROUGH HOSPITAL—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 20th instant, to T. P. Dawson, Hon. Secretary.

BRISTOL GENERAL HOSPITAL—Physician. Applications, 22nd instant, to Henry Fox. R.N., Secretary.

BURY DISPENSARY—House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 16th instant.

CAMBRIDGE—Medical Officer to the Police.

CORK UNION—Medical Officer for the Workhouse.

COUNTY DOWN INFIRMARY, Downpatrick—Assistant Surgeon and Resident Registrar: £63 per annum, board, apartments, etc. Applications, 14th instant, to John K. Maconchy, Surgeon.

CROOM UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Adare Dispensary District: £120 per annum, and fees. Applications, 20th inst., to Matthew O'Flaherty, Hon. Sec., Donoman Castle, Croom.

CUMBERLAND INFIRMARY, Carlisle—House-Surgeon: £100 per annum, furnished apartments, board, etc. Applications, 22nd inst., to John Laver, Sec.

*DONEGAL UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Pettigo Dispensary District: £60 per annum, and fees. Applications, 23rd instant.

GENERAL HOSPITAL, Birmingham—Resident Medical Officer: £100 per annum, board, and residence. Applications, 27th instant, to W. T. Grant, House Governor and Secretary.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street—Medical Registrar. Applications, 15th instant, to Samuel Whitford, Secretary.

HOSPITAL FOR WOMEN—Physician; Two Assistant Physicians; Two Surgeons; Surgeon-Dentist.

HULL and SCULCOATES DISPENSARY—Physician.

HULL GENERAL INFIRMARY—Physician.—Pathologist: £100 per annum.

*IRVINESTOWN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Clonelly Dispensary District: £60 per annum, and fees. Applications, 23rd instant.

KILCHRENAN and DALAVICH, Argyllshire—Parochial Medical Officer. Applications, 1st May, to Rev. N. Mackenzie, Kilchrenan.

KILMACTHOMAS UNION, co. Waterford—Medical Officer for the Kilmacthomas Dispensary District: £120 per annum, and fees. Applications, 14th instant, to David Power, Hon. Sec., Newtown, Kilmacthomas.

LINCOLN COUNTY HOSPITAL—House-Surgeon and Apothecary: £100 per

LUNESDALE UNION, Lancashire—Medical Officer for Workhouse: £11 per annum, board, and lodging. Applications, 4th May, to J. W. Danby, Secretary. annum. For District No. 1: £49 per annum, if resident in the village of Hornby; any other part of district, £30 per annum, exclusive of usual extras. Applications, 21st instant, to Robert Stephenson, Clerk, Hornby.

METROPOLITAN ASYLUM DISTRICT ASYLUM FOR IMBECILES, Caterham—Assistant Medical Officer: £150 per annum, furnished apartments, and board. Applications, 16th instant, to W. F. Jebb, Clerk, 37, Norfolk Street. Strand.

NENAGH UNION, co. Tipperary—Medical Officer for the Silvermines Dispensary District: £100 per annum. Applications, 30th instant.

NEWCASTLE-ON-TYNE HOSPITAL FOR DISEASES OF CHILDREN—Physician.—Two Medical Officers.

NORTH LONDON CONSUMPTION HOSPITAL—Physician. Applications, 15th April, to W. Hornibrook, Secretary.

OXFORDSHIRE—Public Analyst.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

ST. GEORGE and St. JAMES DISPENSARY, King Street, Regent Street—Accoucheur. Applications, 23rd instant, to J. H. York, Secretary.

ST. SAVIOUR, Southwark—Public Analyst. District Medical Officer: £130 per annum and fees.

ST. THOMAS'S HOSPITAL—Resident Physician's Assistant: £100 per annum, furnished rooms, and commons.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

STAFFORDSHIRE LUNATIC ASYLUM—Medical Superintendent.

STRACHUR and STRALACHLAN, Argyleshire—Medical Officer for the Parishes of. Applications to A. Weir, Inspector of Poor, Strachur, by Inverary.

THE WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board, lodging, and washing.

UNIVERSITY OF OTAGO, New Zealand—Professor of Anatomy and Physiology: £600 per annum and class fees, and allowance for passage money and outfit. Applications, 25th April, to John Auld, Esq., W. S., Edinburgh.

WATERFORD UNION—Medical Officer and Public Vaccinator for the Ullid Dispensary District: £100 per annum, and fees. Applications, 16th instant, to Matthew Walsh, Hon. Sec., Ballynearla, Kilmacow.

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, furnished apartments, etc. Applications, 25th instant, to the Chairman of the Medical Committee.

* Held together.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Gill, Railton, M.D., appointed Medical Officer of Health for the Low District of Alston Union.—Salary, £20.

Joseph, George W., L.K.Q.C.P.I., elected Medical Officer of Health for the Borough of Warrington, *vice* Frederick Barton, M.R.C.S.Eng., resigned.

Rickards, Edwin, M.B., elected Honorary Physician to the Birmingham General Hospital.

OPERATION DAYS AT THE HOSPITALS.

MONDAY	Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.
WEDNESDAY	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY	Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY	St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Professor E. Wilson, "On the Uses of Gorgon Balsam"; Mr. Keene, "On a Recent Death from Bichloride of Methylene"; Dr. Routh, "On Certain Preparations of Phosphorus, and their Action on the Economy"; Mr. William Adams, "On a Case of Strangulated Femoral Hernia reduced by large Injections of Oil"; Mr. Francis Mason will show a patient with Infecting Sore on Thigh with Secondary Symptom.—Odontological Society. Communications by Messrs. Sewell, White, Coles, and James Parkinson; Mr. Spence Bate, "On Transplanting and Replacing Teeth".

TUESDAY.—Royal Medical and Chirurgical Society, 8 P.M. Ballot. 8.30 P.M. Mr. Mahomed, "On the Etiology of Bright's Disease and the Prealbuminuric Stage".

THURSDAY.—Harveian Society of London. 8 P.M. Mr. J. Keene, "On some Affections of the Naso-pharynx which give rise to Deafness".

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

Authors desiring reprints of their articles published in the Journal, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

We cannot undertake to return Manuscripts not used.

Communications respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

Xeno.—A Licentiate of the Royal College of Physicians of Edinburgh is considered to possess a fair professional status. The Licence only entitles him to practise *medicine*—not surgery.

Ovariotomy in the Young.

Sir,—In answer to Mr. Spencer Wells's request to be furnished with any cases of ovariotomy in young children that members of the Association may be acquainted with, I beg to refer him to the *Lancet* of the latter part of 1872, in a number of which journal are published the particulars of a case of ovariotomy in a child three years of age—the youngest, I believe, on record in this country—which I had under my care in the North Staffordshire Infirmary.

Burslem, March 23rd, 1874. I am, etc., John Alcock.

Dr. Spencer's Stethoscope.

Sir,—Can any of your readers bear testimony to the superior excellence of Dr. Spencer's stethoscope? and, if so, say where they can be obtained, and what the price of one would be? I am, etc., C. J. P.

London, April 6th, 1874.

Cremation.

Sir,—Many years ago, the advantages of cremation over interment, in the disposal of the dead, presented themselves to my mind, but always weighted with this practical difficulty—viz., that by cremation all chances of the detection of crime by *post mortem* examinations and chemical analysis will be annihilated. Many cases of crime will be undetected, or *post mortem* examinations will have to be made much more frequently than they are at present; in fact, in almost every case. The advocates of cremation will have to meet this difficulty before this mode of disposal of the dead can be adopted even permissibly. I am, etc.,

Ewing Whittle, M.D., M.R.S.A., Lecturer on Medical
Jurisprudence to the Liverpool Royal Infirmary
School of Medicine.

Liverpool, April 3rd, 1874.

Correspondents are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

Exemption of Medical Men from Serving as Jurors.

Sir,—In reply to M.'s letter on this subject, in the British Medical Journal of March 28th, I have to remark that the Medical Act exempted *registered* medical men from all juries whatsoever; and it is no solution of the difficulty to say (even if it be the case) that the clause only applies to civil and not to criminal trials, and that such trials take place in Edinburgh and not in the provincial towns; and I see no qualification in the Act referred to distinguishing special from common jurymen, so far as medical men are concerned.

The Tichborne case was originally a civil case. Were a similar case to be tried in Edinburgh, and one or two M.D.s compelled to serve on such a trial as jurymen, it would be the next thing to professional ruin. I am, etc.,

March 30th, 1874. A. J. Kinloch, M.D.

Maternal Impressions.

Sir,—Having observed in your issue of April 4th Mr. C. M. Thompson's remarks on "maternal impressions", I wish to place before your readers the following case, substantiating those quoted, which came under my notice many years ago.

Mrs. B., a healthy woman, about thirty-seven years of age, the mother of a large family, sent for me as usual to attend her in labour. The presentation was most extraordinary: in fact, I could not make it out. The labour, however, progressed favourably to its termination, when she (the mother), noticing some peculiar expression depicted on the countenances of those about her, exclaimed, "Oh, don't show it me; take it away: I know it's not right." (At this point your readers will perceive the maternal impression conveyed in the exclamation.) The object (or rather monster, more truthfully) had an elongated head somewhat resembling a frog's, with but one eye in the centre; the hands were almost human, but webbed completely from the wrists to the axilla, to the sides as far as the hips. Feet there were none, but rudiments from these to the buttocks were webbed in a similar manner. Fortunately, it was dead. The cause of this deformation, I ascertained afterwards, was, that in the early period of the mother's pregnancy, she was taking a walk in the fields, when she was suddenly startled by a large frog, which sprung across her path, and on to her foot and leg.

Other cases might be added, but I consider the above sufficient to verify the cases noted. I am, etc., T. R. Leeson, M.R.C.S.Eng., & L.M.D.

Wellington Street, St. John's, Blackburn, April 6th, 1874.

The Addenda to the "British Pharmacopœia".

Sir,—In the list given in your issue of to day of Addenda to the *British Pharmacopœia*, with comments "from the dispensing point of view", I find that exception is taken to the new "Injectio Morphiæ Hypodermica" as being only half the strength of that formerly in use. I take the liberty to say—having in view your promised examination of these Addenda from a medical and therapeutical point of view—that, in my humble opinion, the change in question is a step in the right direction. Ever since this mode of administering morphia was introduced, I have now and then heard and read of abscesses and other *désagréments* resulting from its use—consequences altogether attributable, I believe, to the employment of a too concentrated solution; the salt, etc., acting as a local irritant. From the time of its introduction up to the present, I have plied my Wood's Syringe, in administering morphia, as diligently, I venture to affirm, as most practitioners, and I cannot call to mind a single instance in which any, the slightest, mischance—beyond the occasional nausea induced by the constitutional action of the drug—arose from the practice.

The preparation I have invariably used—adopted at first, I admit, for no better reason than that it was at hand—is the Liquor Morphiæ Hydrochloratis of the *Pharmacopœia*; and my object in the present communication is to recommend this to others, as affording perfect immunity from injury or annoyance to the patient, and admitting, in all circumstances, of the necessary dose of morphia being administered hypodermically with perfect ease. I am, etc.,

Land Street, Keith, N.B., March 28th, 1874. R. Turner, M.D.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, April 3rd; The Ayr Advertiser, April 2nd; The West County Lantern, March 28th; The Scotsman, April 2nd; The Brighton Examiner, March 31st; The Leicester Advertiser, April 4th; The Blackburn Standard, April 8th; The Hull Evening News, April 3rd; The Sunderland Times, April 3rd; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Sibson, London; Dr. Murchison, London; Dr. Payne, London; Dr. George Johnson, London; Dr. Ransome, Manchester; Dr. Rumsey, Cheltenham; Our Paris Correspondent; Dr. Mercer, Beverley; Mr. T. Cooper, Glasgow; Mr. W. Storr, Brixton; Dr. Sheen, Cardiff; Mr. W. T. Grant, Birmingham; Dr. Hugh Miller, Glasgow; Mr. A. Parker, Birmingham; Dr. Elliott, Hull; Mr. Holmes, London; Mr. Murdoch, Shrewsbury; Dr. G. H. Philipson, Newcastle-upon-Tyne; Dr. F. J. Brown, Rochester; Mr. Hamilton, Liverpool; Dr. Whitehead, Manchester; Dr. Paul, London; Dr. Tripe, Hackney; The Secretary of the Odontological Society; Dr. J. W. Moore, Dublin; Mr. Poole, London; C. J. P., London; Mr. Howse, London; Dr. H. W. Williams, London; Mr. Shepherdson, Hull; Mr. Birchall, Leeds; Dr. Kelly, Taunton; Mr. Leeson, Blackburn; Our Dublin Correspondent; A. B.; Mr. Eastes, London; Dr. Mackey, Birmingham; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Bradbury, Cambridge; M.R.C.S.; Dr. Joseph Rogers, London; Dr. Phillimore, Nottingham; Mr. Oakley Coles, London; An Associate; Mr. Fairlie Clarke, London; Our Glasgow Correspondent; Dr. Robinson, Dublin; Dr. Langmore, London; Dr. Farquharson, London; The Secretary of the Quekett Club, London; Dr. Foster, Birmingham; Alpha Beta, Spalding; Mr. G. W. Joseph, Warrington; Mr. Poole, London; etc.

THE CROONIAN LECTURES
ON
FUNCTIONAL DERANGEMENTS OF THE LIVER.

Delivered at the Royal College of Physicians.

By CHARLES MURCHISON, M.D., LL.D., F.R.S.,
Physician and Lecturer on Medicine, St. Thomas's Hospital.

LECTURE II.—*Continued.*

III. *Abnormal Disintegration.* 1. *Lithæmia;* 2. *Gout;* 3. *Urinary Calculi;* 4. *Biliary Calculi;* 5. *Degenerations of the Kidneys;* 6. *Structural Diseases of the Liver;* 7. *Degenerations of Tissue throughout Body;* 8. *Local Inflammations;* 9. "*Constitutional Diseases.*"—IV. *Derangements of Organs of Digestion.* 1. *Tongue;* 2. *Appetite;* 3. *Taste;* 4. *Flatulence;* 5. *Constipation and Diarrhœa;* 6. *Vitiated Stools;* 7. *Intestinal Hæmorrhage;* 8. *Hæmorrhoids;* 9. *Hepatic Pain;* 10. *Jaundice, its Pathology.*—V. *Derangements of the Nervous System.* 1. *Aching Pains in Limbs;* 2. *Pain in Shoulder;* 3. *Neuralgia;* 4. *Cramps;* 5. *Headache—Megrim;* 6. *Vertigo;* 7. *Convulsions;* 8. *Noises in Ears;* 9. *Sleeplessness;* 10. *Depression of Spirits;* 11. *Irritability;* 12. *The Typhoid State.*

THE facts and arguments which I have now brought under your notice have led me to the conclusion that functional derangement of the liver, by interfering with the normal disintegration of albuminous matter, and by the production of peccant substances which are not readily eliminated, and which, therefore, accumulate in the system, may, in the long run, lead to many of the most serious maladies—both acute and chronic—to which our race is subject. I shall now proceed to consider certain symptoms, indicating derangement of the different physiological systems, but not constituting distinct diseases, which appear to result from functional disorder of the liver.

IV.—*Derangements of the Organs of Digestion.*

1. *The Tongue.*—It is well to remember that there may be considerable functional derangement of the liver, and yet the tongue may be perfectly clean and normal, or at most only slightly coated in the morning; but in many cases, and particularly if the derangement be of old standing, the tongue presents the appearances commonly described as characteristic of "atonic dyspepsia". It is large, pale, and flabby, and indented by the teeth at the edge of the anterior third, while its surface is white, and the papillæ are often elongated, so as to produce a pilous appearance. If the liver be somewhat congested, with these appearances we may often observe the fungiform papillæ on the tip and edges larger and redder than natural. In other cases, and especially when there is at the same time more or less gastric catarrh, the whole surface of the tongue is uniformly covered with a thick fur, sometimes whitish, but occasionally of a yellowish or brownish tint.

2. *The Appetite* may be excellent, although there is great functional derangement of the liver, with lithæmia, so that the patient is often tempted to eat what he knows from experience to disagree with him. But when the flow of bile into the bowel is deficient, the appetite is often bad, and there may be a loathing of fat and of greasy articles of diet. In cases, which are not uncommon, where there is much functional derangement of the liver in conjunction with hepatic congestion and chronic gastric catarrh, there may be a loathing of all food excepting alcoholic stimulants, which increase the existing mischief, but which, as I have already stated, may lead to the accumulation of large quantities of fat.

3. *A Bitter Taste* is not unfrequently complained of by persons who are the subjects of jaundice; but the symptom is not due to the presence in the blood of bile-pigment, which is tasteless, but may be owing to its containing taurocholic acid, which is intensely bitter, or some abnormal product of disintegrated albumen. This may explain why many patients suffering from functional derangement of the liver, but who have not a trace of jaundice, often complain of a bitter, or sometimes a "coppery", taste in the mouth, especially in the morning.

4. *Flatulence* is a common symptom of functional derangement of the liver. It is one of the most frequent results of a deficient flow of bile into the bowel, and, when the bile-duct is completely obstructed, it is rarely absent. It is also a common symptom in lithæmia, where there is often also a deficiency of bile in the bowel, and in all cases where the circulation through the liver is torpid. In all these cases, in consequence of a deficiency in the bowels of bile, which, as we have seen, is endowed with antiseptic properties, the intestinal contents undergo fermentation, and gas is generated, which accumulates in the bowels, the distension being usually greatest from one to three hours after a meal.

5. *Constipation or Diarrhœa.*—In a large number of cases of functional derangement of the liver with lithæmia, the bowels are more or less constipated; there is, probably, a deficiency in the quantity of bile which passes down the bowel, and, therefore, a want of the normal stimulus to peristaltic action. The motions are either unusually pale, or, from long detention in the bowel and the action upon them of the intestinal juices, they become black and lumpy. The latter condition is often associated with much depression of spirits, and hence the "melancholia" of early writers on medicine.

But functional derangements of the liver may be attended by the opposite condition of diarrhœa, or constipation and diarrhœa may alternate. It is generally assumed that this diarrhœa is due to an increased secretion and discharge of bile; and, in fact, "an excessive secretion of bile", showing itself in "copious, fluid, alvine evacuations, highly coloured with bile, often preceded by griping, by nausea, and sometimes by vomiting", is one of the three functional derangements of the liver described by Dr. Copland* and other practical writers. Dr. Copland admitted that "excessive biliary secretion is more frequently inferred from circumstances than proved by unequivocal evidence"; and, for my own part, without denying the possibility of the biliary secretion being sometimes excessive in quantity and unusually irritating, so as to excite diarrhœa, my experience has induced me to adopt a different explanation for most, at all events, of the cases of so-called "excessive secretion of bile". In most of these cases, there is evidence of more or less congestion of the liver; the circulation through the liver is impeded, and there is a general stagnation of blood in the coats of the stomach and bowels. This mechanical stagnation is very likely to become converted into an active congestion or a catarrhal inflammation under the stimulus of irritating ingesta, so that even a small quantity of such a stimulus as alcohol may excite diarrhœa and vomiting. In many of these cases of "bilious diarrhœa", the stools contain much mucus as well as bile. From what has been stated in my first lecture, it is clear that the large quantity of bile discharged from the bowel in these cases is no certain sign of an increased secretion by the liver, but may be due to a diminished absorption, consequent on irritation of the mucous surface.

6. *Vitiated Stools.*—A "vitiated biliary secretion" is one of the three functional derangements of the liver described by systematic writers. Although there can be no doubt that the appearances of the bile in the gall-bladder after death are subject to great variations, too much importance has, perhaps, been attached to the characters of the stools during life as an index of the state of the liver. It must be remembered that variations in the characters of the stools may be the result of functional derangements or structural disease of the long tract of bowel between the entrance of the bile-duct and the anus, and may likewise depend on the rapidity or slowness with which this tract is traversed by the fæces. Bearing in mind these sources of fallacy, it may be said that when little bile is poured into the bowel, the stools are pale and unusually offensive, unless they be long delayed in the bowel, in which case they may be dark and lumpy; but when there is an excessive secretion or diminished absorption of bile, the motions are relaxed and liquid, and contain a much larger quantity of bile than in the normal state.

7. *Intestinal Hæmorrhage.*—Copious hæmorrhage from the bowels is well known to be an occasional result of cirrhosis and of other structural diseases of the liver which obstruct the portal circulation. I have frequently met with it, however, where there has been obvious derangement of the liver, but no reason to suspect structural disease. The patients have, for the most part, been beyond middle age; but I have known the attacks occur repeatedly in the same person at intervals of many years. The attack is usually preceded by a feeling of oppression and heaviness, or by creeping sensations and more rarely severe neuralgic pains suggesting gall-stones about the liver, by pain in the right shoulder, loss of appetite, nausea, and furred tongue. Great relief is usually afforded by calomel or blue pill, with saline aperients. In the intervals of the attacks the patients may enjoy good health, except that they have to be careful as to diet. Not unfrequently they present the symptoms of the lithic acid dyscrasia, or they are subject to attacks of gout.

8. *Hæmorrhoids.*—In a large proportion of persons who suffer from hæmorrhoids, the primary cause is in the liver. Hæmorrhoids are a common result of structural changes in the liver, such as cirrhosis; but they are also a frequent attendant of functional derangements, and especially of the loaded state of the liver common in lithæmia.

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* *Medical Dictionary*, ii, 725.

9. *Hepatic Pain.*—With the exception just referred to, severe pain in the liver is not a common symptom of purely functional derangement of the organ. It may even be absent when there is advanced structural disease, unless there be inflammation of the peritoneal investment, or pressure upon a nerve by some morbid growth. But in cases of protracted lithæmia, a sensation of weight, fulness, or tightness in the hepatic region is not uncommon; and when the bowels are neglected, or the patient continues to eat rich food and drink alcoholic stimulants, the liver is apt to become enlarged and congested, and then it may be the seat of actual pain, which is usually increased after meals, or by lying on the left side.

10. *Jaundice.*—In considering whether jaundice may result from functional derangement of the liver, it will be necessary to enter somewhat in detail into its pathology. All cases of jaundice may be referred to one of two classes, viz.:

I. Cases in which there is a mechanical impediment to the flow of bile into the duodenum, and where the bile is in consequence retained in the biliary passages, and thence absorbed into the blood.

II. Cases in which there is no impediment to the escape from the liver into the bowel.

The several causes of jaundice belonging to each of these classes are given in the annexed Table.

TABULAR VIEW OF THE CAUSES OF JAUNDICE.

A.—JAUNDICE FROM MECHANICAL OBSTRUCTION OF THE BILE-DUCT.

- I. *Obstruction by Foreign Bodies within the Duct.*
  - 1. Gall-stones and inspissated bile.
  - 2. Hydatids and Distomata.
  - 3. Foreign bodies from the intestines.
- II. *Obstruction by Inflammatory Tumefaction of the Duodenum, or of the Lining Membrane of the Duct, with Exudation into its Interior.*
- III. *Obstruction by Stricture or Obliteration of the Duct.*
  - 1. Congenital deficiency of the duct.
  - 2. Stricture from perihepatitis.
  - 3. Closure of orifice of duct in consequence of an ulcer in the duodenum.
  - 4. Stricture from cicatrisation of ulcers in the bile-ducts.
  - 5. Spasmodic stricture?
- IV. *Obstruction by Tumours closing the Orifice of the Duct or growing in its Interior.*
- V. *Obstruction by Pressure on the Duct from without, by—*
  - 1. Tumours projecting from the liver itself.
  - 2. Enlarged glands in the fissure of the liver.
  - 3. Tumour of the stomach.
  - 4. Tumour of the pancreas.
  - 5. Tumour of the kidney.
  - 6. Postperitoneal or omental tumour.
  - 7. An abdominal aneurism.
  - 8. Accumulation of fæces in bowels.
  - 9. A pregnant uterus.
  - 10. Ovarian and uterine tumours.

B.—JAUNDICE INDEPENDENT OF MECHANICAL OBSTRUCTION OF THE BILE-DUCT.

- I. *Poisons in the Blood interfering with the Normal Metamorphosis of Bile.*
  - 1. The poisons of the various specific fevers:
    - *a.* Yellow fever. *b.* Remittent and intermittent fevers. *c.* Relapsing fever. *d.* Typhus. *e.* Enteric or pythogenic fever. *f.* Scarlatina. *g.* "Epidemic jaundice."
  - 2. Animal Poisons:
    - *a.* Pyæmia. *b.* Snake-poison.
  - 3. Mineral Poisons:
    - *a.* Phosphorus. *b.* Mercury. *c.* Copper. *d.* Antimony, etc.
  - 4. Chloroform and ether.
  - 5. Acute atrophy of the liver?
- II. *Impaired or Deranged Innervation interfering with the Normal Metamorphosis of Bile.*
  - 1. Severe mental emotions, fright, anxiety, etc.
  - 2. Concussion of the brain.
- III. *Deficient Oxygenation of the Blood interfering with the Normal Metamorphosis of Bile.*
- IV. *Excessive Secretion of Bile, more of which is absorbed than can undergo the Normal Metamorphosis.*
  - Congestion of the Liver:
    - *a.* Mechanical. *b.* Active. *c.* Passive.
- V. *Undue Absorption of Bile into the Blood from habitual or protracted Constipation.*

When any obstruction exists to the flow of bile through the hepatic or common bile-duct, the way in which jaundice arises is sufficiently clear. The bile-ducts and the gall-bladder become distended with bile, which is absorbed into the blood by the lymphatics and the veins. This was satisfactorily proved at the end of last century by the experiments of Dr. Saunders,[*] which have been confirmed by many subsequent observers. If a ligature be applied to the hepatic duct of a dog, and the animal killed after two hours, the lymphatics in the walls of the bile-ducts, which are very numerous, are seen to be distended with a yellow fluid; the fluid in the thoracic duct is also yellow, and so likewise are the intervening lymphatic glands. In patients, also, who die of obstruction of the bile-duct, the lymphatics of the liver are often found to contain bile. On the other hand, the serum of blood taken from the hepatic vein two hours after ligature of the common bile-duct is found to contain much more bile-pigment than that of blood taken from the jugular vein,[*] which shows that, in obstruction of the gall-duct, bile is also directly absorbed by the veins.

But it is not so easy to account for jaundice when there is no mechanical impediment to the escape of bile from the liver. Boerhaave and Morgagni long ago suggested that the jaundice in these cases was the result of a suppressed secretion. They maintained that the function of the liver was merely to separate the elements of bile which were already formed in the blood; and that, when anything interfered with this function of the liver, the blood retained the ingredients of bile, and the result was jaundice. Although this view was strenuously opposed at the end of last century by Dr. Saunders, who contended that "in every case of jaundice bile must be secreted and carried into the blood-vessels",[†] it is the view generally received at the present day. Our colleague Dr. George Budd, for instance, in his treatise on *Diseases of the Liver*, remarks respecting those cases of jaundice in which there is no obstruction of the bile-ducts, that "the most obvious explanation of the facts is, that the biliary pigment exists in the blood, and that, in consequence of defective action of the secreting cells, it is not eliminated as it should be in the liver".[‡] It is right to add that he makes an exception with regard to the biliary acids, which he believes to be formed in and by the liver. This view—that the liver manufactures the bile-acids, while it merely eliminates the bile-pigment—has also been advocated by Dr. George Harley, in his essay on *Jaundice*.[§]

In my first lecture, however, I gave reasons, which appeared to me to leave no doubt, that even bile-pigment does not exist already formed in the blood; and, if the view for which I then contended be correct, it will be necessary to seek for some other explanation of those cases of jaundice in which there is no obstruction in the bile-duct than that of suppressed secretion.

A solution of the difficulty has been proposed by Professor Frerichs of Berlin. According to this distinguished observer, a large proportion of the colourless bile-acids formed in the liver is either directly taken up by the blood in the hepatic vein, or is absorbed from the bowel. Under ordinary circumstances, these bile-acids become oxidised and assist in forming the large quantity of taurin found in healthy lungs and the pigments voided in the urine; but these normal metamorphoses are liable to interruption by nervous agencies, or by poisons in the blood, and then the bile-acids, not being sufficiently oxidised, are converted into bile-pigment in the blood, and the result is jaundice.[||] This view has been supported by two experiments intended to show—1. That bile-pigment can be produced artificially from the bile-acids by the action of concentrated sulphuric acid; and 2. That colourless biliary acids, when injected into the veins of dogs, are converted in the blood of these animals into bile-pigment. These experimental results are still the subject of much discussion. They have been controverted by Kuhne,[¶] Hoppe, G. Harley,[**] etc., but confirmed by Stœdeler,[††] Neukomm,[††] Folwarczny,[††] Röhrig,[‡‡] etc. It has been contended on the one hand that the biliary acids in these experiments are decomposed in the blood; and on the other, that, in whatever manner they find their way into the blood, they are excreted unchanged by the kidneys. The majority of observers seem to concur with Frerichs; and his view is confirmed by the circumstance that, of the large quantity of bile-acids secreted by the human liver and subsequently absorbed, none appear in the urine. The decision of the question at issue, however, is not of material importance for explaining those cases of jaundice in which there is no obstruction of the bile-duct, provided there be any truth in the view set forth in my first lecture, that bile-pigment, as well as the bile-acids, is, under normal circumstances, reabsorbed into the blood, becoming transformed, in the process of absorption, into products which are eliminated by the lungs and the kidneys. In the healthy state, the whole of the bile that is absorbed is at once transformed, so that neither bile-acids nor bile-pigment can be discovered in the blood or in the urine, and there is no jaundice. But, in certain morbid states, the absorbed bile does not undergo the normal metamorphoses; it circulates in the blood and stains the skin and other tissues, and in this way we have jaundice without any obstruction of the bile-duct. The morbid states which, so far as we know, conduce mainly to this result are, for the most part, precisely those in which we might expect abnormal blood-metamorphoses, viz.:

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[*] *Structure and Diseases of the Liver*, etc., 3rd edit., 1803.

[*] Dr. Legg states that he has recently repeated this experiment in the dog without success.—*St. Bartholomew's Hospital Reports*, vol. ix, 1873.

[†] *Op. cit.*, p. 107.

[‡] *Op. cit.*, pp. 40, 467, 468.

[§] *Jaundice; its Pathology and Treatment.* London, 1863.

[||] *Klinik der Leberkrank.*, New Sydenham Society's Translation, vol. i, pp. 89, 394.

[¶] Virchow's *Archiv*, vol. xiv, parts 3 and 4, Sept. 1858; and Beale's *Archives of Medicine*, vol. i, p. 342.

[**] *Op. cit.*

[††] See my Preface to the English edition of *Frerichs on the Liver*, pp. xv, xvi.

[‡‡] *Archiv für Heilkunde*, Aug. 1863, p. 385.

1. Certain poisons, such as those of yellow fever, relapsing fever, pyæmia, and more rarely those of remittent fever, typhus, scarlatina, etc.; also snake-poison, chloroform, etc.

2. Nervous influences, such as a sudden fright, violent rage, great or protracted anxiety, and concussion of the brain.

3. A deficient supply of oxygen, as happens in certain cases of pneumonia, or in persons living in confined and crowded dwellings.

4. An excessive secretion of bile, especially when conjoined with constipation, may also probably lead to jaundice. In this case, unless the bile be removed by purging, the quantity absorbed may be too great to undergo the normal metamorphoses, and the presence in the blood of the untransformed bile causes jaundice.

According to this view, the only pathological difference between jaundice from obstruction and jaundice independent of obstruction of the common bile-duct is that, in the former case, none of the bile secreted by the liver can escape from the body by the fæces, and consequently all that is secreted after the gall-bladder and biliary passages are fully distended is absorbed into the blood, the quantity thus absorbed being far too great to undergo the normal metamorphoses; while, in the latter case, bile passes into, and is discharged from, the bowel as usual, but that which is absorbed, which in quantity may not exceed that which is absorbed in health, remains unchanged in the blood. As might have been expected, the jaundice in the former case is much more intense than in the latter, although, when an obstruction of the bile-duct has lasted long, the jaundice often becomes paler, not from any diminution of the obstruction, but from the secreting tissue of the liver becoming destroyed and comparatively little bile being secreted; while, in cases where there is no obstruction of the bile-duct, the intensity of the jaundice will vary according to the amount of bile which is absorbed and the degree of derangement of the blood-metamorphoses.

V.—*Derangement of the Nervous System.*

1. *Aching Pains in the Limbs and Lassitude*, coming on about an hour after a full meal, and sometimes associated with an irresistible tendency to drowsiness, are a very common symptom resulting from hepatic derangement with lithæmia. They are often attended by flatulence and other indications of atonic dyspepsia.

2. *Pain in the Shoulder.*—It is well known that, in organic disease of the liver, complaint is often made of a dull, heavy, or aching pain about the right, and more rarely about the left, shoulder-blade, which is accounted for by the connection existing between the branches of the subclavius nerve and the phrenic. Patients with lithæmia often complain of a similar pain.

3. *Hepatic Neuralgia.*—In rare cases, a neuralgic pain seems to occur in the liver itself. Many, probably most, of the reported cases of "neuralgia hepatis" have probably been examples of biliary colic, where the stone has never advanced beyond the neck of the gall-bladder or the cystic duct, so as to cause jaundice. My experience would certainly lead me to doubt the purely neuralgic character of any such attack in which the pain is followed by jaundice, as has happened in some of the recorded cases. Other instances of supposed hepatic colic have probably been examples of nephritic colic from renal calculi, where the pain, as I have known happen, radiates horizontally forwards, instead of taking the usual direction downwards towards the pubes. But, making allowance for such mistakes in diagnosis, a certain number of cases remain, which appear to be examples of true neuralgia of the liver. Cases of this sort have been described by Trousseau,[*] Anstie,[†] and other authors, and a few have come under my own notice. The patients in these cases have been liable to sudden attacks, often periodic, of severe pain in the right hypochondrium, and radiating thence to the right shoulder, with tenderness over one or more of the dorsal spinous processes. They have been for the most part of nervous temperament, and subject to neuralgic pains in other parts of the body; and in most instances the attacks have been attended with great depression of spirits. The cause of the attacks is to be sought for in a general neuralgic tendency rather than in any disorder of the liver. Trousseau, however, has pointed out that hepatic colic from gall-stones may excite a true neuralgia. After showing how the peripheral irritation of a false tooth may excite facial neuralgia, he observes:—"The same thing obtains in hepatic colic. Fearful pain sets up suddenly in the pit of the stomach and in the region of the gall-bladder and of the ductus communis choledochus. So far, there is merely local pain, without neuralgia, and there is no tenderness on pressure of the dorsal spinous processes; but, after two or three days spent in acute pain, a sharp pain is frequently complained of in the seventh, eighth, and ninth intercostal spaces, in the shoulder, in the neck, and in the arm on the same side; from that time, neuralgia exists, and the vertebræ become very tender on pressure."[*]

4. *Severe Cramps* in the legs and in different parts of the body are a common symptom in persons who are the subjects of lithæmia. They often come on during the night, and they are most common in cold and damp weather. The late Sir Charles Scudamore remarked that, in some gouty persons, they produced such intense suffering as to form the leading feature of the disease.[†] Sometimes they precede a paroxysm of articular gout. Two remarkable instances of this result of lithæmia have been recorded by Dr. Bence Jones. The first was that of a gentleman aged 40, who for years had been liable to constant deposits of lithic acid and lithates in the urine. He then became the subject of attacks of violent pain in the stomach, coming on from one to five hours after a late dinner. The pain was intermittently spasmodic; the most intense pain was reached in half a minute; it then relaxed, and returned as badly as before in two minutes. His suffering lasted about an hour, when the pain gradually abated, leaving a tenderness on pressure and an irritability after food for two or three days. After the attack, the urine always deposited lithic acid crystals. These attacks had lasted for several months, but, under a careful diet and the use of alkalies, they entirely ceased. The second patient, who also was the subject of lithæmia, was seized with violent cramps in the rectum, coming on six or eight hours after food, and lasting from half an hour to an hour. The attacks entirely ceased under the same treatment as in the first case.[‡]

5. *Headache* is a not unfrequent result of hepatic derangement. Most commonly it takes the form of a dull, heavy pain in the forehead, more rarely in the occiput, complained of as soon as the patient awakes in the morning, and either speedily ceasing or lasting the greater part of the day or for several days. Such headaches are common in the subjects of lithæmia after any indiscretion in diet, or when the bowels are constipated. Their immediate cause is probably the presence in the blood of some abnormal product of albumen-metamorphosis; the derangement of the liver is usually indicated by pain and fulness in the right hypochondrium, flatulence, and high-coloured urine loaded with lithates; and relief is usually afforded by mercurial and saline purgatives and alkaline diuretics.

From these headaches it is necessary to distinguish *Megrim*, which unfortunately is the form of headache to which the terms "bilious" or "sick" are still popularly applied. This is a neuralgia, which probably in most cases is in no way connected with hepatic derangement, the bilious symptoms being the result, and not the cause, of the attack, and the presence of bile in the vomited matter being, as in sea-sickness, simply due to the urgency of the vomiting. Although this view was enunciated two centuries ago by Sydenham, and since his time has been clearly set forth in many medical writings, of which I would mention, in particular, the Goulstonian Lectures of the late Dr. Symonds delivered in this college in 1858, and the excellent work of Dr. Edward Liveing[§] recently published, it is still the fashion to attribute these attacks to "biliousness" or to "an excess of bile in the system".

But, while fully admitting that megrim is in no way connected with retained bile, I agree with those authors who believe that certain cases of megrim are toxic in their origin, being symptomatic of gout and of some other disorders. The late Sir Henry Holland, in his *Medical Notes and Reflections*, described hereditary periodic headaches associated with gout, and he added: "In conformity with this view, there is reason to believe that the kidneys are the excretory organs most concerned in giving relief in these cases, and principally by an increased 'separation of lithic acid and its compounds".[||] Megrim, as Dr. Liveing states, is sometimes the expression of what is called a latent gouty diathesis, or, in other words, of lithæmia. A father may have suffered from gout, and his son may become the victim of megrim. In some patients, megrim terminates when they are attacked with gout. "So evidently", observes Trousseau, "is it (megrim) a manifestation of the gouty diathesis that articular gout and megrim are observed in the same person, the one subsiding on the appearance of the other; and that it is often also the only expression of the hereditary tendency in subjects who are the children of decidedly gouty parents."[¶] In connection with these observations, I would call attention to certain cases which have come under my notice of severe neuralgic headache occurring in connection with contracted granular kidneys, and being sometimes the first symptom for which the patient has sought medical advice. The headache in these cases was evidently toxic, and in one instance fatal coma followed the subcutaneous injection of a quarter of a grain of morphia. The headache has been so severe that more than once I have known the case diagnosed as one of cerebral tumour. I have met with these cases so frequently, that I make a point of investigating the condition of the kidneys in all cases of neuralgic headache occurring for the first time in persons of middle or advanced age.

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[*] *Clinical Lectures*, New Sydenham Society's Translation, vol. iv, p. 236.

[†] Anstie *On Neuralgia*, 1871, p. 61,

[*] *Op. cit.*, New Sydenham Society's edition, vol. i, p. 482.

[†] *Nature and Cure of Gout*, 4th edit., 1823, p. 532.

[‡] *Lecture on Pathology and Therapeutics*, 1867, p. 85.

[§] *On Megrim and some Allied Disorders.* London, 1873.

[||] *Medical Notes and Reflections*, 1839, p. 288.

[¶] *Op. cit.*, New Sydenham Society's edition, vol. iv, p. 378.

In this way, then, megrim may sometimes be traced to hepatic derangement, this derangement consisting, not in the retention of bile, but in that condition of liver which we have found to produce lithæmia and often to lead to gout; and, in accordance with this view, I have often noticed that megrim has been produced by particular articles of diet, and relieved by mercury, podophyllin, and other remedies which unload the liver.

6. *Vertigo and Temporary Dimness of Sight.*—Sudden attacks of giddiness are in many instances similar in their pathology to megrim, and giddiness in certain patients replaces the neuralgia. But giddiness, according to my experience, is, in a much larger proportion of cases, connected with hepatic derangement, lithæmia, and gout, and follows the use of certain articles of diet, such as tea, champagne, citron, etc. Many years ago, Boerhaave's commentator related the case of a man who, during two years, was always seized with vertiginous symptoms when he attempted to stand up. In vain had the ablest practitioners endeavoured to cure him. Quite suddenly, he had an attack of gout, of which disease, up to that date, he had had no indication; and from that moment he found himself free from the vertigo to which he had formerly been liable.* A medical friend of my own who has long suffered from gout, as certainly as he drinks a cup of tea or a glass of champagne is seized, often while walking in the street, with sudden giddiness; his head feels empty, and neighbouring objects seem to whirl round him; he does not lose consciousness, but he would fall did he not lay hold of the railing. After a few seconds or minutes, the attack passes off, but in some patients it is more persistent. Another friend who never has had gout, but whose urine is frequently loaded with lithates, was seized with dimness of sight and giddiness every night while writing. He took iron, quinine, and other tonics, but he got worse instead of better. He was advised to give up his profession for a time and try the effect of change of air; but, before taking so serious a step, he took a few doses of blue pill, and the symptoms at once and permanently disappeared. A third patient under my care, who for years had been subject to lithæmia, but never had gout, would be suddenly seized, while writing, with dimness of sight and specks floating before the eyes, or even with complete, but temporary, blindness of one eye. Here also iron and quinine disagreed, but the symptoms were removed by remedies directed against the liver. Many writers have referred attacks such as those which I have now described to derangements of the stomach. Trousseau, for example, who has described them under the designation of "vertigo à stomacho læso",† speaks of them as associated with epigastric pain increased by food, flatulence, acid eructations, and vomiting of glairy mucus; but he admits that the gastric derangement in which the vertigo is supposed to originate may not show itself, and this admission certainly accords with my experience. On the other hand, the circumstance of the frequent association of the vertigo with gout or lithæmia, and the fact that alkalies and aperients, which are the best remedies for these conditions, are also the remedies most likely to prevent a recurrence of the attacks of vertigo, make it probable that this has a toxic origin, and that the liver is the organ mainly at fault.

7. *Convulsions.*—In January of the present year, I saw a gentleman, about 58 years of age, suffering from cirrhosis of the liver. He had all his life been addicted to the pleasures of the table, and had suffered from hepatic derangements as long as he could remember. Six years ago, he became subject to severe spasmodic twitchings in his legs, followed on three occasions by several epileptiform seizures. Shortly after the last fit, he had his first attack of gout, and since then he had suffered repeatedly from the gout, but there had been no return of the convulsions or of the muscular twitchings. There was no evidence of renal disease. Many similar cases are, I believe, on record. For example, Van Swieten mentions the case of a man who had violent abdominal pains accompanied by delirium and general trembling, and subsequently a severe attack of epilepsy. From that date, he had repeated attacks of gout, but no return of the nervous symptoms.‡

8. *Noises in the Ears* are common symptoms in gout§ and also in lithæmia independent of gout. One patient has the feeling of a strong wind blowing into the ear; another compares the noise to that of flowing water, or of singing or buzzing; while in another the sounds have a pulsating character, the sounds corresponding to those of the heart.

9. *Sleeplessness* may, of course, arise from many different causes, but one of its causes is that derangement of the liver which produces lithæmia. When this is the case, the patient is often heavy and drowsy after a full meal, and he may fall asleep at once on retiring to rest; but, after one, two, three, or four hours, he awakes, and then he either lies awake for hours, or he is constantly falling asleep, dreaming, or having the nightmare, and awaking—four or five times or even oftener in the course of one hour—until the morning comes, when he drops into a quiet sleep of an hour or more, or he is obliged to get up tired and irritable. This sleeplessness, like the vertigo we have already considered, is often induced by particular articles of diet, or by some unwholesome combination of them. What will excite headache, giddiness, or disorders of the circulation in some patients will in another cause sleeplessless. Sometimes, however, this symptom will occur when the patient is most careful as to diet. What is important also to note is, that in most of these cases, there are no obvious symptoms of gastric dyspepsia; the appetite may be good—too good in fact; the bowels may be regular; and there may be no pain, flatulence, or other discomfort after meals; but there will be found an unusual tendency to the deposit of lithates in the urine, and very often other phenomena of a so-called gouty diathesis. This form of sleeplessness was described a century ago by Cullen, the distinguished nosologist, in these words: "Persons who labour under a weakness of the stomach, as I have done for a great number of years past, know that certain foods, without their being conscious of it, prevent sleeping. So I have been awakened a hundred times at 2 o'clock in the morning, when I did not feel any particular impression; but I knew that I had been awaked by an irregular operation in that organ, and I have then recollected what I took at dinner, which was the cause of it. Dr. Haller is liable to the same complaint; and, in his larger work especially, he gives the particulars of his own case."* The affection has also been well described by Dr. Dyce Duckworth in some excellent observations on different forms of sleeplessness recently published.† It is, however, a form of sleeplessness not generally understood, and harm is often done to patients suffering from it by the administration of opiates and other soporifics, from ignorance of its real cause. Very often the symptom will be greatly relieved, if not entirely removed, by careful attention to diet, and particularly by moderation in, or abstinence from, wine; and, in some cases, a dose of carbonate of soda when the patient goes to bed, or when he first awakes, is of service. Some patients with this form of sleeplessness have told me that they never sleep so well as after a dose of calomel or blue pill.

10. *Depression of Spirits.*—The influence of the liver upon the animal spirits has been recognised by medical writers in all ages. To the belief in the existence of such an influence may be traced the origin of such terms as *Hypochondriasis* and *Melancholia*. Although it is not contended that the morbid states of mind, to which at the present day we apply these terms, have their origin in the liver, they are unquestionably, in many instances, accompanied and aggravated by derangements of this organ; and it is equally true that, independently of either hypochondriasis or melancholia, persons with functional derangement, or structural disease, of the liver are subject to fits of great depression of spirits and often groundless fears of impending danger, which cease when the liver is restored to its normal state.

11. *Irritability of Temper* is another common symptom of functional derangement of the liver, and is sometimes the first indication of anything wrong. A man who has previously borne the crosses of life with equanimity, and been amiable to those about him, gradually becomes disconcerted by trifles; his mind broods upon them; and he makes all around him unhappy, and himself the most miserable of all. His relatives, perceiving no other sign of indisposition, and failing to recognise the true cause, too often put down the ebullitions of temper to something mentally or morally wrong; but remedial measures calculated to restore the liver to healthy action, if resorted to in time, will often remove the irritability, and thus reveal its cause.

12. *Cerebral Symptoms and the Typhoid State.*—It is well known that restlessness, delirium, stupor, coma, subsultus, tremors, convulsions, a dry, brown tongue, and other phenomena of the "typhoid state", are apt to supervene in certain cases of advanced disease of the liver, whether attended by jaundice or not. These symptoms have been usually attributed to a suppressed secretion of bile. But the assumption that the elements of the bile are preformed in the blood, and are merely separated from the blood by the liver, we have already found to be devoid of foundation; and we have also found that bile is far from being, as commonly supposed, a deadly poison, and that its presence in

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* Trousseau, *op. cit.*, vol. iv, p. 379.

† *Op. cit.*, vol. iii, p. 537.

‡ Trousseau, *op. cit.*, vol. iv, p. 379.

§ Scudamore, *op. cit.*, p. 376.

* *Institutions of Medicine*, 1770.

† BRITISH MEDICAL JOURNAL, December 27th, 1873.

the blood, even to saturation, does not give rise to cerebral symptoms. The cerebral symptoms referred to are often most severe when the jaundice is slight, or when there is none; and they are readily accounted for by the knowledge of the disintegrating function which the liver is now known to perform. When this function of the liver is arrested or seriously impaired, urea is no longer eliminated in sufficient quantity by the kidneys; lithic acid and deleterious products of disintegrating albumen even less oxydised, such as leucin and tyrosin, and perhaps others with which we are as yet imperfectly acquainted, accumulate in the blood and tissues; and the result is the development of symptoms of blood-poisoning similar to those which arise when the kidneys are unable to eliminate the products of albumen-disintegration, owing to disease of their own structure, or to an excessive formation of urea and other products, as happens in many febrile diseases. In acute atrophy, for example, the structure of the liver is destroyed and its functions arrested; leucin and tyrosin take the place of urea in the urine, and are also found in large quantity in the liver, spleen, and kidneys, while cerebral symptoms and the typhoid state are prominent features of the disease.

OBSTETRIC MEMORANDA.

TREATMENT OF *POST PARTUM* HÆMORRHAGE.

XIX.

AGREEING most cordially with my friend and former class-fellow, Mr. Alfred Godrich, in his remarks and suggestions as to the preventive treatment of *post partum* hæmorrhage in the JOURNAL for April 4th, I would add another suggestion. There exists one plan of treatment, for which I do not claim any novelty, but simply more importance than it at present enjoys. It is a plan for conducting the third part of labour—"all the circumstances which relate to the separation and expulsion of the placenta," according to Dr. Denman. It was my good fortune to become early impressed with this plan of treatment, which I am about to describe; and it is my firm conviction that by its means we can, with an amount of certainty otherwise unattainable, prevent the supervention of that most fearful phenomenon, "flooding". I have never had a case of flooding, although during the management of many varieties of labour, both natural and difficult, and obstetric operations, *post partum* hæmorrhage has threatened; and this I attribute solely to this way of conducting the removal of the secundines. The following is the plan I uniformly adopt. *Immediately* on the expulsion of the child—the binder of course being applied during the commencement of the second stage, and gradually tightened—I pass my hand (the left one), and grasp the uterus over the abdomen, and make firm pressure downwards in the axis of the pelvis. I then hook in my right index finger on to the edge of the placenta, which is invariably by this time in the vagina; and, with a gentle rotatory movement, extract. If, however, as is very seldom the case, the secundines be not low enough, I follow up the funis, and hook my finger at its insertion, and so effect its removal. I say, immediately the child is born I do this, because, if pressure be not directed at once to the uterus, the womb closes over the after-birth and prevents its speedy expulsion, and a proportionate amount of risk of *post partum* hæmorrhage is involved. I do not believe it right to teach that we should wait for a griping pain or two to effect the expulsion of the after-birth. These so-called griping pains should only cause the firmer contraction of the womb *after* the expulsion of the placenta. The advantages of this plan of treatment are the following. 1. We effect the speedy and safe removal of the placenta, and so place the uterus out of the danger of hæmorrhage. 2. Should *post partum* hæmorrhage set in, we can have the uterus more immediately under our control. 3. It hinders the supervention of an unusual amount of vascular excitement. I submit these imperfect remarks to the notice of the profession, in the hope that they may evoke some larger experience. But I would feel like that deep thinker who, with more meaning than will disclose itself at once, said, "Already my opinion, my conviction, gains infinitely in strength and sureness, the moment a second mind has adopted it." I am sorry that I am unable to state from whose writings I gained this valuable piece of knowledge of the treatment of the third stage of labour and the prevention of flooding; but the subject was treated of in Braithwaite's *Retrospect of Medicine*. Dr. Churchill, in his fifth edition of the *Theory and Practice of Midwifery*, says: "I have adopted this practice for twenty years, and rarely have the placenta detained more than five minutes; nor have I had a case of hæmorrhage during that time. If we wait some time before making pressure, the uterus closes over the after-birth, enough to retain, but not enough to expel it."

BLENNERHASSETT ATTHILL, L.R.C.P.Lond., M.R.C.S.Eng.
Waterbeck, Ecclefechan, N.B.

LEAVES FROM MY DIARY DURING THE ASHANTEE WAR.

By ALBERT A. GORE, M.D., Surgeon-Major.
Late Surgeon 34th (Cumberland) Regiment.

III.—EN ROUTE.

WHEN steaming past Teneriffe, we were leaving behind the last traces of European civilisation, and about to enter within the boundaries of an entirely new climate and scenery. Low alluvial shores were to replace arid volcanic islands—realms of disease, countries presenting quite the opposite characteristics. We were about to enter the region of the north-east trades, with its hot sun and cold breeze, so trying to the invalid returning from West Africa, or to any one who has resided there for any length of time. Watching the flying-fish by day, and the beautiful phosphorescence of the sea at night; the gorgeous sunsets, in every hue of purple, violet, crimson, and gold; and the splendid moonlight, or, in its absence, myriads of brilliant stars, which light up the firmament of the heavens in an almost equal degree, was about all the occupation there was to wile away the long hours and days which intervened before the low shores of the Gambia were sighted. The short twilights precluded all attempts at reading in the evening; and, as it was becoming too warm to remain below with any degree of comfort, we, as a rule, remained on deck, until the putting out of one light after another in the cabin, warned us that we must either turn in at once or go to bed in darkness. The sea here heaves in a long rolling swell, not nearly so disagreeable as the choppy seas of the Bay of Biscay, or so provocative of sea-sickness—at least such appeared to be the general experience. The waves appear singularly free from zoological specimens. I have watched for hours without seeing anything more than a little Portuguese man-of-war, with its small purple crest glittering in the sunlight, while a sail on either bow is quite a *rara avis*.

Leaving Teneriffe on the evening of the 27th August, the peak was still visible at 6 A.M. On the morning of the 28th, it was becoming much warmer. The following meteorological observations show the gradual transition from the cooler to the more tropical climate, and one now becoming largely saturated with moisture, and give at the same time a general idea of the sensations felt by individuals as they passed from the Canaries into more intensely heated latitudes.

	Wet Bulb.	Dry Bulb.	REMARKS.
Aug. 28th.	72	75	......7 A.M., in cabin, port closed; at sea; left Teneriffe previous evening.
	71	74	......9 A.M., in shade in air on deck; feels warm; sea choppy; N.E. trade beginning to blow.
29th.	72	75	......7 A.M., in cabin, port closed; at sea; two days from Teneriffe; very warm.
	69	71	......9 A.M., in shade on deck; clouded, chilly, damp; about 50 miles off African coast.
	69	72	......3 P.M., in shade in air on deck.
30th.	76	77	......7 A.M., in cabin, port closed; at sea; three days from Teneriffe; very warm & muggy.
	76	78	......9 A.M., in shade in air on deck; off Arguil Bank.
	78	81	......3 P.M., in shade in air on deck; very hot and muggy; first really warm day we have had; 83 deg. in cabin at bed-time; rain-cloud threatening to windward; every one perspiring profusely while at dinner in the cabin.
31st.	80	82	......7 A.M., in cabin; port closed; very close.
	80	82	......9 A.M., in shade in air on deck; very warm, clouded; light S.W. wind.
	80	84	......3 P.M.; every one looking pale, and perspiring, upon the least exertion, profusely; scarcely any breeze.
Sept. 1st.	80	82	......7 A.M., in cabin, port open; very close; perspiring profusely while dressing; water in coolers quite warm.
	77	80	......9 A.M., in shade in air on deck; in River Gambia, 2,500 miles from England—12 days 12 hours; slight rain, thunder; cool breeze from S.E.; misty clouds in this direction; nimbi all about.
	79	86	......3 P.M., in shade in air on deck; very close and uncomfortable.

After passing Cape Blanco, we had plunged into the tropics and gained our first peep at the African coast, the most western point of which (Cape Verde) was not reached until 5.30 P.M. on the evening of the 31st, the last day of August, exactly twelve days since we had started from Liverpool, during which interval we had steamed from 250 to 260 miles in the twenty-four hours, according to the quality of the coal. We had now reached the threshold of that tropical luxuriance, which extends from 16° 30′ north, the latitude of the Senegal, to far below the equator, with a climate whose peculiarities and effects we were being initiated into *de die in diem*, as our floating home was approaching nearer and nearer the latitude of our destination, which was only five degrees north of the Line. The observations below will give an idea, better than any written description, and also a more accurate one of what a day on the northern coast of West Africa is at the break in the monsoon, now and then occurring during its continuance.

Hourly Hygrometrical Observations taken on the 31st August, sixty miles off the African Coast, latitude of Cape Verde, on board Steamship "Volta", running south and east, twenty-four hours distant from the Gambia, in the shade on deck.

Hours.	Wet Bulb.	Dry Bulb.	REMARKS.
8 A.M.	79	81	In the shade on deck; weather clouded and muggy.
9 A.M.	80	82	Very light breeze; rain-cloud.
10 A.M.	79	82	Slightly increased breeze from S.W.
11 A.M.	79	82	do. do.
12 (Noon)	79	82	Feeling warm; clouded.
1 P.M.	80	83	Warmer; less breeze.
2 P.M.	80	84	Warmer; faint breeze from south; hot sun.
3 P.M.	80	84	Hazy of sky; few small cumuli; every one pale and perspiring.
4 P.M.	80	84	General inclination to sleep; occupants of deck mostly recumbent; books discarded.
5 P.M.	80	84	Closing up to Cape Verde; twenty or thirty miles off on port-bow.
6 P.M.	80	83	Sun nearly beneath horizon; feels cooler; six or seven miles off Cape Verde.
7 P.M.	79	83	Light cool southerly breeze; bright moonlight; sun set at 6 30 P.M.
8 P.M.	79	83	Lightning flashes in south-east horizon over land.
9 P.M.	76	81	Hygrometer hung in air at edge of awning.

From these observations, it will be seen how we were gradually coming into the influence of the West African monsoon, which, in the latitude of Cape Verde, breaks up towards the close of September. Upon two prominent "paps" are built the lighthouses, kept up by the French Government in excellent order. Upon a reef, running a long way to seaward, the surf was breaking, and on each side thousands of fish, throwing up the spray in their gambols—a not unusual sight in West African waters. The highest of the two hills appeared to be about 400 feet above sea-level, rising abruptly from the sandy beach, behind which are the wells, where, at one time, sailing-vessels called to fill up their water-casks, purifying the water by means of red-hot iron balls thrown into it prior to use. To the left extended a long range of bush, and several rocky islets, apparently of iron-stone, which crops up, more or less, along the whole coast-line. Farther on, on the left, might be seen the masts of the shipping at anchor, opposite the island and red citadel of Goree, gradually fading from view as we steered for the mouth of the Gambia, 950 knots from the Canaries, which we reached on the morning of September 1st, a journey of 2797 miles from Liverpool. At Cape Verde commences the Guinea region, which extends from 10° 17′ north latitude, to Cape Lopez, in 0° 36′ south, a coast-line of 2000 miles.

The trade between Western Africa and Europe commenced about the middle of the fifteenth century, when Prince Henry, of Portugal, built a fort on the island of Arguin. At the beginning of the following century, the English, Spaniards, French, Danes, and Dutch, had begun to send private ships to trade on this coast. Towards the middle of the century, the commerce of each nation was organised under the management of chartered companies, who formed establishments on different parts of the coast, built forts at the mouths of several rivers, and prosecuted an active trade, the greater part of which was for slaves. Our countrymen chiefly settled at Cape Coast Castle; the French, at the mouth of the Senegal and Goree; the Dutch, on the Gambia; the Portuguese, at St. Genge del Mina; the Danes, at Christianborg, etc. Each of these strong fortresses, mounting from fifty to sixty pieces of ordnance, had subordinate posts and stations, several of which continue up to the present.

In general, the coast of Western Africa, extending for 4000 miles along the Atlantic, with an average breadth of 300 miles, is, along the ocean boundary, a flat country, backed by ranges of lofty mountains, which in some places approach the sea, and, as at Cape de Verde, project in bold headlands. The great coast chain runs parallel to the coast from west to east, where, affording a passage for the waters of the Nun, one of the mouths of the Niger, tends towards the north-east, to join or form the Gehel el Kumri, or Mountains of the Moon. Some of the peaks of this range are 13,000 feet high. It is only, however, about the estuaries of the great rivers, and along their banks, that the country can be said to be flat; in other places, it consists of gentle undulations and rising eminences, giving considerable beauty to the landscape, the most conspicuous features of which are the numerous rivers that meet the ocean, most of them rising in the chain of mountains above described, and running a tortuous course to the coast. Among the principal of these rivers are the Senegal, Gambia, Rio Grande, Rio Nunez, Rokelle, Camaranca, Mellicourie, Mesurado, Prah, Volta, Niger, and Congo.

The Gambia, which we had just now entered, has its source in the Kong Mountains with the Senegal, rolls a powerful and rapid stream, at first, to the north-west, and then westerly, falling into the Atlantic after a course of 700 miles. The country between the two rivers is called by the French the Senegambia, which they have, of late years, almost annexed, their advanced posts being now within fifteen or twenty miles of Fort Bullem. The coast between the two settlements is chiefly peopled by the Jalofs, a powerful tribe. On the northern bank of the river we were about steaming up, are several flourishing little kingdoms—Barra, Boor Salam, Yani, and Wooli, the territory of all of which is flat and fertile, abounding in rice, ground-nut, grain, and other provisions. The inhabitants are chiefly of the Mandingo race, Marabouts, Jalofs, and various other Mahomedan tribes, tall and well-formed, and lightly clad, in flowing and loose blue or white garments, wearing conical caps on their heads, sandals on the feet, and scraps of the Koran, enveloped in small square leathern cases, round their necks. These people are warlike, and have frequently given us much trouble, owing to their peculiar propensities. This fine river, the settlements on the banks of which have been, more or less, connected with England since 1588, when it was explored by some of our adventurous seamen, extends to the Barracouda Falls, some four hundred miles in the interior, beyond which sandbanks and flats soon render the further navigation difficult. About half-way is Macarthy's Island, formerly a military, now a trading station, to which large schooners are able to proceed. When occupied by troops, it had always an unenviable notoriety, three medical officers having died there from yellow fever in 1860. The heat was excessive, and in the rains, when the island was almost inundated, malarial fevers prevailed extensively.

Of the inhabitants of Western Africa, estimated at twenty-six to the square mile, we know but little; but three great Negro races would appear to inhabit the country. The Foulahs, from the Upper Senegal, who have not the extreme Negro characteristics, nor the same jet hue, flat nose, or thick lips, but high features, with an olive tint and agreeable expression, are of the Mahomedan faith, without its usual bigotry. Their manners are courteous and gentle, their habits nomadic, and their flocks and herds numerous. The Mandingoes are a race more numerous, and more decidedly Negro both in form and disposition. Without steady industry, they prefer lighter employment, and more especially traffic, for which purpose they make long journeys, and conduct large caravans many miles into the interior. Originally coming from the more elevated territory of the Manding, they have more refined tastes than is usual among Africans. The third great race are the Jalofs, already alluded to. Although of a deep black complexion and decided Negro features, they are a handsome race, who boast of their antiquity. Their language is soft and agreeable, and their manufactures, chiefly cotton cloths, particularly well made and dyed. Fearless and expert horsemen, they rival the Moors in equestrian exercise. With the Feloops inhabiting the shores south of the Gambia, the Timmanees bordering on the colony of Sierra Leone, commence the more degraded and ruder races, denominated, in Lower Guinea, Kroos, Fantees, Shantees, Dahomians, and Congos, barbarous and uncivilised, the *canaille* of Western Africa.

The vast region in our immediate vicinity abounds in a fertile soil, growing almost anything with very rude attempts at agriculture. Between here and the Congo there is a remarkable uniformity of vegetation, not only as to principal orders and genera, but even to a considerable extent in the species in which it consists. Many of the trees and palms, and other remarkable plants, which characterise the landscape, as the *Adansonia*, *Bombax pentandrum*, *Elais Guineensis*, *Raphia vinifera*, and *Pandanus candelabrum*, appear to be very general along the whole extent of coast; while the *Sterculia acuminata*, the seed of which is the *Cola* mentioned in the earliest account of Congo, exists and is equally valued here and at Sierra Leone for its stimulating active principle, thein, and, what is more remarkable, bears the same name throughout the West Coast; while the *Anona Senegalensis* is a general plant along the whole line of seaboard, only slightly varying in its outward appearance. Many of the esculent plants are also equally observable between the extremes of latitude. The Indian corn or maize, the cassava (jatropha manihot), various pulses, ground-nuts (arachis hypogæa), plantains (musa sapientum), papaw (carica papaya), pumpkins (cucurbita pepo), oranges, limes, the common tamarind, and the most valuable oil-palm, the Elais Guineensis, grow everywhere. To the natives of Africa, this is a most valuable tree; it supplies them with wine (most delicious in the early morning, before it commences to ferment), oil, fishing-nets, hats, baskets, palm-nuts, cabbage, tinder, thatch for their houses, and framework for their dwellings. In this one tree, a bountiful Providence has given nearly all that these people, with their simple tastes, can require.

For the purposes of trade, Western Africa may be divided into two great regions: that to the north, and that to the south of Sierra Leone. In the higher of these latitudes, the ground-nut, with its pretty little yellow papillionaceous blossoms, is cultivated extensively, and exported in large quantities to France, where its nutritious oil is expressed and refined, and the residue converted into feeding-cake for cattle. Here also the African bee is most common, the wax constituting a chief article of commerce. The honey is characterised by its purgative properties, probably from the number of flowering euphorbias in the brakes and thickets. Small quantities of gold-dust are brought from the interior; and various valuable gums, as the gum Senegal, the produce of a stunted and thorny acacia, whose bark, when cracked with the scorching Harmattan, exudes it in large transparent drops; the copal collected in the up-country rivers; and the red tears, soft at first, afterwards) hard and friable, of the Dracæna Draco, or true dragon's blood, the fluid of which distils through the openings in the bark, chiefly during the summer solstice (these tears are used by the natives as a medicine for dysentery, hæmorrhages, and violent bowel-complaints); and rough rice, with a white or more nutritious fat red grain growing upon the alluvial banks of the rivers and estuaries, are among the chief products of this fertile region, nearly all going in French bottoms to French markets; while below the valuable oil-palm is almost the sole article of produce, and the principal cargo of the Liverpool steamers, whose officers look upon a palm-oil trader as an altogether superior being, in comparison with any other description of passenger. While cattle and horses thrive well upon the grassy plains and grain-and-pulse-producing northern regions, they become scarcer and scarcer as we descend the coast, and also more puny, in many places the former not living at all. Imported at such stations, they may last for a year or two, to die at length from loin-disease, or fade away gradually until death closes the poor animals' miserable existence. To many causes this mortality has been attributed, mostly vague and indefinite. In some instances, the disease commences with febrile symptoms; the poor beast hangs its head, merely nibbles at its food, crawls slowly along, at last lying down to die. In such cases, the skin feels hot to the touch, and quinine has been administered without effect. It can scarcely be the food; for they are fed on bamboo-tops, carefully picked grass, Guinea and Indian corn, sometimes rough rice and ground-nut leaves, none of which are inimical to health. This inability to take equestrian exercise is undoubtedly a serious drawback in European life in Africa. In the tropics, it is almost a necessity of one's existence, more especially in a country so enervating as that we were now entering, and one where the frame so soon becomes enfeebled with disease or *ennui* so pronounced as to render the exertion of mere walking too great a bore.

As we descend into the lower latitudes, the food of the people gradually changes in character; here and to the north, Guinea corn and kouskous, made into messes not unlike porridge, is largely consumed; until we reach Cape Palmas, rice is the chief article of diet, which is replaced along the Gold Coast by konkie, or balls of boiled Indian corn, the latter giving place in the bights to the palm-nut and more oleaginous food.

As we had approached the Gambia, the sea had changed its hue to a dirty pea-green, the air became hot and stuffy, quite different from the purer northern sea-breezes. A few solitary palms and a long line of stunted mangroves were all that marked the entrance of the river, which empties itself into the ocean, about nine miles wide, between Cape St. Mary's on the south and the Bird's Island on the north, at a portion of the coast entirely deficient in picturesque embellishments and local advantages. The scenery is heavy and monotonous, vast alluvial and densely wooded mangrove morasses extending on all sides. The capital is Bathurst, situated on the east side of the island of St. Mary's, a low alluvial formation and uninterrupted flat, covered with a thick brush of underwood, surrounded on nearly three sides by the river. The strata is a gravelly soil, consisting of the brown oxide of iron strewn over a stratum of rock of the same description, the other parts consisting principally of a rich dark loamy mould, Guinea grass, palms, cotton trees, and caoutchouc figs, at a distance resembling white thorns, occupy nearly every inch of this soil. Water, which is brackish and bad, may be found everywhere three feet beneath the surface, during inundations of the river finding its way into the ground-floor of the houses. Built in 1816, under the orders of Sir Charles Macartney, like all European settlements of that date, the site is execrable and the buildings excellent. From the extensive surface of mud and stagnant water, exposed to the action of a torrid sun, are generated those miasmatic exhalations which militate so much against the preservation of health. The river is at all times muddy and infested with crocodiles, and also inhabited by the hippopotamus and fish of many varieties. The population numbers 3000 or 4000, of whom not more than fifty are Europeans; being no longer a military station, it has lost much of its importance and a large proportion of its former English residents. The wet season commences about June and ends in October, the most dangerous period being during the drying up of the waters, when vegeto-animal matter is distilled into miasma. The temperature falls to 62 deg. in December, the hottest month being May, when the thermometer in the shade runs as high as 99 deg. The prevailing winds are westerly; and in the rainy season, from June until September, the stream sets so strong, that vessels cannot stem the current by ordinary means. Mullet, soles, bonita, turbot, turtle, snappers, skates, ray, captain-fish, grouper, cat-fish, craw-fish, prawns, mangrove and rock oysters, and mussels and cockles abound, and are daily exposed for sale by the canoe-men's wives in the market. Beef is very scarce, as are also fowls and sheep, but partridge and hares are numerous, while many beautiful birds may be shot in the more wooded portion of the island. Bathurst is subject to periodical and very severe epidemics of yellow fever, and was visited for the first time by cholera in 1868. Commencing in Macarthy's Island, it was believed to have been imported from the Senegal, where it was then prevailing, by Mandingo traders—a not improbable cause of origin. When garrisoned by West Indian troops, phthisis and other lung-diseases were a cause of much mortality, pneumonia being especially frequent in December, during the prevalence of the cold and dry easterly winds. Intermittent fever, dyspepsia, diarrhœa, and dysentery are the chief endemic diseases among Europeans.

When we landed, on September 1st, it was 82 deg. in the shade in one of our host's inner rooms—one of the very few merchants who had contrived to live in Africa for a lengthened period. The greater number of his class return to England or Marseilles—a month's sail—during the rains, thus avoiding the more unhealthy season. The place was covered with rank grass, and a hot steam, with a strong malarious smell, was exhaled by the ground, only disappearing when the sun had shone in its brightness for two or three hours. The rains were just breaking up, and the whole place had a dirty washed-out look upon a nearer approach. The surface-drains and whole town stood in much need of a thorough system of sanitary conservancy. We had for breakfast some deliciously cold water, iced by one of Carré's very simple ether-machines; by its means two large *caraffes* of water were congealed before us in three minutes exactly. This machine, which was worked by a native, costs 200 *francs* complete; a quart and a half of ether, costing about 8s. 6d. a gallon, is sufficient to make ice for breakfast, lunch, and dinner.

The few European residents looked pale and unhappy, the congested lips and lustreless eye only too truly denoting the poison of malaria lurking in the system. The houses are here of a solid style, very comfortable, and built along the edge of the sandy beach, which extends to the convalescent station of Cape St. Mary's, six miles to the westward. They are constructed of brick, brought from France. The Governor was "down with fever", in the language of the country, so we had not the pleasure of paying our respects. We were inundated with offers of small animals, about the size of a good bullock, termed horses, lately captured in a raid upon the Marabouts, and for which the owners were asking very *modest* sums, varying from £30 to £40. They were respectfully declined, much to the chagrin of the weird-looking riders, who appeared as starved-looking as the animals they rode. Making arrangements for a supply of fresh grass for the horses on board, we returned to the steamer, to pass a night in a cabin oppressively warm, with only two degrees between the wet and dry bulbs, and a very faint breeze creeping over the river from the north, lightning lighting up the south-western horizon, and thunder growling in the distance, as accompaniments to our repose.

[*To be continued.*]

THE PHYSIOLOGICAL ACTION OF COCA.

By ALEXANDER BENNETT, M.D.

In the recent numbers of the British Medical Journal, there have appeared several interesting notices on the therapeutical effects of "erythroxylon coca". This substance has been for some years pretty extensively employed at home, but particularly on the continent, as a stimulant and tonic in a variety of diseases, and, it is said, with considerable success. Still, comparatively little is yet known about the action of the plant. The following observations may not be uninteresting to those who are clinically investigating the properties of the drug, which, as our knowledge of it advances, will doubtless prove a valuable addition to the *Pharmacopœia.*

My attention was directed to the action of the coca leaves several years ago; and at different times, and from various sources, I have obtained quantities sufficient for experimental purposes. My object was first to ascertain the effects of the drug upon the healthy human subject, with special reference to its stated stimulant and antitriptic properties; and, with this object, I administered to myself and to others the leaves in doses varying from one to eight drachms in the form of infusion and of extract, and also by chewing them along with different alkalies, after the manner described by travellers as adopted by the natives of Bolivia and Peru. After a series of experiments carefully conducted, I was not able to convince myself that the drug thus administered had any special effects, with the exception of a sensation of slight local tingling of the tongue and mouth when the leaves were masticated for any length of time. Whether this inert action is due to the leaves having lost their active properties by exportation, to their being improperly selected or prepared, to an insufficient quantity having been administered, or to a defective method of application, I am not in a position to decide. After every precaution and variety of treatment with different samples of the leaves, and in as large quantities as could be conveniently administered, I have failed to satisfy myself that there was even any approach to the powerful and somewhat startling results graphically described by many authors as occurring when the leaves are chewed by the inhabitants of the countries where the plant abounds.

I next directed my attention to the neutral principle of the coca leaves, and after great difficulty, with the aid of Messrs. Macfarlane and Co., chemists, Edinburgh, I succeeded in obtaining a small quantity of the crystalline substance cocaine ($C^{16}H^{19}NO^{4}$). With this I conducted a series of experiments and observations on the lower animals, as far as I am aware, for the first time in this country, and arrived at results which appeared to me of considerable importance, ascertaining that cocaine was a powerful poison with special actions on the nervous system.

As coca is extensively employed in South America as a beverage, and as cocaine bears close chemical relations to the neutral principles of tea, coffee, guarana, chocolate, and other well known stimulants, I proceeded to make a series of experiments also with theine, caffeine, guaranine, and theobromine, with the view of determining the actions of each, and the relations, if any, which existed among them. In the *Edinburgh Medical Journal* for October 1873 will be found a description in detail of these observations. The general results at which I arrived may be given shortly as follows.

1. The physiological actions of coca, tea, coffee, guarana, and cocoa, are mainly, if not entirely, due to their neutral principles.

2. Cocaine, theine, caffeine, guaranine, and theobromine are powerful poisons, inducing a series of symptoms affecting the nervous, respiratory, circulatory, vaso-motor, and glandular systems, which terminate, if the dose be large enough, in death.

3. These five principles are, to all appearances, identical in physiological action.

4. In small doses not ending fatally, these five substances produce—*a.* Cerebral excitement not succeeded by coma, and *b.* Partial loss of sensibility.

5. In large doses they produce—*a.* Cerebral excitement, *b.* Complete paralysis of sensibility, *c.* Tetanic spasms and convulsions, and *d.* Death.

6. They paralyse the entire posterior columns of the spinal cord, also the entire system of peripheral sensory nerves; but the anterior columns of the cord and the peripheral motor nerves are not paralysed.

7. They frequently produce convulsions of a clonic character, but occasionally they cause tetanic spasms, which latter are sometimes so severe as to induce opisthotonus.

8. They do not produce muscular paralysis.

9. They at first increase, then impede, and lastly stop, the respirations.

10. They at first increase, and finally diminish, both the force and frequency of the heart's contractions.

11. They produce at first contraction, and afterwards dilatation, of the capillaries and small blood-vessels, with stasis of the blood, indicating first irritation, and subsequent paralysis, of the vaso-motor nerves.

12. They affect the temperature by first slightly lowering, and secondly increasing, it.

13. They usually produce contraction of the pupil.

14. They produce an increase of the salivary secretion.

15. They induce a peculiar form of tenesmus, accompanied by a copious discharge of clear mucus from the bowels.

These conclusions have been arrived at after a careful series of experiments conducted on more than one hundred animals of different kinds; and it is extremely interesting to learn that those agents, which the different nations of the world have found by experience to produce refreshing and stimulating beverages, although unlike one another and procured from totally different sources, possess in common proximate principles, which not only are almost identical in chemical composition, but also appear similar in physiological action.

According to the above observations, cocaine has the same actions as theine, etc.; so, for clinical purposes, the latter is at present preferable on account of the enormous expense of the former. That the effects of the beverages themselves are mainly, if not entirely, due to the neutral principles they contain, is highly probable; but of their beneficial action in medical practice I am not yet in a position to give an opinion. However, from their stimulant action and effect on the nervous system generally, there is every reason to hope that the concentrated forms of these drugs, or the neutral principles themselves, will prove powerful and useful agents in the hands of the physician for the treatment of disease.

Before the medical man can practise his profession scientifically, he should be acquainted, not only with the natural course of the malady he proposes to alleviate, but also with the physiological effects of the drug by which he hopes to reach this end. By observations upon the lower animals, he may also obtain suggestions and information which will materially assist him in relieving and benefiting the human being.

With this object, the above investigation was undertaken; and, although the research is yet in its infancy, I venture to hope that my conclusions will not be found deficient in interest and importance to those who desire to establish a sound system of therapeutics upon careful physiological experiment.

A CASE OF CHELOID SIMULATING MOLLUSCUM FIBROSUM.*

By H. CUNDELL JULER, M.D.

In performing a duty imposed upon me by the Academy of Medicine of Cincinnati, I proceed to a description of a very remarkable, although in this country by no means an unique, case of hypertrophic disease of the skin, occurring in a patient in the Cincinnati Hospital, June 24th, 1873. James Bell, a negro, the subject of this sketch, aged 43, unmarried, was born of slave parents, in the State of Tennessee. He appears to be well nourished and well developed, and states that his health has always been excellent. He was raised as a waiting-boy in the service of a family in Penala county, Mississippi, and was always treated by his master with great kindness, being well fed and comfortably bedded. He never received corporeal punishment. He never had any venereal affection. His mother, sister, and two brothers, are still living. He believes that his sister had a swelling in the form of "snakes", that extended from her neck to her face; but he never saw a person affected similarly to himself. He believes that a spell has been put upon him; and states that coloured doctors who had examined him and counted over fifty tumours under his clothes, had told him that somebody had put a turtle upon him. He has suffered from the present disease for thirty years, it having first appeared when about ten years of age, in a cicatrix following an abscess, in front of the lobule of the left ear. As the tumour increased in size, other integumentary sessile growths made their appearance upon different parts of the body, many of which slowly developed into pedunculated excrescences. The tumours are now present in all stages of growth, varying in size from a coriander seed to a mushroom in expansion, measuring several inches in diameter. They are of a lighter colour than the surrounding skin, becoming lighter by age. They are either distinct, grouped together, or several of them have coalesced. Manipulation gives rise to no uneasiness. The maple-tree wart-like excrescences stand out so sharply defined upon the surface of the skin, that an observer might at first sight suppose that the excrescences were adhering temporarily to the part of the body struck by them. The skin between the elevations is healthy; there are, however, some pigmentary streaks traversing the skin covering the serratus magnus, that may or may not be the result of former floggings with a whip. Usually he is free from pain, but occasionally—especially in the day-time—he experiences pain in these tumours of a darting, cutting, or tearing character. He attributes the pain which he has had in the head to the tumour upon the left side of the face, which has been twice extirpated, and now has its flattened surface covered by leprous scales, to which I shall again allude. The large excrescences upon the jaws and neck give trouble only by their sense of weight. His sleep is disturbed by the uncomfortable interference of the tumours with his rest. He objects to the tumours being pricked, although when a puncture by a needle is allowed it causes scarcely any pain. He complains most dolefully of an intolerable incessant itching of the skin, which, although endurable in cold weather, becomes incessant and exciting in the months of July and August. To use his own expression, "it drives him crazy". The bath affords him some alleviation. While under examination, he scarcely moves from the position in which he is placed. His mind seems under a cloud; but, when aroused by conversation, questions are answered in an intelligent manner. He has a demure and subdued demeanour; his eyes are downcast, and an expression of melancholy shades his countenance. The deadening conviction that he is under the power of some supernatural agency converts the natural vivacity peculiar to his race to a "death-like silence and a dread repose".

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* Read before the Cincinnati Academy of Medicine.

The hypertrophic disease called cheloid, when of recent formation, has been found in similar instances to consist of numerous bands of connective tissue, arising as spindle-shaped cells along the walls of the blood-vessels of the corium, and developing as wedge-shaped prolongations of parallel fibrous bands, till the whole derma is filled by them. In James Bell, these recent homogeneous prolongations, interweaving in a net-like manner, are peculiar and different in figure. Some of them appear to have grown to a certain extent, and, while new material has been forming toward the circumference, interstitial absorption has given rise to central depression. The new material thus formed around the tumour is arranged in serried lobules directed from the centre to the circumference, similar in arrangement to the divisions in the seed of the marshmallow. Thus while the centres are depressed, and the skin shrivelled and puckered, the lobules extending beyond the pedicle are smooth, dense, and resisting to the touch.

Although notes have been taken of the shape, size, appearance, consistence, and position of individual tumours, sixty of which have been counted, it will only be necessary that I should name those that present some special features of interest. It often happens when a skin-disease of long continuance is submitted to a critical inspection, the different observers limit their observations to a partial survey of the case, and thus arrive at opposite conclusions as to the distinctive nature of the disease. The same mistake that occurs when diagnosing cuticular derangements confined to the surface of the skin, also happens when defining the various hypertrophic affections of the derma. In a patient afflicted by one form of the disease, it may not be difficult to detect the existence of a similarity to other dermal affections, indigenous to warm climates. In the malady known as cheloid, dermatologists have specified the disease as consisting of a numerous series of fibrous ridges, springing from the walls of the blood-vessels of the corium, supplanting the derma and imparting to the skin the appearance of a hypertrophic cicatrix, following a burn. Although the case of James Bell but partly accords with this diagnostic description of cheloid, it certainly agrees with those illustrations of the disease figured in American works on surgery. Cheloid is the predominating feature of the affection, and it is, therefore, rightly designated by that name.

It has already been stated that the disease of our patient originated thirty years ago, in the cicatrix following an abscess; and, as diagnostic of the still prevailing cheloid diathesis, there exists upon the inner side of the right thigh, where he was bitten twelve months since by a dog, a small tumour an inch in length and half an inch in width, resembling a curved minnow in shape. I have observed a similar isolated growth upon the face of a negro, arising from the use of a razor. It is most likely with this predisposition to the disease in our patient, the numerous tumours dispersed over the body, reaching from the neck to the ends of the toes, had their origin from mere abrasion of the skin, due to friction or some other accidental cause.

Dr. Fagge of London recently examined, under a low power of the microscope, some molluscous tumours not much larger than a pin's head, and he found that each tumour was originally developed round a hair-follicle, inclosing at the same time the sebaceous glands belonging to the follicle, itself inclosed in a translucent fibrous mass. It is well known that the most trivial damage to the skin may be followed by the appearance of cheloid. It has succeeded the application of a blister, leeches, and sutures; it has been developed by bleeding, by a scratch, or puncture; in the cicatrices of small-pox, acne indurata, syphilis, burns, and the vaccine scar. If such slight causes be sufficient to produce the disease, I believe it impossible to say whether it be idiopathic or otherwise. As the true and false forms of cheloid are identical in microscopical structure, as well as in all other particulars, why is it necessary to adhere to the divisions into true and false cheloid arbitrarily created by Alibert?

It is very probable that the peculiar disease affecting the breast of Jas. Bell, which has been eight years in growing, came on, as he states, from friction. (Fig. 1.) The true cheloid nature of the malady, however, is better seen upon the buttocks (Fig. 2), where its presence is of more recent date. Over the gluteal region of the right side, and descending upon the thigh, are nineteen distinct tumours, mostly of a small size. A portion of the diseased structure, which is marked by a tracery of white streaks, and may be pinched up into a fold, commences an inch below the great trochanter of the femur, and extends for a distance of eight inches and three-quarters downwards and inwards, measuring in its widest part four inches. In close proximity to the groin of the left thigh, there exists a peculiar arrangement of small nodules like a cluster of beads of different sizes. Had this morbid condition of the skin invaded the genital organs, it would, as likely as not, have been denominated elephantiasis. The pedunculated tumours have passed through all stages of growth, and, being useless to the economy, are assuming degenerative changes, partly due, perhaps, to the pressure and local irritation. They present more the appearance of molluscum fibrosum than of the cheloid of dermatologists.

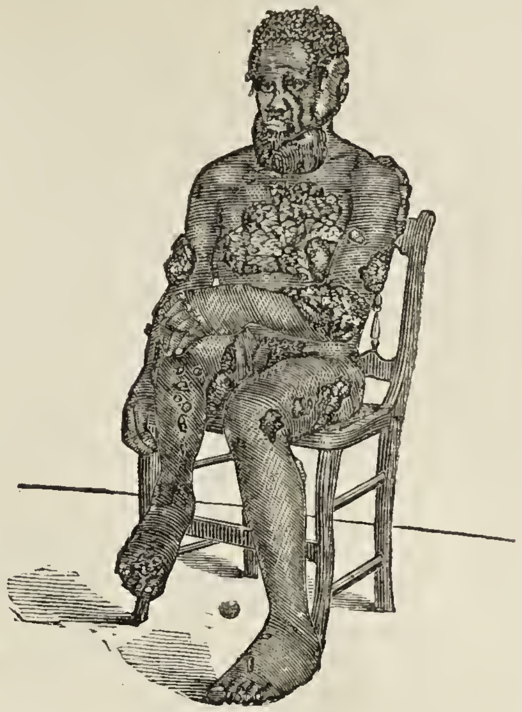

Fig. 1.

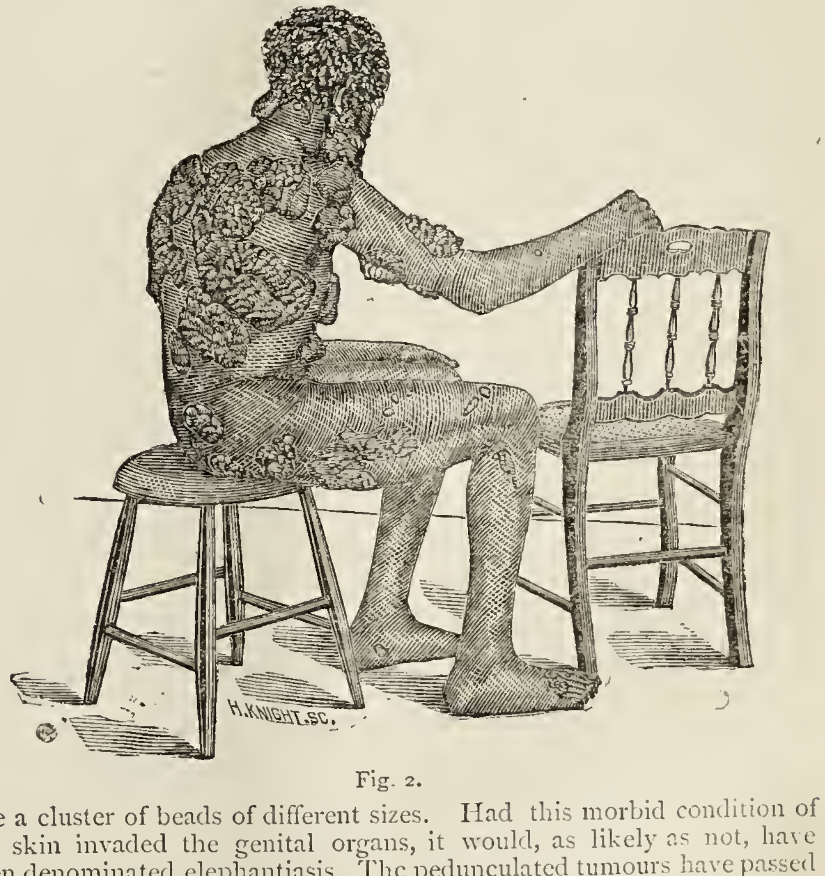

Fig. 2.

The first tumour, already referred to, that made its appearance, and which, after being extirpated, was a year in re-forming, and which, since our war, has undergone another operation, now occupies a very extended surface upon the side of the face, embracing the left ear in the form of a horse-shoe. It measures three inches and a half in front, two and a half above, and three and a half inches below the aural aurifice. Its lobulated inferior border is an inch in thickness, and projects an inch and a half from its broad pedicle. Its posterior portion includes the lobule and the anterior portion of the ear. Its superficial surface is covered with scales formed from a sero-purulent fluid that exudes from a slightly excoriated surface. A similar appearance is to be found in some forms of lepra. This tumour, in coming into contact with a neighbouring fibrous mass, has the under surface of its overlapping lobule ulcerated. The tumour situated below resembles, in shape and colour, the inferior surface of a liver. When its surface is touched, it shrivels between the fingers, and the touch has the semi-elastic feel of a fungus. Its lower border is sacculated, and discharges a yellowish-white gelatinous fluid from small puckered openings. Situated upon the right side of the jaw is a turtle-shaped tumour ; its body rests upon the angle of the inferior maxillary, and its head, having two pea-like bodies in the place of the eyes, includes the lobe of the ear in its substance, and points in front of the aural appendage. Its length is 4⅞ inches, and its breadth 4⅛ inches. The hair of the whiskers is disarranged by the tumours. The apposition of the edges of these prominences with the subjacent skin, or with neighbouring protuberances, has given rise to abrasion of their surfaces. A portion of one of the tumours had suppurated, staining the linen with the discharge. When the sacculi, after having excited considerable pain, had given exit to their contents, they closed, as stated, with puckered cicatrices. The tumours have not encroached upon the cavity of the mouth, the mucous membrane of which is entirely healthy.

Upon the nape of the neck a tomato-shaped growth, looking as if it had burst in the centre from over-ripeness, now discharges a yellowish albuminous fluid. Tumours of this nature, according to Virchow, are developed from the corium, or sometimes take their origin from the panniculus adiposus. They may attain to a great size, having been known to weigh forty pounds. When they attain to an inconvenient size around the neck, they are subjected to surgical interference. Dr. Maury of Philadelphia removed from the neck of a coloured man one weighing nine pounds. But in addition to those around the neck, the dorsal surface of the body, as well as the shoulders and arms, presented the singular appearance as if masses of fungi had been attached to the surface of the skin. These excrescences are all of a lobulated or convoluted appearance, possessing a slight degree of mobility and elasticity. The largest of these tumours upon the back is 9½ inches in length and 4½ in width ; the smallest in size measures 2¾ inches in length and 2 in width. One of these excrescences, having a depressed centre, and consisting of twenty-three lobules, measures 5⅛ inches in length, 2½ inches in width, with a thickness of three-quarters of an inch. The tumours situated upon the scapula, on each side of the spine, have a distance from each other of half an inch. These morbid enlargements have a tendency to overlap one another, rather than to root themselves by prolongations in the skin. Upon section, they present a whitish, homogeneous, gristle-like appearance, and the knife is resisted in its passage through the dense, firm, fibro-cartilaginous-like structure. The blood-vessels have an irregular network arrangement upon the surface, and may give rise to severe hæmorrhage when the tumours are removed. Although two or three of these tumours, when irritated, have discharged a yellowish-white albuminous fluid, and resembled fibroma somewhat in appearance, yet the soft purselike appendages are unlike the soft purse-like appendages to the skin, having a soft spongy consistence, and composed of young gelatinous connective tissue, characteristic of true molluscum fibrosum ; nor can they be easily separated from the pedicle or enucleated from their attachments in the superficial layer of the derma. Besides, James Bell is in perfect health; and, although in such a disease we may suspect some degenerative changes in the substance of the spinal cord, and, as in his case, a greater sensibility on one side than another, that will lead undoubtedly in time to a greater difference in the supply of nervous vigour to the two sides, still he does not manifest those general nutritive disturbances which, in fibroma, often cause death by marasmus or pyæmia. The disease is a localised evidence of disorder of the peripheral nerves, accompanying the blood-vessels of the corium. In the *post mortem* examination of persons who have died of leprosy, the nerves are found to be thickened by a fibrous structure, and their terminal branches atrophied and pearly in aspect, while in the anæsthetic variety the nervous centres in the cranial and vertebral cavities are often found diseased. Yet it is somewhat singular that the microscope seldom reveals the elements of nerve-structure in the tumours attending hypertrophic cutaneous diseases. Even in a case of very painful neuroma, reported by Dr. Duhring of Philadelphia, the microscope failed to discover, in the rounded hard nodules, that were often the seat of the most intolerable pain, the presence of any nerve-fibres. In all similar affections of the skin where peripheral nerves become affected, as in our patient, the morbid nervous condition is conveyed, to a greater or less extent, along the nerves to the central nervous system, and gives rise, not merely in some cases to intercurrent nervous disorders, but to that characteristic mental condition observed in many cases of hypertrophic disease of the skin.

By the persistent use for several years of small doses of arsenic, not only its sedative influence would be exercised upon the peripheral cutaneous nerves, and, by allaying this extreme sensitiveness to external impressions, remove the causation of the disease, but it might, to some extent, restore healthy nervous functions, by assisting in the reformation of lost nervous structure and the removal of sclerosis of the skin and nervous centres, which seem to form after nervous elements have disappeared. Local measures, as pressure, etc., may at the same time be resorted to for removing these dermal tumours. Mr. George Pollock, of St. George's Hospital, London, has published in the *Lancet*, of March 22nd, 1873, the details of a case of molluscum fibrosum, which appears to have some of the characters distinguishing the case of James Bell.

The woman, aged 33, who had been afflicted since childhood, was in a very low state of health when admitted to the hospital. There were over one hundred tumours of various sizes in different parts of the body. Some were solitary, some were clustered, some with broad base, some pedunculated, whilst others were as small as a split pea. The chief growth extended from the right side of the neck by a pointed extremity to the upper margin of the right mamma. It consisted of a long, thick, and broad pendulous flap of skin about eighteen inches in length. Its anterior surface was thrown into several folds, which give it somewhat the appearance of coils of intestine. One large one, attached to the back of the head, was of the size of a small melon. The microscope, according to Dr. Whipham, showed that the growth was due to excessive hypertrophy of the connective tissue, and partly to abundant cell-growth, occupying interspaces between the bands of fibrous tissue.

The microscopical drawing (Fig. 3) accompanying this essay will show the havoc made by the disease in the dermal tissue. The main feature presented is hypertrophy of the cutis vera, as well as of the deeper pigmentary layer of the epidermis. The connective tissue of which the cutis vera is composed is of a low type, consisting of wavy interlaced bands of fibres, enclosing here and there within its meshes patches of fibro-plastic matter, consisting of closely packed, minute, angular, actively growing corpuscles, with faint striæ passing amongst them. The hairs and hair-follicles appear quite normal, though surrounded by a layer of the abovementioned fibro-plastic material. The pigment-layer is very large and abundant, sending in anastomosing processes to the cutis vera.

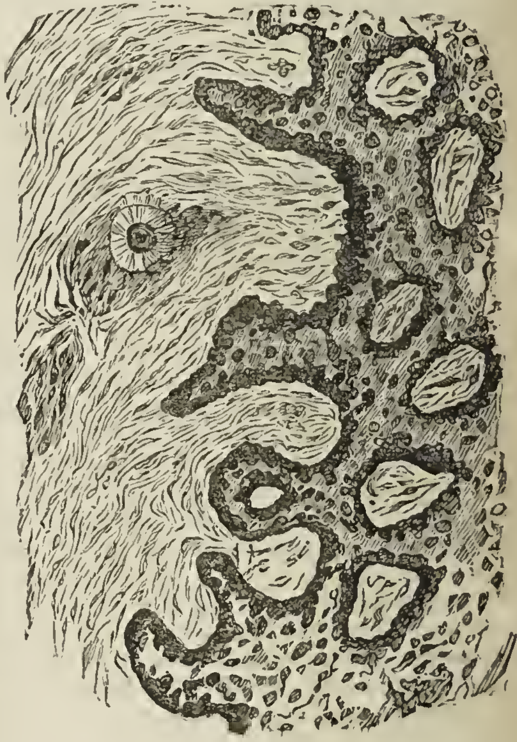

Fig. 3.

James Bell's disease is remarkable from the fact that it embraces some of the characters of both cheloid and molluscum fibrosum. If the origin of those cases occurring in England, now called molluscum fibrosum, were minutely investigated, it is possible, from the nature of the microscopical examination of Mr. George Pollock's case, and the fact that molluscum fibrosum is a disease peculiar to warm countries, that they would follow our example, and call their cases cheloid, especially as this disease is more likely to prevail in temperate climates.

THE ALLEGED OCCURRENCE OF PURPURA IN CHILDREN.

By W. WILLIAMS, M.D., M.R.C.P.,
Junior House-Surgeon to the Royal Southern Hospital, Liverpool.

Referring to Dr. Lewis's communication to this Journal under the title "Notes on Purpura", I had my attention drawn by Dr. Cameron six months ago to the investigations that were being made by Dr. Lewis into the nature of the maculated condition of the skin giving rise to the abnormity of which he treats, and I was induced to devote much time and attention amongst our in- and out-patients to the matter, with a view of ascertaining to what real origin the affection owed its presence; and I now feel no hesitation in attributing the symptoms in question to a local rather than a constitutional cause. For this malady, which has given rise to the supposition of the prevalence of purpura amongst the poor children of this town, met with in the form of small dark-red circular spots, of more or less uniform tint, varying in size from about the one-ninth to the one-twenty-fourth or even less of an inch in diameter, and found most frequently and in greatest abundance on the integument in front of the body, neck, and upper arms, has, besides the weight of its hitherto generally recognised and undisputed claim to an origin in flea-bites, many peculiarities which entirely preclude the idea of a different source.

According to the hypothesis advanced by Dr. Lewis, but contrary to universal experience of purpura, the chests of young children, healthy and unhealthy indiscriminately, are found more frequently marked than are the legs of the aged. Thus most unaccountably conjoined with its imputed nature, do we find that, in the choice of sites, preference is given to the warmest and most delicate portions of the surface; the lower limbs, the parts most dependent and furthest removed from the centre of the circulation, being discarded almost invariably.

Again, the duration of the disease shows a wide gap to exist between it and purpura. In the latter case, weeks and even months are known to pass with a continuance of the cutaneous discoloration; while, as the result of altered topical states, as through admission into a clean ward in cases of flea-bite, the spots soon fade, and are usually absent on the fourth day—to quickly reappear, however, on discharge and consequent re-exposure to the previously existing conditions. In all the numerous instances where I have had opportunities for observation, this rule has held good.

Further, I am enabled to state that, during my experience, no other besides the cutaneous resemblance to a purpuric symptom was present in a single instance; there was no tardiness in the reunion of fractures or healing of wounds; no unusual hæmorrhage either from them or from the mucous membrane. And another point of no inconsiderable value in establishing a correct theory, is indicated by the fact that these spots are much more rife during the hot summer than during the winter months.

Moreover, it will be allowed that, without a knowledge, gained through experiments with insects themselves, of the influence exercised on the duration and character of the resulting petechiæ by the condition of the skin, delicate or otherwise, the nature of the bite, severe or the reverse, the state of the patient, healthy or unhealthy, and the vitality of the part, errors such as appear in Dr. Lewis's statements respecting flea-bites are not surprising. For, on the application of a flea to almost any part of the cutaneous surface, not omitting the face and eyelids, in a short time, as the result of the bite or bites, one or more circular blushes of a light red colour are left, having at the centre a spot of a much darker tint and of the size of a pin's head, with occasionally the actual site of the puncture indicated by a still darker point in its middle. In twelve hours, or less, the blush will have faded, leaving the central dot as the only indication. This will, however, have assumed the appearance of an ordinary spot of ecchymosis visible through a transparent layer of cuticle, and will remain for an uncertain period, varying from one to six or eight days, the duration being influenced, as above stated, by the healthy or unhealthy condition of the patient, the vitality of the part, and the energy displayed by the insect; for, when a flea feeds undisturbed from one or two punctures, the resulting marks are much more permanent than when, owing to disturbance or other cause, numerous incisions are made during one meal.

In support of the above assertions, I tender reports of the following cases, a few out of between thirty and forty which I have taken.

CASE I.—Ann Jane McC., aged 14, a stout and healthy girl, was admitted on February 9th under Dr. Wollaston, for a scalded thigh. Numerous spots of a dark red colour were observed on her neck, and on the front of the chest, the abdomen, thighs, and arms. Two circles, enclosing each from fifteen to twenty spots, were made with nitrate of silver. On February 10th, of those within the circles, one-third had lost the red tint and become of a brownish yellow colour. On the 11th, only six retained a red colour; all the rest were as more or less faded brownish yellow stains. On the 13th, the spots were absent, together with those on the rest of the surface. On February 17th, a flea was applied to the integument of the back, leaving three areolæ with central dark red spots, two of which gave no indication of a puncture even with the aid of a lens. Next day, each appeared as a dark red spot, without an areola. On the 19th, there was no apparent change. Next day, the spots had somewhat faded; on the 21st, they were yellowish brown dots; and on the 22nd, were absent.

CASE II.—Herman S., aged 8, a delicate boy, of fair complexion, was admitted on December 5th, 1873, under Dr. Carter, for convulsions. A flea was applied to the chest on the evening of admission; it left a mark similar to those described above. On the 6th, the areola was absent; the spot was dark red. On the 7th, there was no apparent change. Next day, the spot appeared as a brownish stain; and on the 9th, it was absent. Another application was made on the evening of the 8th, resulting in the appearance of nine marks; only seven, however, of these were visible next morning. They passed through the same stages as the above, and were wanting on February 12th.

CASE III.—Mary Ann K., aged 19, of well developed frame, healthy appearance, and fair complexion, was admitted on February 9th under Dr. Wollaston, suffering from fracture of her clavicle and much bruising of her shoulder. Numerous spots were observed on her neck. Two patches, containing each from twenty to thirty, were ringed by a stick of nitrate of silver. On the 10th, a third had lost the red tint; the rest were unchanged. Next day, the majority were yellowish; many were absent. On the 12th, all were much faded; a few remained still reddish. Next day, a very few were observed, and these were of a yellowish brown colour.

CASE IV.—Charles McA., aged 40, of strong well developed frame, was admitted on February 9th under Dr. Carter, suffering from double pneumonia in the second stage. A great number of small dark red spots were present on the whole of the anterior surface of the body, arms, and thighs. On the 10th, some were a little faded; others, the most numerous, were unchanged. On the 11th, the red colour was rapidly disappearing; a large number appeared as brownish stains. He died on the 12th, at 11.45 P.M. Not more than twenty spots out of the many present on his admission were observed on the body.

CASE V.—James McK., aged 7, a healthy well grown boy, was admitted under Dr. Cameron, for hoarseness of long standing, on February 10th. Fleas were applied to the chest on the same day; they left eleven marks, which retained the red colour for three days, and were visible as brownish marks for three days longer. On the evening of February 12th, an application was made to the right upper eyelid, with the result of producing four well marked flea-bites, which retained a red colour for four days, and for two longer appeared as brownish dots.

CASE VI.—Richard B., aged 10, a healthy strong boy, attending school, and taking his meals at home, was admitted on November 9th, 1873, under Dr. Wollaston, for a severe wound of the face. The spots, present in large numbers in the usual sites, and similar to those already described, observed on his admission, were absent on November 12th. Having been discharged with a natural skin, free from spots, on November 19th, he presented himself again in the out-patient room on the 29th, as thickly studded with spots as on the date of his admission.

CASE VII.—Thomas H. R., aged 10, a very healthy, stout, well grown boy, was admitted on March 23rd, under the care of Mr. Hamilton, for a severe wound of the scalp. Very numerous spots, similar to those already described, were found on almost every part of his skin, including the face, eyelids, margin of the scalp, and dorsal aspect of the feet and hands. They faded in the following order. On the 26th, the feet, thighs, hands, arms, face, and eyelids, were free from spots; the front of the chest, neck, and abdomen, showed about one-third the number of dots present on his admission. On the 27th, his skin was spotless.

SURGICAL MEMORANDA.

ATRESIA VAGINÆ.

IN the JOURNAL of February 28th, is reported a case of atresia vaginæ, occurring in the practice of Dr. Greenhalgh at St. Bartholomew's Hospital, but actually treated by Mr. Thomas Smith and Dr. Hope, the latter of whom appends some clinical observations on the subject.

This malformation, common enough in the female infant, must have been seen frequently by most surgeons and obstetricians; and, in its usual form, is easily remedied, the membrane which occludes the vagina being usually thin and easily lacerable, when put upon the stretch between the left forefinger and thumb of the operator and pressed against by the blunt end of a probe, or a bodkin, or any similar instrument. Under this proceeding, it splits longitudinally, leaving the mouth of the vagina patent, and there is little liability to any reunion of the edges. The case, as is well known, becomes much more serious in the adult female, not because the canal is less easily restored by operation, but by reason of the secondary evils that ensue upon even the simplest form of it, as, for instance, the mere puncture of the hymen with a lancet. I do not think the case cited by Dr. Hope, in support of this well-known fact, is quite to the point. It is doubtful, at least, whether the pyæmia of which this girl died was not due rather to the ulceration of the intestine, and that ulceration wholly independent of the vaginal puncture, notwithstanding the existence of some muco-purulent fluid in the cavity of the uterus after death.

In such instances, however, the necessary surgical treatment is not always followed by any constitutional disturbance, even where it has been long delayed, when the menstrual function has been long established, and a great accumulation of blood, etc., has in consequence arisen, distending both vagina and uterus, if not the Fallopian tubes as well. I am indebted to my friend Dr. Smith, of this place, for the few following notes of such a case, which I saw with him last year.

M. P., aged 15, a delicate-looking girl, had never menstruated up to the time when she was first seen. She commenced to complain about fifteen months ago of a severe pain over the lumbar region, also a feeling of weight and bearing down in the vagina, becoming worse at the periodical dates, and latterly accompanied with great difficulty in micturition. . Upon vaginal examination, a thick imperforate membrane existed, instead of the usual hymen, completely closing an otherwise well-formed vagina; the membrane was felt to be distended with fluid. An elliptical piece was removed from the centre of the membrane, sufficient to admit the forefinger within the vagina. About three pints of a dark grumous fluid escaped; both vagina and uterus were enormously distended and enlarged. A weak injection of carbolic acid was used freely after the operation. No bad symptoms supervened, and within a fortnight the patient was able to walk about free from pain. The opening was dilated with bougies without difficulty. On March 5th, 1874, she had menstruated only twice since the operation. Her general health was much better.

In this case, during the escape of the treacly fluid, after puncture of the hymen, I found the os uteri so low down in the pelvis and so dilated, that I could pass my forefinger well into the cervix, and the uterus formed a distinct tumour above the pubes. The question of interest in all these cases is the best method of relieving them, so as to run the least risk of incurring the grave evils of decomposition of the blood and septicæmia, endometritis, or peritonitis from the rupture of the Fallopian tubes by uterine action. Theoretically, the following would be the objects aimed at: first, as free an opening of the vagina as practicable by incision of the hymen, by excision of a portion of it, or by the action of a pointed stick of caustic potass; secondly, the avoidance of all irritation of the womb by digital examination or pressure—the latter of which also, if it had been carried far, might, if removed, cause a vacuum in the vagina and uterine cavity, and so favour the entrance of air and decomposition of the blood, etc.; thirdly, in the event of such decomposition, to use antiseptic injection. Some of the readers of the JOURNAL might do much good by reporting their individual experiences.

H. BURFORD NORMAN, F.R.C.S., Southsea.

THERAPEUTIC MEMORANDA.

TREATMENT OF HAY-FEVER.

I HAVE read with much interest a paper in the *Practitioner* for April entitled "An Experimental Observation on Hay-Fever", by Professor Binz of Bonn. As the period when this annoying malady generally returns is not far distant, I wish to add one or two remarks to the paper just mentioned.

Helmholtz's discovery of the presence of vibriones in the nasal secretion in hay-fever, and his successful treatment of his own case by the injection of a neutral solution of quinine into the nasal cavities, were facts not unknown to me. I was not, however, aware that it was in consequence of reading a notice of Binz on the poisonous action of quinine on the infusoria, that Helmholtz resorted to this method of treating the disease. I would suggest another remedy, viz., solution of camphor, for this disorder, founded upon the same experimental data. My friend Mr. Anningson, assistant to Professor Humphry, showed me a short time ago the poisonous effect of a solution of camphor upon some infusoria, chiefly paramœcia. This solution produced a perfect cessation of movement in them. It occurred to me at the time that the value of a strong solution of camphor, frequently and for some time sniffed up the nose in the early stage of coryza, might depend upon the camphor destroying some low organisms which most probably produce this complaint. On this hypothesis, I would also recommend a strong solution of camphor, similarly applied to the nose, in hay-fever. Perhaps the remedy has been already tried in this complaint, but I am not aware of any one having previously suggested it. I may add, in conclusion, that the most efficacious remedy in hay-fever, as far as my experience goes, is the application, by means of a camel's hair brush, of tincture of opium to the interior of the nose. I can also speak highly of the internal administration of arsenic.

J. B. BRADBURY, M.D., M.R.C.P., Linacre Lecturer in Medicine, and Physician to Addenbrooke's Hospital, Cambridge.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LONDON HOSPITAL.

HYPERTROPHIED SPLEEN: LEUCOCYTOSIS: TUBERCULAR DISEASE OF THE PERITONEUM AND PLEURA.

(Under the care of Dr. RAMSKILL.)

CASES in which the spleen is enlarged are instructive clinically and pathologically, and physiologically also; for with the spleen, as with other organs, morbid changes impair its functions. By studying, therefore, all cases in which the spleen is enlarged, we may hope to ascertain its functions.

J. W., aged 55, stated that he had suffered from night-sweats and a cough at the fall of the year for three or four years past. In 1869, he had rheumatic fever, and was laid up four months; subsequently, he met with an accident which dislocated his shoulder, but he recovered, so as to be able to work as usual. In the summer of 1872, whilst at work one day after dinner, he was suddenly seized with a "sharp knitting pain in his left side", to use his own expression, "as if one had been tying his entrails in a knot". This pain was worse, he said, when he took a deep breath. From that time, he gradually lost flesh; he often felt weak and faint, and the pain became continuous, caused him to be restless at nights, and unable to do any work. He often felt hungry, but feared to satisfy his appetite, for, about fifteen minutes after eating, he felt very uncomfortable, full and distended in his hypogastric region. He could take liquid better than solid food. With respect to his family history, he said that his mother died of consumption at the age of 35, and that all his brothers and sisters died young.

On admission into the hospital, a tumour, which had the shape of the spleen, was felt in the left hypogastric region; its edges were rounded and well defined; it was smooth, and it was particularly noticed as not being nodular and not painful on pressure. The liver was enlarged, and the abdomen somewhat distended. There were no physical signs to indicate lung-disease. The heart-sounds were feeble. The blood was examined by the microscope; its white corpuscles were found to be much more numerous than normal; the red corpuscles readily formed rouleaux. After being in hospital a few weeks, he was relieved and went home.

In August, 1873, he was again admitted. He then complained of what he called a "tightness at the bottom of the stomach", especially when he drank anything. He was very thin, and his skin, noticeably that of his face, presented a brownish yellow appearance. The enlargement of the liver, and the tumour in the left side, which was thought to be enlarged spleen, remained much as before. It was noticed, however, that this supposed spleen did not pass obliquely down towards the middle line; though its position and form led Dr. Ramskill to regard it as an enlarged spleen. The blood was again examined, and it was noticed that the white corpuscles were more numerous than natural, but they were not in such great abundance as is usual in cases of leucocythæmia. He remained in much the same condition for many weeks, generally stating, when asked, that he felt better; but he did not gain flesh, and there were no indications of improving health.

In the middle of September, he was seized with great pain under the left lower ribs, which persisted with more or less severity for several days, and made him unable to raise himself in bed, or even turn from side to side. Half a grain of opium every four hours gave him relief. The abdomen was then distended two or three inches above the level of the sternum, and it was very resonant on percussion. His breathing was thoracic.

On October 5th, there was large crepitation at the lower fourth of the left lung behind; the resonance was clear, but markedly flat at both apices. He expectorated a quantity of muco-purulent matter, and complained of shortness of breath. His temperature rose to 102 and 102.8. The abdomen was somewhat, but not very, tender on pressure, and he had but very little pain in that region. It was thought, from the pain in the abdomen, the tenderness, although it was very slight, and the high temperature, that he had at this time peritonitis. After this, the patient first sank, not suffering much pain.

REMARKS BY DR. RAMSKILL When this patient was first admitted into the hospital, his spleen was found to be enlarged, and we were unable to determine the cause of the unusual size. At that time, he had no symptoms indicating peritoneal disease. His body was badly nourished, and the skin pigmented of a sallow brownish yellow, like, but deeper than, the tint of splenic cachexia. When admitted the second time, he was in much the same condition. He complained then of pain in his abdomen; and he said, on inquiry, that the pain disturbed his night's rest; but his statements on this point were sometimes contradictory. The pain, wasting, and cachectic tint led some of us to think he had carcinoma in the abdomen. Subsequently, the pain in his abdomen increased until pressure upon it caused much suffering. His temperature rose, and these symptoms were thought to indicate peritonitis, and the necropsy showed that this conclusion, so far, was correct. The blood was examined when first he was in the hospital, and an excess of white corpuscles was discovered. On the second occasion, the white corpuscles were found to be increased in number, but not to exhibit the great excess usually seen in leucocythæmia, nor were a number of intermediate corpuscles seen as in leucocythæmia, making the blood look as if it predominantly consisted of white rather than red corpuscles.

Dr. RAMSKILL next called attention to another case of enlarged spleen—malarious (?)—and said: This tumour, descending from under the left ribs, passing downwards and inwards towards the median line, with distinct edges, a notch in its inner border, and the increased area of splenic dulness upwards, has the well recognised character of splenic enlargement; and there can be little or no doubt that it is an enlarged spleen. The patient has been in the army, and lived in countries where he was exposed to, and evidently suffered from, malarious poisoning, for he tells us that some years ago he had ague. The question arises—Is this splenic enlargement consequent on malaria? In situation, size, and form, this tumour resembles an enlarged spleen, such as occurs with ague, but this patient has not had any ague-like paroxysms, nor has he been in any district noted for malaria, as far as we can learn, during the last few years. But, whilst this is fully recognised, it must be remembered that experience has shown that persons who have been exposed to malaria, and evidently, judging by the effects of quinine treatment, are suffering from malarious poisoning, may have enlarged spleen without any ague-like seizures; further, that persons who have been exposed to malaria, and had ague, may, months or even years after such exposure, and attacks of ague, have, seemingly without any fresh exposure, a recurrence of these ague-like seizures, leading us to think that probably malarious poisoning, like syphilitic poisoning, may remain latent in the system for a time, and even a long time. It may subsequently be brought into activity, and in some persons may produce a recurrence of the ague-like paroxysms, and in others an enlarged spleen. It is noteworthy, that this man's blood was carefully examined, and showed no excess of white corpuscles.

TOWN'S HOSPITAL, GLASGOW.

EPILEPTIC APHASIA AND HEMIPLEGIA: COLOURED VISION: SYPHILITIC (?) ORIGIN.

(Under the care of Dr. ALEXANDER ROBERTSON.)

IN a recent brief but important communication, Dr. Hughlings Jackson directs attention to coloured vision in epilepsies, and its relation to other sensory and motor phenomena of this group of diseases. The following case, at present under Dr. Robertson's care, illustrates his views, and has besides a bearing on other questions in pathology. Dr. Robertson writes as follows.

J. C., widow, aged 45, of stout but relaxed frame, pale and somewhat earthy aspect, has been epileptic for six years. No cause is assigned; she denies syphilis, and there is no distinct indication of it. Until about three months ago, she was subject to very severe convulsive seizures, with loss of consciousness, every three or four weeks. They were always preceded, for about two hours, by the appearance of a ball of red light before the eyes, particularly the right one. On recovery from the fits, the right arm and leg were partially paralysed, and continued so for a day or two. She was ordered, first, fifteen grains of the bromide of potassium twice daily, which she used for several weeks without much benefit. As she often complained of severe frontal headache in the intervals between the fits, it occurred to me that the disease might possibly be of syphilitic origin, even though the history did not bear that out, and I therefore ordered her iodide of potassium, increasing the dose gradually from five to fifteen grains thrice daily. The relief to the headache was most marked. She has had no convulsive fit greater than what I will describe, for fourteen weeks, except one which occurred about six weeks ago, after the last medicine had been omitted for a fortnight through mistake. At the end of this fortnight, the headache also returned with its former severity. But, though the convulsive attacks have decreased so much in frequency, lesser seizures, at intervals of about eight days, seem to have arisen in their place; and, on February 7th, I saw her immediately after one of them began. She was sitting on a chair by her bedside, somewhat stupid-looking, but quite conscious. On addressing her, she tried to reply, but could only say "I", "Man", which she repeated several times; nodded when I asked her if she knew me. After standing beside her about half a minute, spasmodic movements of the right upper and forearm set in; the muscles chiefly affected were the pectoralis major and the biceps. The fingers were semi-flexed, but did not partake in the movements. The leg was not affected at all, nor was the face. During the continuance of the spasms, she put out her tongue when requested, and otherwise manifested consciousness. The spasmodic movements lasted about three minutes. At the close of the attack, she said distinctly, though with an effort, "richt", "better". At 7 P.M., I found that her speech was fully restored. She now stated that she had seen the ball of fire with the right eye for about a quarter of an hour before this seizure began, and added that she had usually noticed it for about that length of time before the milder fits. A fortnight afterwards, I saw her directly after another fit, which had been preceded by the usual hallucination; I then tested her eyesight particularly. When shown a neckerchief of bright red colour, she said it was a faded red; and a bright yellow she thought was a whitish-yellow. She was not quite sure whether blue was blue or green. Next day, she could distinguish all these colours with case; said that the red was a *good* red, and that the yellow was a bright yellow. She thought I was showing her different articles, though they were the same as on the previous day. There was no difference between the two eyes.

REMARKS.—In this case, the subjective production of red as a distinct aura was followed by a partial inability to recognise that colour for a time. This, as Dr. Jackson holds, may be regarded as the analogue of unilateral convulsions followed by temporary hemiplegia—a sequence which is also illustrated by this case. Still, it more than bears out the conclusion, for the after-inability to distinguish colours was not confined to red. It was interesting to observe that the fit began with aphasia, pointing to the third left frontal convolution, or its neighbourhood, as the locality of the "discharging lesion". The spasmodic movements in the minor fits were limited to the right arm. From this and other cases, I am disposed to think that there is a more intimate association between defects of speech and motor defects in the arm than in the leg. Does it indicate a greater proximity, or more intimate union, or both, of their centres in the cerebrum in the one case than in the other? I had noted this association, thinking it was a little discovery of mine; but I find it has not escaped Dr. Jackson's observation. In one of his papers, that trustworthy observer states, "the more the leg and the less the arm suffers in cases of right hemiplegia, the less the defect of speech there is". The almost complete immunity from pain, and the freedom from the severe convulsive seizures, when using the iodide of potassium point to a syphilitic origin of the disease. The advantage in respect of the fits may well be questioned, as she has now minor fits so much more frequently than she was wont to have the major ones. Perhaps, they also may be kept in comparative abeyance by the persistent administration of the bromide with the iodide of potassium—a combination which she is now using.

SPINAL PARALYSIS IN CHILDREN.—M. Roth describes in Virchow's *Archiv*, vol. lviii, 1873, the case of a child aged 2 years, the subject of partial paralysis of the lower limbs, who died of diphtheria. The paralysis was more marked in the right leg than in the left (the right limb was distinctly more wasted); some improvement, however, had in the course of a year followed treatment by electricity. At the necropsy, the lumbar enlargement of the cord was found to be imperfectly developed; and the anterior roots of the cauda equina were of a grey colour, flattened, and atrophied. On transverse section, the anterior grey cornua were seen to be of a dirty grey white colour, and were only distinct towards the lateral columns. The posterior columns were grey throughout. A careful examination of the cord after hardening revealed the presence of inflammation of the right anterior cornu of the lumbar portion of the cord for an extent of about 1.2 inches, and of the left for about a third of that extent. The pathological process, which might be regarded as an interstitial myelitis, had thus its essential origin in the anterior grey cornua, but also spread here and there into the posterior cornua and into the white substance of the anterior and lateral columns. In the diseased parts, nucleated cells were found both in the tissue and in the walls of the vessels; and at some points these accumulations gave rise to an appearance of circumscribed softening. Between the nucleated cells lay a network of fine shining fibres, mostly of connective tissue; the true nerve-fibres were few in number, and the large multipolar ganglion-cells were almost entirely wanting. As a result of this atrophy of the anterior cornua (especially the right), there was atrophy of the corresponding anterior roots of the nerves.—*Centralblatt für die Medicinischen Wissenschaften*, March 14.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MARCH 27TH, 1874.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

A Case of Hæmoptysis.—Dr. CAYLEY read particulars of a case of hæmoptysis. The patient was a police-constable, aged 20, with a phthisical family history, but who had himself always enjoyed good health. In taking a drunken woman into custody, he received a blow with the fist below the right breast; a few hours afterwards he coughed up about half a pint of florid blood. During the next five days he continued to suffer from pain at the seat of the blow, but did not bring up any more blood. The hæmoptysis then returned, and continued at intervals for two days, and he was admitted into the Middlesex Hospital on October 14th. It was then noticed that there was slight dulness under the right clavicle, and a friction-sound over the lower part of the chest. He continued to spit up small quantities of blood at intervals; the signs of considerable effusion into the right pleura showed themselves. His temperature became high, and he sweated profusely. On October 19th, the hæmoptysis returned with great violence; he brought up torrents of bright red blood; he became blanched and livid, and died at 9 P.M., twelve days after receiving the blow. On *post mortem* examination, no injury to the soft parts or ribs was discovered. The right pleura contained two pints of pus; an abscess, holding half an ounce of pus, was found immediately beneath the costal pleura, close to the attachment of the diaphragm to the cartilages of the ribs in front. In the apex of the right lung was a caseous nodule, of the size of a hazel-nut, and scattered through the upper lobe were some recent grey miliary granules. The lower part of the lung was collapsed. There were also grey miliary granules scattered over the peritoneal surface of the liver. The other viscera were normal. The connection between the lesions in this case might be accounted for in several ways. First, it might be supposed that the concussion of the blow caused the first attack of hæmoptysis; this, by producing inflammatory irritation of the lung, determined the eruption of tubercle, to which the patient was predisposed, and this caused the subsequent hæmoptysis; the abscess and pleurisy being also caused by the blow, but not being directly connected with the hæmoptysis or the tuberculosis. Or it might be considered that the first attack of hæmoptysis was due to the blow; that this also caused the abscess and the empyema—the latter exciting the tuberculosis by infection, and this the subsequent hæmoptysis. But though chronic pleurisy, especially when the fluid was allowed to remain long in the pleura, not unfrequently excited tuberculosis, this was not often the case with acute pleurisy. A third hypothesis was, to consider that these lesions stood in no causal connection with each other, but that the patient, who was of the tubercular diathesis, happened to receive a blow which produced an abscess and pleurisy at the time he was about to be attacked by tuberculosis. The legal responsibility of the person who inflicted the blow would depend upon which of these hypotheses is adopted.—Dr. POWELL presumed the hæmorrhage was chiefly round the old disease—probably from the effects of the blow; and that the tuberculosis was due to the lighting up of the old disease. He would like to know if there was any evidence that the inflammation arose from the blood effused. In a certain number of cases, he was quite sure, hæmorrhage might set up acute disease. This man, too, was apparently healthy. He thought it rare to find acute tuberculosis set up after pleurisy, even after empyema. —Dr. SYMES THOMPSON was not quite clear as to the sequence. No doubt the bleeding was largely instrumental in setting up the active disease. He had a case in some respects similar, where a blow on the side had been followed by signs of lung-mischief. The question was raised whether the bleeding had done harm or good.—Dr. SOUTHEY said the case raised two interesting points—one medico-legal, one pathological. The man did not die directly from the blow, but indirectly, the part being excessively vulnerable. There was no evidence that the tubercle arose from the bleeding into the lung; but the lung itself was diseased. This was not one of Niemeyer's cases. The cause of the profuse bleeding was obscure. Acute tuberculosis often arose from empyema, even of short standing.—Dr. GREENHOW did not agree with Dr. Southey as regarded the legal aspect of the case. The man who inflicted the injury was liable to a charge of manslaughter, for the patient might have lived long enough if he had not been struck. The tubercle in the lung was quite obsolete. He would like to see or to hear of a real and unmistakable case of phthisis *ab hæmoptöe.* He greatly doubted the accuracy of Niemeyer's view. In this instance, doubtless the blow caused the abscess and the hæmoptysis. He had seen hæmoptysis caused by such an injury, even severe in character, but ending in recovery. He had also seen a blow giving rise to pleurisy. He thought the tuberculosis had arisen from the obsolete tubercle.—Dr. POWELL said there was a very great difference between acute tuberculosis and inflammation following a hæmorrhage. The former was very rare, if ever it took place; the latter was common. There was here probably a tendency to phthisis, but fresh disease was set up by the blood.—Mr. BRUDENELL CARTER said the question of law was clear enough: if death followed within a year and a day of the receipt of the injury, the person injuring the sufferer was guilty, in the eye of the law, of the man's death.—Mr. HEWETT said that many years ago he had seen a man who was injured on the chest. There was profuse hæmoptysis, and this was supposed to be due to a fractured rib, but there were no signs of that. The man died, and a large rent was found in the substance of the lung, whence the bleeding.—Other such cases were recorded.—Dr. CAYLEY said there was no sign of inflammation in the lung. It was compressed at the base by the pleural effusion.

Case of Blood-Cyst of the Hand.—Mr. J. WARRINGTON HAWARD read notes of a case of blood-cyst of the hand. The patient was a man, aged 43, married, in good health, and with a good family history. For three years, he had suffered from tingling and pain in the right forefinger, and for two years had had a gradually increasing tumour on the ball of the right thumb. This was punctured, and only blood escaped. He was admitted into St. George's Hospital, and the tumour was removed by Mr. H. Lee, the limb being bandaged after Esmarch's method. The tumour was examined by Mr. Haward, who found it to be a cyst with thick walls of gelatinous appearance, containing in its interior smaller masses of material resembling that of the cyst-wall, and some old blood-clot. Microscopically, the cyst-wall and the contained masses were found to be composed of spindle-shaped cells with oval nuclei, closely placed in a very scanty intercellular material. The clinical histories of cases of blood-cyst were shown to exhibit very various characters, some cases doing well and others exhibiting decidedly malignant characters, this difference depending upon the character of the cyst-wall. The different kinds of blood-cyst having been spoken of, the author drew the practical conclusion that, in all such cases, the growth should be very completely removed, and, even then, that a guarded prognosis should be given.—Mr. P. HEWETT had had a similar case. A lady had a large fluctuating tumour in the palm of the hand. He thought it was a bursal swelling, and opened it. Bloody fluid appeared; and in a few days, fungating growths, which bled much, began to sprout from the edges. He amputated the forearm. She died of phthisis the year afterwards, without any return of the tumour. Another lady had a dark-looking cyst in her breast for eighteen years. She had punctured it from time to time, and let out fluid. She became tired of this, and had it removed. The breast was seen to consist of a single large cyst. She remained well for years, but died of cancer in the axilla. There was no malignancy in the cyst.—Mr. T. SMITH mentioned the case of a boy who fell and struck his calf. He was seen with a collection of blood in the calf. This was removed, but it accumulated again and again, and finally turned cancerous. The limb was amputated, but the child died of internal cancer.—Mr. CALLENDER had often seen cases of disease referred to an injury. To take a subsidiary point in the case, what was the experience at St. George's as regards Esmarch's method? He thought it was peculiarly inapplicable to some cases, and that profuse bleeding often followed removal of the ligature.—Mr. HEWETT said Esmarch's method suited very well in this case; one could see well what to remove.—Mr. PICK said that the method suited well for operations on bone and for tumours of the extremities. It took a good deal of time, and was not altogether satisfactory.—Mr. HAWARD said some of these cysts were malignant from the first, others not so; but a malignant growth might spring even from these last, just as it might from an old cicatrix. Esmarch's method was very useful, but its uses were very limited.

Bracketed Splint for Excision of the Knee and for Compound Fracture. —Mr. CALLENDER described for Dr. Packard of Philadelphia a bracketed splint for excision of the knee and for compound fracture. The essential idea of the splint was that of a solid support for the whole limb, the middle portion, or that corresponding to the knee, being removable, the other portions being firmly bracketed together. The object of the splint was to keep the knee at absolute rest until the union of the sawn surfaces had taken place, and at the same time provide means for changing the dressings without removing the limb from the splint. The principle of the splint was based on that of the ordinary interrupted splint, but it was fashioned in such a way that the central or "interrupted" part, corresponding to the wound, instead of being removed altogether, was made to fit into the others by means of a tongue and groove, and so could be slipped like a shaft into its place, and be removed at will for the purpose of dressing the wound.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

WEDNESDAY, MARCH 4TH, 1874.

RUTHERFORD HALDANE, M.D., President, in the Chair.

Albuminuria in Vascular Bronchocele and Exophthalmos.—Dr. WARBURTON BEGBIE read a paper on albuminuria in cases of vascular bronchocele and exophthalmos. After a reference to the history of the disease, which is now associated with the names of Graves, Basedow, Begbie, and Trousseau, he referred to several cases in which he had discovered a previously unnoticed form of albuminuria, which might be described as temporary or intermittent. In such cases, albumen was found in the urine in considerable quantity soon after meals; especially —and in greatest quantity—soon after breakfast; while the urine was completely free from albumen at certain other times of the day. Dr. Begbie described two very interesting cases in which he had observed this condition for a considerable time, and in which treatment, mainly by iron and digitalis, had had the happiest results. He also alluded to others in which he observed the symptom, but for a less period of time. Two of the cases had been seen by Dr. George Johnson of London, at Dr. Begbie's request.

Exhibition of Pathological Specimens.—Dr. G. W. BALFOUR showed the Stomach and Duodenum of a lad, aged 19, but small and ill-nourished, who had been in his ward for a day or two, complaining of aggravated dyspeptic symptoms. He was not confined to bed, and was walking about within an hour or two of his death. At the *post mortem* examination, the peritoneum contained flatus; an ulcer of the duodenum was found, a portion of the adhesions of the edges of which had evidently been ruptured by the flatus. No peritonitis was present. The cause of death seemed to have been a reflex affection of the heart, the result of an over-distended stomach.

Mr. JOSEPH BELL showed—1. An Ear which he had removed from an old farmer, aged 70, for Epithelial Cancer, involving nearly the whole of it. 2. The Ankle-Joint and Bones of the Tarsus, which he had removed by Syme's Amputation, from a boy aged 12, in whose case, about a year ago, he had excised the ankle-joint. Disease had returned; but the case showed the remarkable reproduction of bone which had taken place, as the excision had been subperiosteal. 3. Two good specimens of Enchondroma of the Hand, which he had recently removed by amputation.

Dr. CADELL showed an excellent specimen of a Horn which he had excised from the parietal region of the scalp of an old woman.

Treatment of Trichiasis.—Dr. ARGYLL ROBERTSON read a note on the operation of repositio ciliorum for trichiasis. After describing Celsus' knowledge of the operation, and the manner in which it fell out of use, he spoke of its reintroduction by Dr. Snellen of Utrecht; and described the operation, in which the misplaced hair is caught in the bight of a very fine loop of ligature and pulled through a tunnel in the skin of the lid. He had performed this operation in twelve cases, and in all except one (the first) with success. He first had failed because his ligature was too coarse, and he had attempted to ensnare too many hairs at once. This operation was useful in cases where the misplaced hairs were few and large.—Mr. JOSEPH BELL thought this operation likely to prove useful in such cases, but feared it would not be of much use in those very numerous cases in which the misplaced hairs were very fine and very numerous.

Fracture of the Radius.—Dr. JOHN CHIENE read a note of a case of fracture of the radius. The patient, an elderly woman, had fallen from a height and sustained various injuries, which she survived three days. Dr. Chiene had the opportunity of dissecting the arm, which exhibited a Colles's fracture with more than the usual amount of comminution. He read a minute account of the various splits and displacements of the fragments, with remarks on their causation.—In a somewhat desultory discussion of the causes and treatment of this fracture, Mr. Joseph Bell, Dr. Miller, Dr. W. Taylor, and Dr. Chiene took part.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

TUESDAY, FEBRUARY 10TH, 1874.

W. T. GAIRDNER, M.D., President, in the Chair.

Syphilitic Hemiplegia.—Dr. ALEXANDER ROBERTSON showed a patient, aged 49, a widow, who had had two attacks of *left* hemiplegia, the first eighteen months ago, the second two months ago. In connection with both attacks, there was some shaking or twitching on the *right* side. Two months after the first attack, droop of the left eyelid and dilatation of the left pupil appeared; the ptosis passed off in six months, but the dilatation continued. Six weeks ago, a syphilitic ulcer appeared on the right thigh. When she was shown to the Society, the paralysis of the left side was but slight. The sense of smell was more acute on the left side, but a few months before it was the left nostril which was defective. The sight, impaired in both eyes, was much worse in the left, and this eye could not be rolled up or down. The left side of the tongue at its anterior part was very deficient both in common and in gustatory sensibility, and it was said to be usually coated with fur, but the nutrition and movements seemed normal. The masseter and temporal muscles were distinctly weaker on the left, the muscles of the face were only slightly affected, and the uvula pointed to the left. Hearing was very defective on the left side. The articulation, especially of the liquids, was impaired. Some tendency to emotional excitement also existed, but the perceptive faculties were good. Regarding the lesion as syphilitic, Dr. Robertson thought it more likely to be multiple than single; the two attacks of left hemiplegia, with shakings and twitchings on the right side, he regarded as due probably to a gummatous nodule in the right half of the pons Varolii near the crus cerebri; he thought, moreover, that there might have been inflammation of the pia mater, with effusion of lymph, extending forwards as far as the left optic tract and backwards to the seventh nerve. He directed attention to the loss both of common and of special sensation on the left side of the tongue.—Dr. THOMAS REID had examined the eyes of this patient, and found on the left side well marked optic neuritis, with contraction of the disc. The field of vision was contracted, and there was diminution of the acuteness to about one-tenth in the central part. On the right side, there was also slight neuritis.

Atrophy of Optic Nerve: Improvement by Galvanism.—Dr. THOMAS REID showed a young woman, aged 26, with pale atrophy of the optic nerves, due apparently to some cerebral affection. In November, 1871, she was admitted to the Eye Infirmary, and found to be unable to distinguish light and shade with the left eye, but she could count fingers with the right. The loss of vision in the left eye had been noticed (accidentally) twelve months before admission, and in the right about six months later. Menstruation had been suppressed for eighteen months, and for two years she had been subject to vomiting and headache. The ophthalmoscope showed the left disc pale and slightly atrophied, and the retinal vessels tortuous. The disease was less advanced in the right eye. She was treated with liquor strychniæ with some benefit, and the menstruation appeared on January 10th. In the beginning of January, 1872, she was sent to Dr. Finlayson for treatment by the constant current, and a distinct improvement was rapidly noticed. On January 15th, she could read No. 19 Jäger; and on the 26th, No. 16; the improvement continued till she could read No. 12. Since then she had had febrile attacks, headaches, and gastric irritation from time to time. The atrophy in the right became as well marked as in the left, but the improvement in the vision was maintained.—Dr. FINLAYSON said that the improvement which followed the use of electricity was more strikingly shown by the improvement she manifested in finding her way along the street than even by the use of types. The current used was from a Stöhrer's battery, never exceeding ten elements, and was passed sometimes through the temples, sometimes from occiput to forehead; but usually the positive pole was applied to the forehead and the negative to the angles of the orbits, this pole being sometimes glided along the skin at these parts. The applications were always short, and were stopped or interrupted for a few minutes on the occurrence of giddiness. The treatment was continued many months; at first, the applications were made thrice a week, and were diminished gradually in frequency.

Myoma attached to Cervix Uteri.—Dr. SAMSON GEMMELL showed a specimen obtained in the dissecting-room. The tumour was of the size of the fœtal head; it lay between the layers of the broad ligament to the right of the uterus, having the round ligament and Fallopian tube of that side firmly adherent to its surface. The tumour was connected with the cervix uteri by a very narrow pedicle which contained large blood-vessels. The tumour occupied the true pelvis, but was not adherent to the viscera. The microscopic sections shown proved it to be essentially muscular in structure.

Strangulation of Intestine from Twisted Mesentery.—Dr. JOSEPH COATS showed a preparation. The small intestine, from about a yard beneath the duodenum to about the same distance above the ileo-cæcal valve, was almost black, engorged with venous blood, and distended with gas and fluid fæces. There was no constriction of the intestine at the boundary of the strangulated part, but the obstruction seemed to be caused by a twist. The loops of engorged intestine were folded on one another in a complicated manner, and it was only by untwisting the mesentery that they were disentangled; this twist had evidently compressed the vessels and led to the engorgement. There were no adhesions in the strangulated portion, but there was a single adhesion just above, and several adhesions of loops of intestine just below the engorged part, but these did not constrict the gut. It was suggested that the portion of intestine bound by adhesions might have had its peristaltic action interfered with, and the irritation might have led to a tumultuous and irregular action sufficient to account for the twisting of the mesentery.—Dr. GAIRDNER said the man had been under his care at the hospital, but the history of the case was but imperfectly known, as he died very soon after admission.

Aneurismal Dyspnœa: Dissection of Nerves and Plexuses.—Dr. GAIRDNER showed a dissection of an aneurism of the arch of the aorta. A woman, aged 30, was admitted to the ward with alarming dyspnœa, only very partially relieved by inhalation of ether and nitrite of amyl. This dyspnœa appeared to Dr. Gairdner to present an appreciable amount both of laryngeal and bronchial spasm, but not enough of either to account for the fearfully dangerous looking paroxysms, the pale lividity, and the evident apprehension of impending death. The physical signs were not very marked; a little dulness on percussion and impaired respiration at the left back were found; the heart's sounds were normal, perhaps rather louder at the left sterno-clavicular articulation, where some ill-defined dulness on percussion also existed, but no pulsation or tumour in the jugular fossa or elsewhere could be detected. The pulses were equal, and the pupils also were usually natural, but the left had been seen once to be smaller. The patient died a week after admission. Dr. Gairdner regarded the complex neurosis as bearing in the direction partly of bronchial and laryngeal spasm, and partly of angina pectoris with orthopnœa. The lividity showed the aëration of the blood to be much interfered with, while the access of air to the lungs was still sufficiently free to be consistent with life. Dr. Gairdner referred to his classification in his *Clinical Medicine* of the different forms of dyspnœa associated with aneurismal disease, and expressed his regret that preparations were but seldom preserved in their nervous relationships along with a clinical history. The dissection shown had been carefully executed by Dr. Samson Gemmell, who made the following report. 1. The left pneumogastric nerve ran over the centre of the aneurism, and was firmly adherent. 2. The left recurrent was given off a little below the centre of the tumour, and became lost in the aneurism on the under side of the arch, but again appeared behind the trachea and the aneurism, and from this it ascended to the larynx. Its fibres were much flattened, but not atrophied. 3. The left side of the trachea was firmly adherent to the aneurism, the sac of which was in this situation. The left bronchus was pressed on and flattened. 4. The tumour projected into the lumen of the pulmonary artery just at the bifurcation; the right branch was especially pressed on. 5. The deep cardiac plexus seemed exposed to pressure. 6. The laryngeal muscles appeared equal on both sides. 7. The structures on the right were normal. (The pulmonary plexuses had been injured in removal from the body.) Dr. Gairdner found, therefore, in view of the dissection, the explanation of the lividity in the pressure on the bronchus coupled with the pressure on the pulmonary artery; of the laryngeal spasm in the serious affection of the pneumogastric and recurrent nerves; and of the angina pectoris in the pressure on the cardiac plexus.

Specimens.—Dr. JOSEPH COATS showed two specimens obtained from the brain of an old man who died of cerebral hæmorrhage.—Dr. HECTOR C. CAMERON showed rice-like bodies from bursal swelling of the wrist and palm.

TUESDAY, MARCH 10TH, 1874.

W. T. GAIRDNER, M.D., President, in the Chair.

Specimens.—Dr. JOSEPH COATS showed a heart, just removed, containing a large Globular Vegetation in the Left Auricle; the case was one of mitral contraction. The vegetation, three inches long, just reached to the mitral orifice, but did not obstruct it.—Dr. ALEXANDER ROBERTSON showed an Aneurism of the Aorta, just removed from a patient on whom he had operated, with a degree of apparent success, by means of galvano-puncture. He reserved the details of the case for subsequent condensation and report.—Dr. D. N. KNOX showed three dissections which he had made, illustrating various kinds and degrees of variation in the Generative Organs of Hermaphrodite Bullocks.

Various Nervous Lesions and Ulceration of the Cornea after Fracture of Skull.—Dr. H. C. CAMERON showed a young man who had received an injury to the head, resulting evidently in fracture of the base of the skull. The sight of the left eye was lost, and the disc was found atrophied. On the right side, loss of vision was also threatened from ulceration of the cornea; this did not seem to have been due to exposure, but apparently to a lesion of the fifth nerve more directly; this nerve was found to be affected in the whole of its three divisions. Common sensation was much diminished on the right side of the tongue at its tip and side, but there was no diminution of special sense. The point of the tongue was deviated to the right, the uvula to the left. There was paralysis of the sixth nerve on the right, also faint ptosis and imperfect movements of the eyeball on this side. The hearing was also affected on the right side.—Some discussion took place on this case, more especially as to the preservation of taste, with loss of common sensation on the right side of the tongue, as this formed a striking contrast to the case shown by Dr. Robertson at the last meeting.—Mr. H. E. CLARKE thought the deviation of the tongue to the right might be due to a lesion of the facial nerve in this case.

Epithelioma of Orbit: Favourable Results from Picric Acid.—Dr. THOMAS REID showed a woman, fifty years of age, with epithelioma of the left orbit. Eighteen years ago, she received a scratch at the inner extremity of the lower lid, and for fourteen years there had been an irritable sore. Dr. Reid saw her three years ago, at which time there was a warty ulcer. Two years ago, the whole lower lid had become destroyed, and the margins of the upper lid and the canthi were also affected; the margins had the thickened character usual in epithelioma. Sudden inflammation of the orbital tissue now supervened, with protrusion of the eyeball; this was followed by destruction of the orbital tissue, the eyeball hanging loosely supported by its muscles; the bones of the orbit had also become exposed, and, as it was uncertain how deeply the disease extended, no plastic operation was performed. On account of some favourable experiments being made with picric acid at this time, Dr. Reid gave her a saturated solution of this substance to apply to the sore. Two or three months ago, she returned to the Eye Infirmary. The disease had not extended, and the health was improved; the cancerous infiltration was limited to the upper and inner margins of the sore; the lower and outer margins had taken on a healthy action, the thickened edges being replaced by healthy granulations. The solution was, therefore, now applied more systematically, chiefly to the edges which had remained hard, with the effect of inducing a more healthy action and a tendency to contraction, so that, both as regarded the local and the general condition, the result had been satisfactory and encouraging.

Tubular Form of Epithelioma.—Dr. THOMAS REID showed numerous microscopic sections and drawings to illustrate the varieties of this form of epithelioma, and to show its different stages when originating from the sebaceous glands. He explained at some length his views and observations on this subject.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, FEBRUARY 7TH, 1874.

ROBERT D. LYONS, M.D., President, in the Chair.

Morbid Anatomy of Scarlatina.—Dr. A. W. FOOT exhibited specimens, taken from the body of a boy, aged 12, who had died on the fourth day, and from that of another, aged 7, who had died on the third day of illness. The elder boy had early and severe throat-symptoms, commencing simultaneously with the initial rigor; the eruption was copious and dark-coloured; profuse pharyngeal catarrh, with immense swelling of the tonsils and adjacent parts, greatly impeded respiration; œdematous pulmonary *râles* supervened, the temperature rose to 105.7 deg., and he died in a semi-comatose lethargic condition, without any struggle. The younger boy presented no specific cutaneous manifestation of the disease, but there was a purplish hyperæmia of the skin; his morning temperature on the third day was 106.4 deg. Fahr.; convulsions came on early on this day, and continued, with very short intermissions, for about seven hours, when he died. In both cases, the solitary follicles in the small intestines were universally enlarged, but especially in the first and last portions of the bowel; and the tumefaction of the mesenteric glands corresponded in degree to this. The agminated follicles were morbidly prominent. In the elder boy, the tonsils had numerous rents on the internal aspect of their investments, leading into irregular excavations, containing shreddy sloughs. In neither of the cases were the kidneys abnormal in size or weight, and their vascularity was but slightly increased. The brain of the younger boy, who had had convulsions, was remarkably anæmic, internally and externally; no evidence of any inflammatory or tubercular irritation of the membranes could be discovered; there was a little ventricular effusion, and a limited central softening of the fornix. The brain of the elder boy, who appeared to have died from mechanical dyspnœa, was considerably congested. Dr. Foot considered that the profuse and widely disseminated affection of the lymphatic glands, in both these cases, tended to show the propriety of the name suggested by Dr. John Harley, for this disease, of "febris lymphatica". The remarkable amount of anatomical change in the intestines after death, at such early stages of the disease, also suggested the question, whether much of it had not occurred before the period of invasion.

Croup and Diphtheria.—Dr. BENNETT brought forward specimens illustrative of the pathological conditions. Two children ad been admitted to Sir P. Dun's Hospital last July. One, a girl, aged 11, died in six hours, of diphtheria; the other, a boy, aged 8, sank in two days, from croup. In the latter case, the pathological appearances were evanescent. A loose, thin, semitranslucent, non-adherent, false membrane lined the larynx, trachea, and bronchi. The paroxysms of croup had been isolated by considerable intervals on the first day, but they became more frequent, and death was caused by asphyxia. In the case of diphtheria, the girl had walked into the consulting-room without distress, stating that she had been ill for eight or ten days. Her face, which was puffed and pallid, wore a lethal expression, and her voice was exceedingly croupous. A thick yellow false membrane covered the uvula, tonsils, pharynx, back of the tongue, and epiglottis. The air entered the lung without distress, but with some crepitation. The urine was highly albuminous. She sank in six hours. The diphtheritic membrane was adherent to the mucous membrane above the larynx. In the trachea and bronchi it could be detached. There was considerable œdema of the glottis. Rindfleisch (*Pathological Histology*, vol. i, p. 431, New Sydenham Society's Translation) had shown that the adherent character of the diphtheritic deposit depended upon the manner of its formation. It was an infiltration of newly formed cells into the subepithelial connective tissue, and not a deposit upon, or a secretion from, the mucous surface (as in croup); in fact, it was the altered mucous membrane itself.

Enteric Fever Fatal by Hæmorrhage from the Bowels.—Dr. STOKES showed the intestines of a corpulent, rather intemperate man, who died of the effect of intestinal hæmorrhage, on the thirteenth day of fever. When admitted (on the eighth day), the axillary temperature was 104.7 deg., and the pulse 134. There was extreme prostration, but almost a complete want of abdominal symptoms—no diarrhœa, or meteorism, or tenderness on pressure. Delirium soon set in, and increased continuously up to death, which took place in four days. On February 2nd, intestinal hæmorrhage, to half-a-pint, occurred. Next day, about two ounces of blood were again lost. The pulse now ran up to 160. Delirium increased, subsultus became marked in the upper extremities, the temperature rose to 106 deg., and the patient died on February 4th. The colon, distended with air, contained a quart of dark blood. The ileum was studded with follicular ulcerations, and a few solitary glands in the colon were ulcerated. There was no hyperæmia of the mucous membrane of the ileum. What was the source of the hæmorrhage—the ulcers, or a capillary exhalation? The case exemplified, as shown by Broussais, that ulceration might occur without pain; also, that hæmorrhage masked symptoms of local lesion; and, lastly, the prevailing epidemic character of disease.

Hæmorrhage in Enteric Fever.—Dr. HAYDEN showed the intestinal tract and spleen of a cabinetmaker, aged 25, who was killed by hæmorrhage on the thirteenth day of enteric fever. When admitted (on the tenth day), there was a copious eruption of rose-spots, but only slight diarrhœa, meteorism, and ileo-cæcal tenderness. Temperature, 102 deg. Pulse, 112. Sudden hæmorrhage, to the estimated amount of three or four pints, set in on the thirteenth day. The ileum was absolutely free from ulceration—only one of Peyer's patches was tumefied, and hyperæmic. The surface of the large intestine was of a deep crimson tint, and from it the copious capillary hæmorrhage had evidently taken place. The spleen was enlarged, and very much softened.

SATURDAY, FEBRUARY 14TH, 1874.

ROBERT D. LYONS, M.D., President, in the Chair.

Chronic Internal Intestinal Fistula.—Dr. JENNINGS presented the pelvic viscera of a woman, admitted to hospital on September 21st, 1871, suffering from the effects of her first and only labour, twenty years previously. She was very pallid, and extremely emaciated; and a local examination revealed two interfemoral tumours—one, the everted bladder; the other, the prolapsed uterus. After a considerable time, Dr. Jennings, at the patient's special request, performed an operation to produce atresia of the vaginal walls in their posterior two-thirds. Although no anæsthetic was used, sickness set in after the operation, and proved very obstinate. At the end of sixty hours, the sutures had to be removed. The edges of the wound were then in a sloughy state. The woman died of exhaustion on the fifth day. On examination, it was found that the ileum passed into a tumour in the pelvis, which formed a cloaca for the fæces and urine. The functions of the remaining portion of the ileum, the colon, and rectum, had apparently been in abeyance for twenty years. Notwithstanding, the colon was of normal calibre, although pallid, and full of flatus.

Perityphlitis, with Acute Circumscribed Peritonitis.—Dr. HAYDEN showed the abdominal viscera of a girl, aged 22, admitted, January 29th, to the Mater Misericordiæ Hospital. A week before that date, she had been suddenly attacked by acute pain and tenderness in the belly. When seen, she was in a state of collapse. Under suitable treatment she rallied. The abdomen was tympanitic and tender, but the bowels were regular. The symptoms lessened, and she continued to improve until February 10th, when she again sickened. Two days later, the collapse returned. Pain was complained of in the lower part of the left side of the chest, but there were no physical signs of pulmonary lesion. She died on the 13th. At the necropsy, the internal surface of the whole intestinal tract was ascertained to be healthy. There was no trace of ulcer of the stomach, and only the least trace of hyperæmia towards the lower end of the ileum. The peritoneal aspect of the intestines were thickly coated with lymph, and matted together. About two dozen small abscesses existed in the mesentery, ileo-cæcal region, and pelvis. The inflammatory changes were especially noticeable in the neighbourhood of the cæcum caput coli.

Atrophy of the Pancreas: Hydropneumothorax.—Dr. YEO exhibited the lungs, spleen, pancreas, and duodenum of an intemperate woman, aged 40, who had died of hydropneumothorax. Slight cough and constant diarrhœa had been the prominent symptoms for six months, and she had rapidly become emaciated. The chest-symptoms became much intensified a fortnight before she died. Her appetite was lost, and she almost lived on alcoholic drinks. At the *post mortem* examination, the liver occupied a central position, the right side of the diaphragm projecting, as an even convex tumour, two inches below the ribs. The right pleura reached as far as the left nipple, displacing the heart excentrically, and compressing the left lung. The right pleural cavity, thickened by friable exudation, contained much air, and eighty-four ounces of greenish, curdy, whey-like fluid. The lung, compressed into a small pyramidal mass, lay in the inner and upper part of the pleura. A vomica, as large as a filbert, was found in the anterior portion of the upper lobe, and opened by a large valve into the pleura. The lung-tissue, black, tough, and quite airless, was free from tubercle or caseous degeneration. The left lung and pleura were healthy. Some cicatricial markings existed on the liver, and a thick fibrous patch on the convex surface of the spleen. The bile-ducts were considerably dilated, but the opening into the duodenum was exceedingly narrow. No pancreatic duct could be discovered, but an oblong cyst, of the size of an almond, occupied its position beside the bile-duct. A dense packet of fat, about half-an-inch thick, and covered by unaltered peritoneum, had taken the place of the pancreas, and presented on section numerous fibrous trabeculæ, with a few clusters of gland-tissue sparingly scattered throughout its centre. Several cicatrices were found on the vulva.

Femoral Aneurism: Pyæmia.—Mr. J. HAMILTON brought forward the case of a blacksmith, aged 52. At the upper corner of the popliteal space, just below Hunter's canal, an aneurism existed, as large as the closed fist. There was strong pulsation, and a loud *bruit de soufflet* was audible. The case was of four months' standing. From the thinness of the walls of the sac, the fluidity of its contents, a great enlargement of the glands in the groin, and the patient's excessive nervousness and intolerance of distress, the case was eminently unsuitable for compression. An instrument was, notwithstanding, applied for two hours, with the effect of greatly lessening the pulsation, and of reducing the size of the tumour. Digital compression for twelve hours was then unsatisfactorily carried out. This having failed, extreme flexion was tried, the pulsation being quite checked by this means. The patient, however, grew impatient, and loosened the bandage. Thomson's *presse artère* was also applied, but ineffectually. As a last resource, Mr. Hamilton tied the vessel in the usual way. There was very slight hæmorrhage, but unusual venous congestion of the limb, was noticed. On the fourth day, a rigor occurred, and was shortly followed by diffuse inflammation. At this time, the tumour again became the seat of a "muffled" pulsation. Violent pain in the right shoulder and arm was followed by swelling of the sterno-clavicular articulation. The knee subsequently became engaged. On the twenty-first day, hæmorrhage took place, although the ligature had not been interfered with. Owing to all these complications, the man sank. The femoral artery ran at the posterior aspect of the tumour, and the vessel was evidently disintegrated at one point. The veins were filled with pus, and there was ulceration of the femoral vein. The arterial system generally was diseased, the aorta being atheromatous, with some calcareous plates. A small aneurism existed in the abdominal aorta.

Atrophy of Optic Nerve.—Dr. FITZGERALD exhibited a drawing of retrogressive optic neuritis. The patient, a boy aged 8, was sent to the National Eye and Ear Infirmary last August by a distinguished Dublin surgeon. He stated that two months previously, he got up one night in his sleep and proceeded to descend a ladder from the loft where he slept, when he missed his footing and fell, he said, sixteen feet. He remained insensible for twenty minutes. For some weeks subsequently, he suffered from intense headache and vomiting. The sight gradually failed, and he was now totally blind. The optic nerve in the right eye was quite atrophied, and in the left the inner half of the disc was also completely atrophied, though the outer still exhibited traces of the neuritis, as evidenced by a delicate chord partially obscuring the margin of the disc and the vessels. It appeared that since the previous Christmas he had been subject to severe headaches. His teeth presented a somewhat suspicious appearance, but it was impossible to find out if there were any syphilitic history.

DUBLIN OBSTETRICAL SOCIETY.

SATURDAY, JANUARY 10TH, 1874.

LOMBE ATTHILL, M.D., Vice-President, in the Chair.

Uterine Polypi.—DR. ATTHILL exhibited specimens of uterine growths. The first was a large mucous polypus, of the size of a man's fist. It illustrated three clinical facts: the possible absence of symptoms, except menorrhagia; the rapidity of growth; and the tendency to cure by loss of vitality of these tumours. The patient was unmarried, and 26 years of age. The tumour took two years to grow to its full size; its lower segment projected through the os uteri, and was undergoing incipient degeneration. The second specimen was one of fibrous polypus, removed from an unmarried woman, aged 38. The symptoms dated back twelve years, during which time she had suffered from profuse menstruation. In September 1873, the flow lasted fourteen days, and the interval was only seven days. A third specimen was one of true capsulate fibrous tumour, occurring in the anterior lip of the os uteri. The patient was a servant, unmarried, aged 31. The prominent symptom was a sense of weight and fulness in the vagina. Menstruation was always normal. The tumour, which lay embedded in the anterior lip of the uterus, elongated and thickened, was removed by Grenet's apparatus—a loop of platinum wire, about half-an-inch in length, connected with the galvanic battery in the ordinary way. The operation proved slow. A fourth specimen was one of cauliflower growth of the cervix uteri, attended with a profuse watery secretion, which had been mistaken for urine. The tumour was removed by amputation of the cervix uteri with the *écraseur*.

Report on the Rotunda Lying-in Hospital for 1872-73.—Dr. GEORGE JOHNSTON, the master of this institution, read his fifth annual report. The immunity from epidemics enjoyed by this hospital was largely due to a system of thorough ventilation—the upper sash of a window in each ward being constantly kept open, to the extent of six inches; to the removal of old-fashioned canopies and bed-curtains, the cleanliness of the patients and their surroundings, the regular attendance upon the inmates, the judicious administration of suitable nutritious animal food (chicken-broth and beef-tea), and the timely interference of art in cases of threatening protracted labour. During the year ending November 5th, 1873, 1191 women were confined in the hospital, 77 at their own homes; 286 were under treatment in the wards for uterine diseases, and 2814 were relieved as out-patients in the dispensary, making a total of 4368 cases. Of those confined in hospital (1191), 934 had purely natural labours; in 39, the labour lasted over twenty-four hours; 15 gave birth to twins, 1 to triplets, 44 to abortions (including 2 cases of hydatids). Five children presented with the upper, 35 with the lower extremity. The forceps was used 41 times; the perforator 6 times—the child always being dead previously. Version was performed in 16 cases. Ten were admitted with accidental hæmorrhage; 3 with placenta prævia. There were 10 cases of *post partum* hæmorrhage, only one of which required the use of the solution of perchloride of iron. The placenta was retained in 4 cases—twice from adhesions, once from irregular contraction, and once from inertia. Prolapse of the funis occurred in 10 cases, convulsions in 4, apoplexy in 2, mania in 8. Five patients were epileptic. The mother of the triplets had previously had ten children. The first born was a girl, weighing 6 lb. 4 oz.; the second, a boy, 5 lb. 8 oz.; and the third, a girl, 4 lb. 8 oz. Two of the placentæ were united, and one distinct. In 36 out of 141 cases, it was deemed expedient to apply the forceps before the os uteri was fully dilated. Under such circumstances, the os must be dilatable, not rigid. The practice, in skilful hands, not only saves the life of the child, but prevents danger to the mother from long-continued pressure on the soft parts, especially when the membranes have been ruptured at an early stage. Of the 36 mothers, 34 recovered, one—an anæmic primipara—died of peritonitis, with uterine diphtheritis; and one—a pluripara—was admitted comatose, and in convulsions. Dr. Johnston showed that a short second stage had no influence in causing *post partum* hæmorrhage. The total number of deaths was 32, or a death-rate of 1 in 37.25, 15 of which were caused by zymotic diseases—an average of 1 in 70. In many of the patients, who died of this class of diseases, there was a previous history of mental distress, seduction, straitened circumstances, or other misfortune. There were 7 deaths from peritonitis, 1 from phlebitis, 1 from puerperal fever, 4 from pyæmia, 1 from enteritis, and 1 from uterine diphtherite. By a reference to the statistics of mortality in the various city districts, Dr. Johnston showed clearly that this number of deaths from zymotic causes in the hospital did not indicate any internal epidemic tendency.—A short discussion followed, in which the Chairman, Dr. More Madden, and Surgeon-Major Johnston took part.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, DECEMBER 3RD, 1873.

LLOYD ROBERTS, M.D., President, in the Chair.

Arrested Development of Cranium.—Mr. ATWELL showed a fœtus with hernia cerebri. There was deficiency of the occipital bone; the only part left being its basilar process. The brain formed a tumour at the back of the head, and was covered only by the integuments and membrane. The anterior fossa of the cranium was almost obliterated. The fœtus was one of twins, and survived with a weak sobbing respiration for some hours. There was a large quantity of liquor amnii; it poured out in a stream when the membranes were ruptured.

Conical Cornea.—Dr. LITTLE exhibited two cases of conical cornea, and made some remarks on the treatment.

Heart-Disease.—Dr. PIERCE showed a patient with heart-disease, with cyanosis.

Spina Bifida.—Dr. HARDIE showed a dissected specimen. It had a threefold interest; first, in showing well the ordinary anatomical peculiarities of the affection; secondly, in the communication of the cyst with the spinal canal having become obliterated under treatment by injection of tincture of iodine; and, thirdly, in death having been occasioned by the toxic effects of iodine. Dr. Hardie remarked that the cyst could have been quite easily removed with the knife, had it been clear that the aperture of communication was closed.

Cystic Tumour of Mamma.—Dr. HARDIE showed a specimen. It was of the size of a small orange, and was peculiar in having on its inner surface a warty growth, of the size of an almond, which appeared to have been the source of the blood which formed a part of the contents of the cyst.

Necrosis of Femur.—Dr. HARDIE showed the femur of a child, with a sequestrum lodged above the condyles posteriorly, and a great development of bone surrounding it, in the form of arches and spicula.

Subcutaneous Injection of Mercury.—Mr. CULLINGWORTH read a paper on the subcutaneous injection of mercury. After a brief account of the gradual development of the subcutaneous method of administering remedies, the author proceeded to give a historical sketch of this mode of giving mercury from the earliest experiment by Mr. Charles Hunter, fourteen years ago, to the plan advocated by Dr. Staub of Strasburg, in 1872. He then narrated the results obtained by using Staub's solution in twenty-three patients, fifteen of whom were suffering from constitutional syphilis. The secondary manifestations had disappeared with marvellous rapidity, and in no case had he met with abscess or slough at the seat of puncture. He found, however, that persistent induration invariably followed, and that the solution itself was extremely unstable, and its preparation unnecessarily tedious. He had accordingly made some comparative experiments with other solutions. These, like the former series, were drawn up in the form of tables, which were handed to the President and members. He reported that the solution which gave rise to the least pain and subsequent induration was one containing three grains of the bicyanide of mercury in an ounce of water, to which a little glycerine had been added. He was not aware that this salt had been previously suggested for subcutaneous use, but he had no hesitation in advising its further trial. The dose recommended was ten drops (one-sixteenth of a grain) administered daily, or as often as might be thought desirable.

DEATHS OF MEDICAL MEN FROM YELLOW FEVER IN MEMPHIS.—A convention of physicians has been held in Memphis, United States, for the purpose of taking measures to perpetuate the memory of the seven members of the profession who perished in that city while in the discharge of their duties during the late visitation of yellow fever. A circular has been issued asking for contributions to a fund for the erection of a suitable monument, to be inscribed with the names of Drs. Williams, Freeman, Crone, Hatch, Kennon, Blount, and Minor, victims to the pestilence, of whom the committee says: "Their fame, the story of their heroism, belongs to the medical world, and our brethren throughout the broad land are respectfully requested to contribute something to this laudable end."

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, APRIL 18TH, 1874.

THE "VICTOR EMMANUEL" HOSPITAL SHIP IN THE SOUTHAMPTON WATER.

THE *Victor Emmanuel* hospital ship steamed up the Southampton Water on Saturday last, and took up her moorings off the coast-guard station, adjoining the Royal Victoria Hospital at Netley. Her position is about a mile from the shore on the Netley side. She had arrived from St. Vincent's and the Gold Coast on the afternoon of the previous day, and anchored at Spithead for the night. When she left Cape Coast Castle, she had on board seven sick and wounded military officers, and 167 sick and wounded non-commissioned officers and privates of various regiments. Three of the invalided officers died during the passage home, and seven of the men. The majority, however, of the invalids had improved so greatly during the voyage, that two of the officers and 129 of the non-commissioned officers and men were sufficiently convalescent to be landed at Portsmouth and to be sent on to their respective corps before the *Victor Emmanuel* steamed round to Netley. The three officers who died on board were Major Baird, 42nd Highlanders, Lieutenant Johnstone, 23rd Welsh Fusiliers, and Surgeon McCarthy, Army Medical Staff. Major Baird had a very severe wound of the upper part of the thigh, which had implicated the profunda artery, but in addition suffered from heart-disease of old standing; and to this the fatal termination of his case appeared to be directly attributable. This officer died before the ship left the coast of Africa. Lieutenant Johnstone succumbed to dysentery of an extremely aggravated character, and was buried at sea. Dr. McCarthy's death occurred while the *Victor Emmanuel* was in harbour at St. Vincent's. He was suffering from dysentery when he was first received on board ship, and was in a very debilitated state. There was much cerebral disturbance during the voyage to St. Vincent's; and, though two nurses were appointed specially to attend to him, he managed one evening, between 9 and 10 o'clock to get into one of the cabins on the main hospital deck, and, before he could be prevented, to throw himself out of the port into the water. The instant he fell, two of the ship's officers jumped overboard to try and save him, and the life-boat was immediately lowered, but he was not seen again.

The invalids who were too ill to leave the *Victor Emmanuel* at Portsmouth have since been landed and placed in the Netley Hospital. Some of them are still suffering from dysentery, and others from fever, the latter in a few instances of a very severe character. Two of the officers admitted into the hospital, and sixteen of the men, are disabled by wounds. One of the officers, Sublieutenant C. D. Sherston, of the Rifle Brigade, has passed through an attack of pyæmia; and, though now improving in general health, is still in a very emaciated and weak condition. He had his right humerus shattered by a rifle-bullet in the advance on Coomassie. Two months and a half have elapsed since the wound was inflicted, but no union has yet taken place. The other officer, Captain North, of the 47th Regiment, received a slug-wound in the right elbow-joint, and it is a question whether the injury may not lead to the necessity for excision of the articulation. Some of the injuries among the men are also very severe. In one case, a slug-wound at the back of the neck has led to paralysis of the upper and lower extremities *on the same side.* The projectile entered just below the mastoid process. Good union has occurred in one case in which the humerus was fractured by an Ashantee projectile, probably a slug, which passed through the arm; and the man is in a fair way of recovering full and complete power of the injured extremity. One invalid, of the 42nd Regiment, had a severe gunshot-fracture of the lower jaw, accompanied with considerable laceration of the soft parts in the neighbourhood. Some of the branches of the carotid were implicated, for there was profuse hæmorrhage from a deep source; indeed, he appears to have been all but moribund from loss of blood when he happened to be seen, on the ground where he had fallen, by Surgeon-Major Mackinnon, who immediately cut down upon the common carotid and ligatured it, thus saving the man's life. This soldier is now in robust health, but is still suffering from some impairment of the movement of the jaw and power of mastication. One of the gravest of the gunshot injuries is a slug wound, which, at first sight, appears a comparatively trifling one, for the missile is lying just beneath the skin above the right clavicle. It has occurred in an old soldier, who passed through the Crimean and Indian Mutiny wars—the serjeant-major of the 42nd Highlanders. The slug entered near the upper edge of the clavicle. Paralysis of the arm on the same side followed immediately, showing that the cervical plexus of nerves had been struck. This paralysis has gradually disappeared, and the man has now regained considerable power in the limb. But a more serious matter is that a large aneurismal enlargement of the subclavian has followed the injury; and, strangely enough, the slug is now lying superficially, just below the skin, as already mentioned, where its outlines can be distinctly felt, but apparently firmly connected with the aneurismal swelling on the surface of which it is lying. Although the slug can be readily laid hold of, together with the skin, it cannot be separated from the coats of the aneurism, which appears prominently above the clavicle. The wound over the clavicle, by which the projectile entered, is firmly cicatrised.

All the invalids are loud in praise of the food, care, and attention they received on board the *Victor Emmanuel.* Nothing appears to have been wanting that could tend to promote their recovery or increase their comfort. They agree in saying that the medical officers, under the direction of Surgeon-Major Dr. Bleckley, C.B., who was in medical charge, devoted themselves zealously to their work, and were always ready by night as well as by day to attend to every call; while Captain Parkyn, the naval officer in command, did everything in his power to assist their efforts. It was a most fortunate occurrence that the ice-machine placed on board proved a complete success. An ample supply of ice was made daily, and at no time was there any interruption in the manufacture. It was not merely as a luxury that the supply of ice was important, but while off the Gold Coast, and in the tropics, the ice proved itself to be one of the most efficient restoratives and tonics at the disposal of the medical officers, not to mention its value as a topical application in head-affections and local inflammations. The only failure in the arrangements of the *Victor Emmanuel* seems to have been the mechanical contrivance by means of which it was hoped the effects of the rolling of the ship would be in a great degree neutralised. Each of the cots on the main hospital-deck was made to swing upon iron uprights fixed in the deck. In practice, however, it was found that they swung too much, so that the patients were inconvenienced by the excessive movement, and were even liable to be thrown out upon the deck. The cots had, therefore, to be fixed, and were only used as stationary berths.

During the time the *Victor Emmanuel* was on the Gold Coast, she received altogether 565 patients on board. Of this number, 125 were transferred to other ships; 165 were sent as invalids to England; 104 were sent back to duty; 4 died; and, as before mentioned, 167 were still on board when the ship left Cape Coast Castle for England.

The *Victor Emmanuel* is one of the old 74-gun wooden line-of-battle ships. She had not been in commission for about ten years before she was converted into a hospital ship. She belongs to a class of ships which have been thrust aside from the Royal Navy by the modern ironclads, and are now only to be seen laid up in ordinary. Before leaving

England for her late employment, her sides were painted of a white colour, to lessen the absorption of solar heat while in the tropics; and, though this paint has lost a little of its brightness during her service on the Gold Coast, she still forms, with her vast hull, large ports, and lofty masts, a very conspicuous object in the Southampton Water. It is understood that she is to remain as an auxiliary to the Royal Victoria Hospital for a month or two, during which time the invalids will be arriving from India and other distant foreign stations. A large number of hospital marquees are now standing in the hospital grounds, sufficient to accommodate between 200 and 300 men; but these are occupied by men of the Army Hospital Corps, for whom there is no room in the hospital buildings. Seven hundred invalids are expected to arrive at Netley in a day or two from Bombay, by one of the large steam troop-transports employed on the Indian service.

THE ARMY AND NAVY MEDICAL DEPARTMENTS.

THE Director-General of the Naval Medical Service having obtained a renewal of his term of office, we may hope he feels himself sufficiently strengthened to ask at once for the correction of many of the evils that have of late kept up a misunderstanding with the profession at large. He has certainly a heavy task before him, but the opportunity is not the less brilliant for doing much where there is much to be done, as discontent throughout the service keeps candidates away, impoverishes the list, and renders it difficult for a Director-General to work the service when a small expedition demands a few more young hands. Our attention was called not long since to the complaints of some of the most junior, that they were prevented from leaving the service before they had set foot on shipboard, but when they had already served sufficiently long and seen enough of the kind of life to convince themselves of their own incompatibility with its requirements. We did not, however, place weight on this beyond its significance of the unpopularity of the navy.

Other causes have been brought to our knowledge, acting generally or in part from highest to lowest, such as the denial of the rights which relative rank should confer, the absence of encouragement to seniors in the way of promotion, and the altogether diminished value of the home appointments; and also the wrongs perpetrated on medical officers by the scheme of retirement of 1870. The accumulation of these causes of dissatisfaction has impaired the efficiency of the service greatly in respect to its numbers; and, had things continued in the same course—the same Government continuing in office—a committee of investigation would have become desirable and necessary on the part of the authorities; but we trust it will be obviated by the Director-General finding his power to recommend the reform of wrongs increased by his renewal of service.

The Army Medical Department will equally expect from Sir W. Muir some ameliorations of the conditions which have rendered that service so dissatisfied since the issue of the last reconstructive Warrant. We may state that a carefully prepared statement has been handed in to the Secretary of State for War by Mr. Ernest Hart, at the request of Colonel Deedes, embodying the substance of the former communications of the Parliamentary Bills Committee to his predecessors in office; and that a further deputation of that Committee will be arranged at as early a date as will suit Mr. Hardy's convenience, at which the just claims of the medical officers of the Army may be laid before that Minister, and his views on the subject elicited. Great pains have been taken to obtain an accurate view of the position and wishes of the department, and further communications are invited.

IMPENDING SANITARY LEGISLATION FOR IRELAND.

UNDER this title has just appeared an able pamphlet by an accomplished writer on sanitary organisation, Dr. T. W. Grimshaw. He deplores in Ireland much the same state of public health as disastrously prevails in this country. He advocates also much the same legislation as we have from time to time insisted on in these parts; and he states the present requirements of Ireland to be at the present time:

1. A Codification, Consolidation, and slight Amendment of the existing Sanitary Laws.
2. Uniform Authorities, without clashing of jurisdiction.
3. Convenient Areas of Administration, with easily workable Sub-districts.
4. A complete Executive Organisation.
5. Constant Supervision by the Central Authority.
6. Security for a certain amount of independence for the local opinions of the Local Authorities.
7. All Sanitary Law to be compulsory, except certain permissive powers granted to the Central Authority.

In order to secure the carrying of these provisions into effect, it is proposed to constitute a Public Health Committee of every Authority for the management of all sanitary matters within its district—that is, leaving Town Councils, Town Commissioners, Boards of Guardians, and Grand Juries untouched, except in so far as they will give up their functions as to public health to the Committee. These Committees are to have an infusion of the ratepaying element, and also of eminent professional citizens not likely to be found among the ranks of municipal corporations.

The Executive Organisation is to be composed of:

1. The Central Authority;
2. The Chief Medical Officer of Health;
3. The Rural District Medical Officers of Health;
4. The Urban District Medical Officers of Health;
5. Local Medical Officers of Health;
6. Inspectors of Nuisances;
7. Superintendent Inspectors of Nuisances.

Here the Rural District Medical Officers of Health would correspond with our Visiting Inspectors, and would be eight in number—one to each of the Registration Districts into which Ireland is divided. The estimate for these proposals—we presume payment of officers alone—would involve a tax of 1½d. in the pound on the Poor-law valuation.

We commend this pamphlet, and also the papers by the author and Dr. Maunsell, to the careful consideration of all interested in the future of sanitary organisation. We believe them to lay down in the main those lines upon which an efficient law must in the future be constructed.

AT a quarterly meeting of the Council of the Royal College of Surgeons of England, on the 16th instant, the Jacksonian Prize was awarded to Mr. Henry Trentham Butlin, F.R.C.S., of Guilford Street, Russell Square, for his essay on Ununited Fractures. For the Collegiate Triennial Prize of fifty guineas, no award was made for the present year.

THE ST. MARYLEBONE PROVIDENT DISPENSARY.

UNDER the title of "The History of a Provident Dispensary", we lately sketched the progress of the above institution during its forty years' existence, and indicated the danger which threatened it of collapsing altogether, in consequence of the out-patient departments of two large hospitals in its neighbourhood giving for nothing that for which it charged a penny a week. We understand that the narrative we then gave has induced some active members of the Charity Organisation Society to join the Committee of the Dispensary, and to give them substantial aid in procuring new premises in Great Portland Street, the lease of the former ones in Duke Street having run out. Now, though we have never concealed our opinion, that until the out-patient departments of hospitals are reformed, provident dispensaries must labour under immense disadvantages, yet none the less do we wish success to this attempt to sustain the oldest institution of its kind in London.

CREMATION ON THE CONTINENT.

THE *German News* says that the Society for the Cremation of the Dead at Berlin has been joined by such a number of members that shortly a general meeting for its definite constitution is to be held. In order to overcome the prejudices of many of the residents of the capital, the founders of the Society intend publishing a pamphlet on the subject, in which it will be shown that cremation is by no means a new idea, but has been practised for thousands of years, and that its present revival is due to important sanitary considerations. The pamphlet will then proceed to show how the practice of burying the dead has, according to the latest scientific investigations, been the cause of many epidemics, and that regard for the living imperatively demands that the practice should be abolished. The pamphlet will next advert to the religious part of the question, and show that cremation is not contrary to the tenets of Christianity, and that its introduction need not prevent the observance of the rites now performed at burials. The preservation of the ashes of the deceased would replace the present system of preserving the graves. The rules of the Society have now been drawn up, and it appears from them that it is intended to promote the object in view privately, and also publicly, by public meetings, newspaper articles and pamphlets of all kinds, by public lectures, by founding and assisting societies having the same object, and by assisting scientific men in their experiments for the discovery of the most practicable method of cremation.—In Vienna (a correspondent of the *Pall Mall Gazette* writes), a lady of the advanced age of seventy, to whom the question, therefore, begins to assume an aspect of personal importance, has subscribed 30,000 florins to the Cremation Fund, with directions for a furnace to be erected without delay.—Another correspondent adds: The cause of cremation is making further progress. The furnace intended for the experimental burning of the dead, now in building in Dresden, is to be completed in a few weeks. Meanwhile, a Cremation Society has formed at Vienna, under the appropriate title of "The Urn", and has obtained the Government's consent for instituting similar experiments. The furnace, to be built in Vienna, will be after the design of Professor Reclam, of Leipzig. "The Urn" has a goodly roll of members to show already, and every day is said to witness additions. In Zürich, Swiss papers affirm, cremation is more spoken of, and excites greater attention and zeal than even the proposed revision of the Federal Constitution, on which a vote is about to be taken shortly.

DR. LIVINGSTONE.

We are authorised to state that soon after the arrival of the remains of Dr. Livingstone at the rooms of the Royal Geographical Society, an examination was made by Sir William Fergusson, in the presence of Dr. Kirk, Dr. Loudon of Hamilton, N.B., a former friend and professional attendant, the Rev. Dr. Moffat, the Rev. Horace Waller, and Mr. F. Webb, of Newstead Abbey. The remains were much decomposed, but the condition of the left arm bone, in which there had been an ununited fracture, the result of the bite of a lion over thirty years ago, was so clear that the identification of the body was placed beyond doubt. At the special desire of the family, no others than those above-named, with the exception of two assistants, were permitted to be present.—Dr. L. Marsh forwards to the papers a copy of a letter from Dr. Livingstone, containing the following passage:

"South Central Africa, 21st November, 1872.

"My dear Sir,—I was very much pleased by the arrival at Unyamyembe, in August last, of your note, dated November, 1869, containing a resolution passed at a meeting of the Committee of the Medical Club, by which I was most kindly elected an honorary member. I feel extremely grateful for the honour, and beg to assure you that my silence is not to be attributed to indifference."

ACTION FOR RAILWAY INJURY: ALLEGED HIGH MEDICAL CHARGES.

In a case (Ash *versus* the Great Northern Railway Company) recently tried at the Northern Assizes before Mr. Justice Archibald and a special jury, the plaintiff was a maltster at Heathfield, near Huddersfield, and was injured while travelling third-class in an accident which happened at Wrenthorpe Junction on the 25th of January, 1873. No evidence was called for the defendants, but it was contended that the plaintiff's claims for medical attendance and other charges were exorbitant, and also that the injuries and symptoms of which the plaintiff complained were greatly exaggerated. One of the medical gentlemen's bills was for £100, the doctor having charged a guinea a visit and sent his own medicine. The plaintiff had gone on a trip to the south of France without being advised by his doctor to do so, and had also been at Filey, where he had been advised to go, and where he had sent for his own doctor to visit him. The jury found a verdict for £50 damages, beyond £180 already paid into court.

LANDSEER'S LIONS.

Sir Edwin Landseer has been spared the grief of learning that his Trafalgar Lions are showing a weakness of constitution which disables them from withstanding exposure to the rigours of our English climate. An eminent physician, who is also the leading metallurgical authority of this country, Dr. Percy, has been officially requested to examine and report upon their condition.

SEX IN EDUCATION.

A writer well entitled to be heard, discusses this week the subject of sex in education. The subject is one of much professional and social interest. It is certainly desirable that this matter should be considered from all points of view, and we invite attention to it.

THE SECRETARY OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We learn with pleasure that the Council of the College of Surgeons, having had before them the question of recognising the faithful and able services of Mr. Trimmer for a series of years, have, by a handsomely worded resolution, raised his salary from £500 to £700 a year. Every one will agree, we think, that the College of Surgeons has needed of late years, and will still need, the services of a man of intelligence, education, and devotedness. These it has found in Mr. Trimmer; and such services as he has rendered deserve ample material recognition, as well as the higher meed of appreciate praise and confidence.

HARVEY MEMORIAL WINDOW AT FOLKESTONE.

This window, for which the Vicar of Folkestone has collected subscriptions from more than 3000 members of the medical profession, was unveiled on Thursday, the 9th instant, by the Vicar, the Rev. M. Woodward. It was designed by Mr. C. E. Kempe, and is a work of merit. In unveiling the window, the Vicar stepped forth into the middle of the chancel, and, the curtain being removed from before the window, he said—"In the name of the Father, Son, and Holy Ghost, to the glory of God, and in reverence of the Blessed Virgin Mary, and St. Eanswythe, and in honour of that most illustrious man Dr. William Harvey, a native of this town, whose discovery of the circulation of the blood has conferred such inestimable benefits on the human family, I dedicate this window, the gift of his brethren and successors in the divine art of healing."

PRESCRIBING CHEMISTS.

A correspondent writes to us:—"I have just been called in to a case of abortion, brought on by the treatment of a 'prescribing chemist', in which the woman nearly lost her life. She went to him for 'advice gratis', as she had not been regular for some months; and he gave her some powders, etc., which speedily brought on alarming hæmorrhage and abortion. This is but a sample of numerous cases in which persons' lives have, to my knowledge, been placed in jeopardy by the treatment they have received from prescribing chemists. Almost daily, cases are brought to me, with the view of securing a certificate, in which the chemist has become alarmed at the symptoms his erroneous treatment has produced. One chemist here has his labels printed 'Surgeon-Dentist-and-Family-Chemist'. The hyphens protect him, and delude the public into the belief that he is not only a chemist, but a dentist and surgeon. Is there no means of restraining these men from injuring the public, and at the same time robbing legally qualified men? *Apropos* of this subject, I noticed during the Tichborne trial that, in answer to the Lord Chief Justice, a pharmaceutical chemist stated on oath that he was entitled by law to *prescribe* medicines. Surely this is not a fact. This prescribing by chemists is a growing evil, and, if possible, should be put down at once with a strong hand. Will you kindly tell me what steps should be taken?"—The right of "prescribing" medicines is one which the law does not confine to the medical profession, but accords to every subject. The selection of medical advisers from the ranks of qualified or of unqualified practitioners is one which is at present equally the privilege of every Briton. A chemist has a legal right to call himself a prescribing or a family chemist, or to adopt another mode of describing himself. The title of dentist is not in any way protected; every man has the right of pulling teeth. The preamble of the Medical Act accurately defines its object: it is to enable the public to distinguish between qualified and unqualified practitioners, and to prevent the fraudulent assumption of chartered and registerable titles. If any poor man, or rich man, select the unstamped and unregistered article because it is cheaper or more convenient, or because it pleases his ignorant fancy, the law does not interfere to prevent him. On the other hand, a terrible responsibility lies upon chemists who undertake the most anxious and serious duty of treating disease. They are obviously unfitted for it; they have neither time, education, nor opportunities to fulfil the duties of diagnosing and prescribing for disease. The Pharmaceutical Society justly discourages the evil practice; and an enlightened opinion will not hold them guiltless of the mischief which they do, and of the deaths of which they incur the responsibility.

CHEMICAL SOCIETY.

THE anniversary meeting of this Society was held on March 30th, when the following officers and Council were elected for the ensuing year. *President:* W. Odling, M.B., F.R.S. *Vice-Presidents who have filled the office of President:* Sir B. C. Brodie, F.R.S.; Warren De la Rue, Ph.D., F.R.S.; E. Frankland, D.C.L., F.R.S.; A. W. Hofmann, D.C.L., F.R.S.; Lyon Playfair, Ph.D., C.B., F.R.S.; A. W. Williamson, Ph.D., F.R.S.; Colonel P. Yorke, F.R.S. *Vice-Presidents:* J. H. Gladstone, Ph.D., F.R.S.; A. Vernon Harcourt, M.A., F.R.S.; G. D. Longstaff, M.D.; H. E. Roscoe, Ph.D., F.R.S.; Maxwell Simpson, Ph.D., F.R.S.; A. Voelcker, Ph.D., F.R.S. *Secretaries:* W. H. Perkin, F.R.S.; W. J. Russell, Ph.D., F.R.S. *Foreign Secretary:* H. Müller, Ph.D., F.R.S. *Treasurer:* F. A. Abel, F.R.S. *Other Members of Council:* J. Attfield, Ph.D.; H. E. Armstrong, Ph.D.; Dugald Campbell; J. Dewar, F.R.S.E.; A. Dupré, Ph.D.; G. C. Foster, F.R.S.; M. Foster, M.D., F.R.S.; P. Spence; H. Sprengel, Ph.D.; T. Stevenson, M.D.; R. Warington; C. R. A. Wright, D.Sc.

DEATH UNDER CHLOROFORM.

WE are indebted to Mr. Allingham for the following account of a death from chloroform which occurred last Monday at St. Mark's Hospital. A. R. P., aged 48, a seaman, was admitted into the hospital on April 9th, with a fistula *in ano.* He had been for three months an in-patient at the Seaman's Hospital at Greenwich; and he said that he there had been operated upon for the fistula several times, and had taken chloroform *twice.* He was a tall, well made man, not fat, and not emaciated. His countenance was rather worn. An examination of his lungs and heart detected no disease. On Monday, April 13th, he came into the operating theatre, to be operated upon by Mr. Allingham. Chloroform was administered by Mr. Baly, the resident surgeon; it was given on a small square of lint, the chloroform being dropped on it out of a drop-bottle; altogether not more than *one drachm* was used. The man appeared to bear the anæsthetic very well. There was a little struggling, but not much, with no marked lividity of countenance; and in about the usual time he became insensible to pain. There was no stertorous breathing. Mr. Allingham had laid open one sinus, when the resident surgeon exclaimed that the patient's pulse had stopped. Instantly the tongue was drawn out of the mouth, and artificial respiration commenced. The chest over the region of the heart was slapped with a wet towel, and ammonia was applied to the nostrils. The breathing feebly continued for a few seconds, and two distinct gasps were made, after which the man was dead. The pulse could not be felt, nor the heart heard to beat, after the moment that Mr. Baly said the pulse had failed.

EARLY MARRIAGES IN AMERICA.

THE Registrar of Providence, Dr. Snow, has pointed out, says the *Philadelphia Medical Times*, the faulty marriage-laws of Rhode Island. It appears that they permit minors of any age to marry, without the consent of parents or guardians. He says it is not unfrequent that children of fourteen or fifteen years are married in that State; even younger children may be united in marriage without the knowledge or consent of their parents. In a State Report on Registration, the marriage is mentioned, in a single year, of couples of the following ages: 18 and 14, 17 and 15, 16 and 15, 61 and 15, 76 and 13. The Registrar adds: "This defect in our marriage-laws has had the effect to make Providence a Gretna Green for runaway matches of minors from our own State. Scarcely a week elapses that applications are not made for an examination of the records, by distracted parents from this and from other States, to ascertain if their minor sons or daughters have been married here."

ST. GEORGE'S HOSPITAL.

THE following memorial has been presented to the Board of Management of St. George's Hospital by Clergymen and Laymen residing in the neighbourhood of the hospital.

It will be readily admitted that any permanent improvement in the condition of the lower portion of the working class of London can only be brought about by the elevation and improvement of their habits. The out-patient department of St. George's Hospital, and the neighbouring free dispensaries, by their gratuitous provision for even the most ordinary medical treatment of the working classes, have, however unintentionally, largely contributed to encourage them in improvident and mendicant habits. Owing to the numbers flocking to receive this gratuitous medical relief, and to the limited time at the disposal of the medical officers, it was found impossible that each case could be properly examined into and treated in the out-patient department of the hospital. Something has lately been done towards remedying this. Only a certain number of new cases are now seen every morning; but this does not touch the root of the evil, while it superadds some new inconveniences. Patients who have been accustomed to receive charitable aid, rather than apply to an institution where they would have to contribute something, on the principle of mutual assurance, towards the preservation of their health, still attend the out-patient department in considerable numbers, so that many of them cannot be seen till the next morning, and not even then if they happen to be late. Thus it may frequently happen that, like the sick man at the fountain of health, they anxiously wait for their turn, but having no friend to assist them, some one steps in before them. While all are tempted to apply by the attraction of gratuitous treatment, many are necessarily precluded from receiving any aid. Meanwhile a system of medical relief, on sound principles, for ordinary ailments of every kind, including the large class of women's and children's complaints, has been gradually formed around St. George's Hospital. The lead was taken by the Managing Committee of the Royal Pimlico Dispensary, under the influence of the Duke of Westminster, and in the first complete year after its conversion to the provident system, 2,358 working-class members have joined, whose payments amounted to £204 : 7 : 7, proving how ready our people are to assist themselves if only the way be opened to them. The St. Paul and St. Barnabas Dispensary was established as long ago as 1849, on a combination of the provident with the eleemosynary principle, and in the first complete year since it has been placed entirely upon the provident footing, the members have increased from 1,251 to 1,366, and their payments from £68 : 10 : 9 to £96 : 0 : 8. In this dispensary the rates of payment have always been abnormally low, else the sum would have been larger. The St. George's Dispensary, which is united to the parent hospital by many ties besides those of name and neighbourhood, has been converted to the provident system by a laborious process extending over two years. In all the arrangements for this purpose, the able medical officers of the dispensary have been fully consulted, and it is believed that a model has been matured which will be regarded with interest in many quarters. And all this has been done under the disadvantage of the competing gratuitous medical aid for ordinary ailments in the out-patient department of the hospital. Seeing, therefore, that a subsidiary system of provident dispensaries has been established in the neighbourhood of St George's Hospital, amply sufficient to provide for the ordinary medical wants of the surrounding district, we earnestly request that it may receive the official recognition of the Board of Management of the Hospital, and that their arrangements may be modified to suit this altered state of things. We would especially suggest that admission to the out-patient department should, for the future, be confined to cases which, on account of their difficulty, gravity, or other peculiarity, require hospital treatment; and that all the ordinary trivial cases, which had best be treated at, or in the immediate neighbourhood of, the homes of the patients, should be referred to the provident or (if the applicants are entirely destitute) to the Poor-law dispensaries. We also suggest that the committees, or medical officers, of the dispensaries should be authorised to recommend for treatment in the hospital such cases as, from their peculiar or difficult character, or from their requiring prolonged clinical treatment, can be best dealt with at the hospital. Finally, we venture to remark that the legitimate opening which the provident dispensaries would offer for suitable employment, and just remuneration, for the younger members of the medical profession residing in London, would supply an acknowledged desideratum. Being convinced by practical experience that arrangements on this principle are necessary for the physical and moral well-being of the population around us, and being desirous of obtaining the co-operation of the great and distinguished hospital which is under your direction, we respectfully submit the subject for the consideration of the Board of Management.

This memorial has been largely and influentially signed. Among those who have attached their names to it, are the Duke of Westminster, the Earl of Shaftesbury, Lord Eversley, Mr. Gathorne Hardy, Sir James Paget, Sir William Fergusson, Sir William Gull, Sir Charles Trevelyan, Sir Baldwin Leighton, Sir E. Colebrooke, Rev. Mr. Liddell, Rev. Mr. Wilkinson, Rev. Mr. White, and Mr. Thomas Hughes.

MEDICAL CHARTS.

THE *New York Medical Journal* for February speaks of having had an opportunity of inspecting a series of medical charts of the United States prepared by Dr. S. H. Carney. The set consists of five maps, each nearly seven feet in length. The prevalence of each disease is represented by different shades of a given colour. Red has been chosen for phthisis, brown for pneumonia, purple for rheumatism, blue for malarial diseases, and green for typhoid.

SCOTLAND.

THE UNIVERSITY OF EDINBURGH AND SCIENTIFIC TEACHING.

A MEETING of a highly important character in connection with the interests of the University of Edinburgh as a school of practical science, was held in that city last week, under the presidency of the Lord Provost. The inadequacy of the means which that institution possesses for maintaining its position in this respect, has for some time been a subject of serious consideration; and the object of the meeting was to discuss a series of proposals made by a provisional committee that had been appointed for promoting the improvement and extension of the University buildings. The following resolutions were unanimously passed.

1. Moved by the Duke of Buccleuch, and seconded by Dr. Lyon Playfair, M.P., "That, while the University of Edinburgh is almost the largest University, and contains by far the largest and most important medical school in the United Kingdom, the present state of its buildings is such as to impede the proper discharge of its functions, especially in respect of imparting scientific instruction in accordance with the modern system, and also in respect of the convenient teaching of all its classes; and that it is for the interest of science, and of the higher education of the country generally, that this state of things should not be allowed to continue."

2. Moved by the Lord President of the Court of Session, and seconded by Mr. Charles Cowan, "That the University of Edinburgh is worse equipped than Universities of equal importance, not only in respect of its teaching accommodation, but also in regard to other material appliances necessary for academical efficiency; and that it is especially matter for regret that the University of Edinburgh should have no Hall for conferring degrees, conducting examinations, or holding meetings of its members."

3. Moved by Mr. Campbell Swinton, and seconded by Mr. D. McLaren, M.P., "That, in the opinion of this meeting, the improvement of the University of Edinburgh in the points specified in the former resolutions is a public object of great importance, not only to the city of Edinburgh, but also to the country at large."

4. Proposed by the Rev. Dr. Macgregor, and seconded by Mr. Marshall, "That this meeting acknowledges with gratitude the bequest of the late Sir David Baxter, and the liberal subscriptions recorded in the preliminary subscription list, and resolves that every effort should be made to bring this matter before the public, with the view of obtaining sufficient funds to supply the University of Edinburgh with all that is now required for the extension and improvement of its buildings."

5. Proposed by the Rev. Dr. James Taylor, and seconded by Provost Swan of Kirkcaldy, "That this meeting cordially approves of the proceedings of the Provisional Committee which has hitherto taken action in this matter, and also of the definite proposals now submitted; confirms the appointment of trustees for the fund; and appoints the noblemen and gentlemen, who have already kindly consented to act as a General Committee, and the following select Acting Committee, of whom five shall be a quorum, and who shall have power to add to their number, to carry out these proposals."

Among the proposals, are one to erect, in the immediate vicinity of the New Royal Infirmary, complete class-rooms, theatres, laboratories, and museums, with the latest scientific improvements, for the Medical Faculty of the University of Edinburgh; and another to erect an University Hall for the conferring of degrees, the holding of examinations, and for all public academical ceremonials. The Acting Committee consists of the Lord Provost, Principal Sir Alexander Grant, Sir Robert Christison, Mr. James Cowan, M.P., Professors Crum Brown, Muirhead, Tait, Turner, and Wilson, and other gentlemen. The Secretaries are Professor Wilson, John Christison, Esq., W.S., and R. Bruce Johnston, Esq., W.S. The estimated cost of the improvements is £100,000; and of this as much as £55,535 has already been collected, including a bequest of £18,000 from the late Sir David Baxter, £4000 from the general fund of the University, £2000 from the Duke of Buccleuch, four donations of £1000 each, four of £500, one of £400, one of £262, three of £250, twenty-seven of £200, one of £150, two of £105, eighty-eight of £100, etc.

THE ADULTERATION ACT IN GLASGOW.

FOUR cases under the Adulteration Act were lately brought up for disposal at the Central Police Court, Glasgow. William Marshall, provision dealer, pleaded guilty to having sold four gallons of sweet milk adulterated with skimmed milk to the Industrial School. A fine of £10, with £1 expenses, was imposed.—James M'Lay, provision dealer, was charged with having sold half a pound of butter adulterated with cheese and fatty matter. The charge was denied, and the plea made that the article sold was Holland butter, and recognised in the trade as pure. The case was adjourned for further examination.—Robert Martin, druggist, was accused of having sold three drachms of scammony which was adulterated. A fine of 20s., with a similar sum for expenses, was inflicted.—Robert Cooper, druggist, was also charged with selling adulterated scammony. It was stated in defence that there were two kinds of scammony (Aleppo and Virginia) sold in Glasgow, and the kind in court was of the former. The accused was fined 20s., with 20s. expenses. These are the first cases in which the druggists of the city have been charged with selling adulterated articles.

SANITARY STATE OF WISHAW.

AT a recent meeting of the Local Authority in Wishaw, a letter from the Board of Supervision to the Sanitary Inspector was read, calling on him to make a report to the Board within a week as to what action had been taken on the report of Dr. Littlejohn on the state of the burgh. The report stated:

> A very cursory inspection of the town showed me, to my surprise, that some of the worst nuisances reported on by me in April 1873, had been allowed to remain. There are no scavengers in the employment of the Commissioners, and everyone apparently is left to do what he pleases with his refuse. As to the prevailing epidemic, I found from an examination of a single poor locality—viz., Marshall Street—that smallpox was very prevalent, and that it flourished there in all its stages

No attempts were made to isolate the sick, to fumigate the houses, to disinfect and cleanse the bedding and clothes; and, as for the general population, no house to house visitation had been instituted, and no opportunities for vaccination had been placed at the disposal of the inhabitants. The only bright spot in this dark picture was the establishment of a wooden building as an epidemic hospital. With ordinary precautions the disease might have been stamped out or kept within ordinary limits. As it is, I was assured by Dr. Livingstone that upwards of eighty deaths from small-pox had occurred during the last two months, and now when the disease appears among the mining population and they become demoralised, the sick are left untended, and the neighbours leave, spreading infection wherever they go. I have to suggest—1, that all cases of the disease should be reported to the local authority and visited by the medical officer; 2, that a daily statement of the progress of the disease should be made up by the Town Clerk; 3, that all cases reported by the medical officer as suitable for reception into the hospital should be conveyed there; 4, that where this is impracticable the sick should be isolated as much as possible, and suitable assistance in the shape of nurses afforded; 5, that in the meantime a house to house visitation should be instituted in the poorer districts, and vaccination brought within the reach of all exposed to the contagion of the disease; and 6, that the population should be warned by bills and otherwise of the continued presence of small-pox, and of the risk and penalties incurred by premature exposure before complete convalescence.

IRELAND.

THE Dublin Synod last week resolved to petition Parliament for the closing of public-houses on Sunday in Ireland.

THE Governors of the Rotunda Lying-in Hospital acknowledge the receipt of the sum of £50, being the proceeds of a benefit given by Mr. Simonson, of Dublin, on last Saturday, for the repairs of that institution.

SMALL-POX, we regret to state, is increasing in Belfast, there being, for the week ending April 4th, nineteen cases of the disease under treatment in the Union Hospital in that town. Of these nineteen cases, twelve were fresh ones admitted during that period.

THE LATE DR. FLORENCE M'CARTHY.

AT a meeting of the Town Council of Cork on Monday last, an unanimous vote of condolence was passed with the family of the above gentleman on his late melancholy death whilst returning from the West Coast of Africa, where he had been engaged in the Ashantee expedition. Dr. McCarthy's death took place on board the *Victor Emmanuel* hospital ship on March 15th.

MEDICAL INSURANCE.

SIR DOMINIC CORRIGAN has lately published a pamphlet on the present method of granting insurance certificates. The subject was some time since brought under the notice of the members of the Medical Society of the College of Physicians, Sir Dominic having read a paper on medical certificates, which created a considerable amount of discussion at the time. This paper has been republished with the object of drawing the attention of all concerned to the observance of stricter accuracy, as the author believes that members of the profession are too facile in appending their names to documents of this kind at the request of interested parties. He objects more particularly to a practice which he states to be very prevalent—viz., effecting an insurance on a party without his or her knowledge, and obtaining information in a private manner from the medical attendant of the person whose life is intended to be insured by a third party. He also refers to several questions which are expected to be answered by the medical attendant of a patient who wishes to insure his life, and notes the following as being particularly objectionable. Question 9. "Is he subject or predisposed to insanity, pulmonary disease, or any other constitutional or hereditary disorder having a tendency to shorten life, or is he addicted to any habit having that tendency?" The answer to this query, Sir Dominic states, "in many instances must be either evasion, untruth, or revelations that should for ever be concealed in the medical adviser's own breast". The whole subject is dealt with in a masterly manner, and will well repay perusal by those interested in the matter thus brought under the notice of the profession.

IRISH SANITARY LEGISLATION.

THE announcement that Sir Michael Hicks-Beach had obtained leave to bring in a Public Health Bill for Ireland, has caused a considerable amount of excitement, not only in medical but in general circles. The recent articles in the *Times* and *Pall-Mall Gazette*, calling special attention to the failure of the English Public Health Act of 1872, have added considerable alarm to this excitement, as the Irish public very naturally dread the possibility of the repetition of the costly English failure. We have good reason to believe that there is little cause for real anxiety in the matter, for, although sanitary legislation for Ireland may not fulfil all the requirements which medical sanitarians have a right to expect and hope for, yet, from the general tenour of the proposed Irish Public Health Bill of the late Government, the experiences of the late English Act, and the well-known sanitary knowledge of the Irish Chief Secretary, the future sanitary legislation of Ireland seems to be in a more hopeful state than that of England was before the passing of the Act of 1872. With a view of watching the progress of the impending legislation, committees have been appointed by the College of Physicians, the Irish Poor-law Medical Officers' Association, the Irish Medical Association, the Dublin Sanitary Association, and, we believe, by the College of Surgeons. The Sanitary Association invited all the other bodies to send representatives to a conference to be held on Wednesday, the 15th instant, with a view of considering what the many requirements of sanitary legislation for Ireland are, and what steps should be taken to assist the Government in bringing forward as perfect a measure, or series of measures, as possible. Most of the Dublin newspapers have called attention to the matter; and two pamphlets, one by Dr. Maunsell, the secretary of the Irish Poor-law Medical Officers' Association, the other by Dr. Grimshaw, have been issued, both calling attention to the question, and making suggestions as to the course legislation should take. The views advocated by these gentlemen are substantially the same as those put forward by them in the paper which they jointly brought before the Public Health Section of the Association at the London meeting last year, and for which we refer our readers to the JOURNAL of September 6th, 1873. The chief points contended for, are the utilisation of the Irish Poor-law medical service for sanitary purposes; the prevention of the formation of innumerable little local authorities, and the diminution, as much as possible, of the local power of such of those authorities as it is absolutely necessary to employ as administrators of sanitary matters. The proposals of Drs. Maunsell and Grimshaw seem, from the remarks of the Irish press, to have met with very general approval. For the present, we understand, the Bill has been postponed; and, in the meantime, we have reason to believe its authors will willingly receive any suggestion for its improvement.

PHARMACY IN IRELAND.

THE following Bill has been drawn up by the President and Fellows of the King and Queen's College of Physicians in Ireland to amend the practice of pharmacy in Ireland, and forwarded to the Chief Secretary for Ireland, with a request that he will take charge of it in Parliament.

Whereas a great deficiency exists throughout Ireland of establishments and shops for the sale of medicines and compounding of prescriptions, and great inconveniences thereby arise to the public, in many parts of the country:

1. It is hereby enacted that, from and after the passing of this Act, the provisions of the Pharmacy Acts of England, 15 and 16 Vict., c. lvi, 30th June, 1852; 31 and 32 Vict., c. xxi, 31st July, 1868; and 32 and 33 Vict., c. xvii, 11th August, 1869, be extended to Ireland as follows:

2. From and after the passing of this Act every person duly qualified and registered under the aforesaid Pharmacy Acts, as chemists, or chemists and druggists, being thereby entitled to keep open shop in Great Britain for the compounding of the prescriptions of duly qualified medical practitioners, shall in like manner be deemed to be qualified to keep open shop for the sale of medicines and compounding of prescrip-

tions in Ireland, and shall not be subject for so doing to any prosecution or penalty, notwithstanding any enactment to the contrary in the Apothecaries' Act of Ireland of 1791 (31 Geo. III, cap. xxxiv).

3. Moreover, every person duly registered by the Apothecaries' Hall of Ireland as qualified to keep open shop in Ireland for the compounding of prescriptions, shall, in like manner, be deemed to be qualified to keep open shop for the compounding of prescriptions in Great Britain, and shall not be subject to any penalty for so doing, notwithstanding any enactment to the contrary in the Pharmacy Acts of Great Britain hereinbefore enumerated.

From the reasons assigned for the adoption of the proposed Bill, it is apparent that the College desires that the practice of pharmacy in Ireland should be assimilated to that in England. This Bill is evidently the result of the action of the Irish Apothecaries' Hall, to which we referred some time since. The College represents that it is universally known that throughout the whole of Ireland there is a great want of chemists' and druggists' shops, conducted by persons competent to understand and compound the prescriptions of duly qualified medical practitioners. In many towns throughout Ireland, at present, there are no apothecaries' or chemists' shops available for the compounding of prescriptions. The secretary of the Apothecaries' Hall of Ireland, in an interview with Lord Hartington, on January 15th, 1874, stated, that "there were, to his knowledge, from twenty-eight to thirty of the most important market towns of Ireland, with populations varying from 10,000 to 50,000, wherein there was no apothecary or competent person qualified to compound medicine, consequently causing great inconvenience". Persons examined and qualified under the Pharmacy Acts of Great Britain are prevented from opening shops in Ireland; but at present they are prevented by a penal clause in the Apothecaries' Act of Ireland, which imposes a penalty of £20 for practising as an apothecary without the license of the Hall, and under which prosecutions have been instituted from time to time by the Apothecaries' Hall of Ireland. The College also considers that the protracted and expensive course of instruction, at present required by the Apothecaries' Hall of Ireland, is not only totally unnecessary to qualify persons for compounding medicine, but is beyond the means of many of those who would propose to open shops as chemists or druggists, or pharmaceutists. The College urges that, to obviate the present evils, it is only necessary to extend to Ireland the Pharmacy Acts of England. The proposed Bill will provide in Ireland, as in England, a supply of persons duly educated and qualified to open compounding establishments; and it will not interfere with the present powers of the Apothecaries' Hall of Ireland to prosecute persons who would attempt to open compounding establishments in Ireland, without being qualified either under the Pharmacy Acts of England or under the Apothecaries' Act of Ireland. It will moreover establish between Great Britain and Ireland reciprocity of rights in pharmacy, similar to those now enjoyed in medicine.

THE WEBB FUND.

THE following contributions have been received by Mr. Augustus Churchill, the Treasurer, to the 15th instant.

	£	s.	d.
Mr. Willington Clark...	2	2	0
Mr. Stephen Olding ...	5	5	0
Miss May Olding.........	1	1	0
Mr. H. Bodkin Poland.	5	5	0
Mr. Thomas Morson ...	3	3	0
Mr. W. J. Harris	2	2	0
Mr. John Morgan	5	5	0
Dr. Silver..................	2	2	0
Dr. Lavies	3	3	0
By Dr. T. Smith Rowe:			
Mr. J. Chippendale...	1	0	0
Mrs. Yglesias	1	1	0
Mr. H. Curling	1	1	0
Dr. Bramwell	1	1	0
Mr. T. Wright	2	0	0
Miss Wright............	1	0	0
Miss E. Wright	1	0	0
By Dr. T. Smith Rowe:			
Miss J. Wright.........	1	0	0
Mr. Henry Thompson	10	0	0
Dr. Ransom............	3	3	0
Dr. Tom Hewitt......	2	2	0
Mr. A. E. Durham......	2	2	0
Mrs. Andrew Duncan...	5	5	0
Dr. B. Carrington	2	2	0
Mr. R. Crawford.........	5	0	0
Mr. Thomas Knight ...	2	2	0
	70	7	0
Amount previously acknowledged	1808	14	6
Total............	1879	1	6

EXAMINATION AND VERIFICATION OF THE BODY OF THE LATE DR. LIVINGSTONE.

THE arrival of the body of Dr. Livingstone in London on Wednesday last was followed by an examination of his body by Sir William Fergusson, with the view of settling all doubt as to the identity of the body with that of the great missionary and explorer. The following account is from the pen of Sir William Fergusson.

Happily, it was borne in mind by many old friends that he had one condition of body which would mark the identification of his remains, even if years and years had elapsed. The skeleton of the human frame being the last part which decays and falls into impalpable dust, it was thought by those who knew some part of his physical condition that if it should be proved, on anatomical examination, the remains of an old ununited fracture in his left humerus (arm-bone) could be recognised, all doubt on this subject would be settled at once and for ever.

It has fallen to my lot to have the honour of being selected to make the crucial examination to this end, and I have accordingly performed that duty. From what I have seen, I am much impressed with the ingenious manner in which those who have contrived to secure that the body should be carried through the long distance from where Livingstone died until it could reach a place where transit was comparatively easy, accomplished their task. The lower limbs were so severed from the trunk that the length of the bulk of package was reduced to a little over four feet. The soft tissues seem to have been removed to a great extent from the bones, and these latter were so disposed that by doubling and otherwise the shortening was accomplished. The abdominal viscera were absent, and so were those of the chest, including, of course, the heart and lungs. There had been made a large opening in front of the abdomen, and through that the native operators had ingeniously contrived to remove the contents of the chest as well as of the abdomen. The skin over the chest, sternum, and ribs had been untouched.

Before these points were clearly ascertained, some coarse tapes had to be loosened, which set free some rough linen material—a striped coloured bit of cotton cloth, such as might have been an attractive material for the natives, among whom Livingstone travelled—a coarse cotton shirt, which doubtless belonged to the traveller's scanty wardrobe, and in particular a large portion of the bark of a tree, which had formed the principal part of the package—the case thereof no doubt. The skin of the trunk, from the pelvis to the crown of the head, had been untouched. Everywhere was that shrivelling which might have been expected after salting, baking in the sun, and eleven months of time. The features of the face could not be recognised. The hair on the scalp was plentiful, and much longer than he wore it when last in England. A moustache could not be distinguished, but whiskers were in abundance. The forehead was in shape such as we are familiar with from memory, and from the pictures and busts now extant. The circumference of the cranium, from the occiput to the brow, was 23⅞ inches, which was recognised by some present to be in accordance with such measurements when alive.

In particular, the arms attracted attention. They lay as if placed in ordinary fashion, each down by the side. The skin and tissues under were on each side shrunken almost to skeleton bulk, and at a glance to practised eyes—there were five, I may say six, professional men present—the state of the left arm was such as to convince everyone present who had examined it during life, that the limb was Livingstone's. Exactly in the region of the attachment of the deletoid to the humerus, there were the indications of an oblique fracture. On moving the arm, there were the indications of the ununited fracture. A closer investigation and dissection displayed the false joint which had long ago been well recognised by those who had examined the arm in former days. The Rev. Dr. Moffat, and in particular, Dr. Kirk, late of Zanzibar, and Dr. Loudon, of Hamilton in Scotland, at once recognised the condition. Having myself been consulted regarding the state of the limb when Livingstone was last in London, I was convinced that the remains of the great traveller lay before us. Thousands of heads, with a like large circumference might have been under similar scrutiny; the skeletons of hundreds of thousands might have been so; the humerus in each might have been perfect; if one or both had been broken during life it would have united again in such a manner that a tyro could easily have detected the peculiarity. The condition of ununited fracture in this locality is exceedingly rare. I say this from my personal professional experience, and that such a specimen should have turned up in London from the centre of Africa, excepting in the body of Dr. Livingstone, where it was known by competent authorities to have existed, is beyond human credibility. It must not be supposed by those who are not professionally acquainted with this kind of lesion—which often causes so much interest to the practical surgeon—that a fracture and new joint of the kind now referred to, could have been of recent date or made for a purpose. There were in reality all the indications which the experienced pathologist recognises as infallible, such as the attenuated condition of the two great fragments (common under such circumstances), and the semblance of a new joint, but actually there was a small fragment detached from the others which bore out Livingstone's own view, that the bones had been "crunched into splinters". Having had ample opportunity of examining the arm during life, and conversing with Livingstone on the subject, and being one of those who entertained hopes that the last reports of Livingstone's death might, like others, prove false, I approached the examination with an anxious feeling regarding this great and most peculiar crucial test. The first glance at the left arm set my mind at rest, and that, with the further examination, made me as positive as to the identity of these remains as that there has been among us in modern times one of the greatest men of the human race—David Livingstone.

The accompanying extract from Dr. Livingstone's *Missionary Travels and Researches in South Africa*, published in 1857, will be read with peculiar interest at the present date. It bears specially upon the matter now in question. In giving an accout of an attack on a troop of lions in the village of Mabotsa, Dr. Livingstone says: "In going round the end of the hill, however, I saw one of the beasts sitting on a piece of rock as before, but this time he had a little bush in front. Being about thirty yards off, I took a good aim at his body through the bush, and fired both barrels into it. The men then called out, 'He is shot! he is shot!' Others cried, 'He has been shot by another man too; let us go to him!' I did not see any one else shoot at him, but I saw the lion's tail erected in anger behind the bush, and, turning to the people, said, 'Stop a little till I load again'. When in the act of ramming down the bullets. I heard a shout. Starting, and looking half round, I saw the lion just in the act of springing upon me. I was upon a little height; he caught my shoulder as he sprang, and we both came to the ground beow together. Growling horribly close to my ear, he shook me as a terrier dog does a rat. The shock produced a stupor similar to that which seems to be felt by a mouse after the first shake of the cat. It caused a sort of dreaminess in which there was no sense of pain nor feeling of terror, though quite conscious of all that was happening. It was like what patients partially under the influence of chloroform describe, who see all the operation, but feel not the knife. This singular condition was not the result of any mental process. The shake annihilated fear, and allowed no sense of horror in looking round at the beast. This peculiar state is probably produced in all animals killed by the carnivora, and, if so, is a merciful provision by our benevolent Creator for lessening the pain of death. . . . . Besides crunching the bone into splinters, he left eleven teeth wounds on the upper part of my arm. A wound from this animal's tooth resembles a gunshot wound; it is generally followed by a great deal of sloughing and discharge, and pains are felt in the part periodically ever afterwards. I had on a tartan jacket on the occasion, and I believe that it wiped off all the virus from the teeth that pierced the flesh, for my two companions in this affray" (who were bitten, one in the thigh and the other on the shoulder) "have both suffered from the peculiar pains, while I have escaped with only the inconvenience of a false joint in my limb. The man whose shoulder was wounded showed me his wound actually burst forth afresh in the same month of the following year."

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

At the meeting on April 8th, the following statement was submitted by Dr. Joseph Rogers, Chairman of Council.

Since our last annual meeting, on February 26th, 1873, we have held two meetings of the Association—one called on the 7th April, 1873, at the suggestion of Mr. Corrance, and a conference of Poor-law medical officers which took place during the meeting of the British Medical Association last August. Our meeting in April (which was attended by five members of Parliament, among them the Hon. E. Gordon, now a member of Mr. Disraeli's Government) was mainly convened for the purpose of taking into consideration the action of the department at Gwydyr House, with reference to the working of the Public Health Act, in which there had been exhibited an amount of administrative indecision and general failure hardly conceivable. To take one instance—that of the sanction of the appointment of health-officers. We have seen that some gentlemen have been appointed to areas so vast as to be unworkable, others to localities so small as to be ridiculous; and yet in no one instance, so far as I have read, has any arrangement been come to whereby the local knowledge of the district medical officer has been utilised, although it must be obvious to any one who thinks on the subject, that without such information as these gentlemen can alone furnish, the Act—certainly in those districts extending over huge areas—must prove a failure.* It was thought, when we met in April last year, that some effort would be made, by independent members, to amend this and the other faulty provisions of Mr. Stansfeld's Act; indeed, Sir C. Adderley and Mr. Powell brought in a Bill with such object, but the general disruption of parties, and the political lethargy which prevailed last session, prevented any such reform, though it is but just to state that Sir C. Adderley gallantly attempted it. On the whole, however, I do not regret his want of success; for although, had his measure passed, and the amendments of the late Mr. D. Dalrymple been grafted thereon, much benefit would have been achieved; yet it may fairly be anticipated that when the deficiencies of the present measure become more apparent, a scheme more comprehensive, more just in its dealing with our branch of the public service, and more in consonance with the requirements of the community, will be carried through the Legislature. To that consummation it is desirable that the action of the Association should in future be largely directed.

Before leaving this section of the subject, I may say that we have great grounds for congratulation that the chief during whose administration this imperfect Act was passed, and to whose want of sufficient control of his subordinates much of its subsequent failure is due, is presidentially defunct. Let us hope that his successor will not follow his example in permitting the medical service at Whitehall to be subjected in every way to the necessarily ignorant laymen, who, during the last three years, have been permitted to determine matters as best suited their convenience or office views.

Our second meeting, held in the week during which the British Medical Association was in London, partook of the nature of a conference. It was my intention at that time to have worked out a fresh programme; but, unfortunately, I became ill, and for upwards of three months was wholly prevented from doing anything in the shape of literary work—indeed, I had to abandon my profession for a time altogether. But although prevented from doing all that I could have desired, I was present; and I learn from the BRITISH MEDICAL JOURNAL that I then urged that an improved status and remuneration of Poor-law medical officers would lead to enlarged powers of usefulness, and would be followed by diminished general poor relief expenditure, which, as you are probably aware, amounted last year to £8,007,403. In corroboration of this view, I referred to the beneficial results which have accrued from the working of the Irish medical relief system. In the same number of the JOURNAL which reports our meeting will be found an abstract of the last report of the Irish Poor-law Commissioners (now the Local Government Board, Ireland), from which I learn that 97,000 cases of sickness were treated in 1872 in the workhouse hospitals (15,000 being zymotic), and about 12,000 deaths occurred therein. The number receiving out-door relief was 63,000, on whom was expended £80,000, or a little over £1 a-head. As regards the medical organisation, we learn that Ireland is divided into 163 unions, and these again are subdivided into 800 dispensary districts, the average area of each being seven square miles.

The dispensary medical officers attended close on 800,000 persons, 211,000 of whom were treated at their own homes. The total expenditure for medical purposes amounted to £141,000, whilst the total disbursements of poor rates for all purposes amounted to £894,888, or at the rate of 1s. 4d. in the pound on the valuation.

I have, on previous occasions, drawn attention to the fact that the stipends of the medical officers in Ireland are not only much greater than they are here, but that there is a considerable approach to uniformity; this, with the invariable provision of all drugs and appliances by the respective boards of guardians, makes the medical arrangements complete. Here, on the contrary, as I have repeatedly shown, there exists, conjoined with the supply of medicines by the medical officers —the metropolis, under Mr. Hardy's Act, and a few of our large towns alone being excepted—every conceivable scale of payment, the salaries varying from 8d. to 7s. per case of sickness, the rule being, apparently, that in those places where sickness is greatest the payments shall be the least. Then again you note that here no opposition is ever made by the Department to a medical officer holding two or three, or even more separate appointments; and though, in the interest of the sick poor, general orders were issued, many years ago, limiting the area of districts to 15,000 acres, no objection has ever been made by the Department to areas extending over thousands of acres in excess of this limit, or there could not exist 665 districts exceeding 15,000 acres. In too many instances so vast are the districts as to deprive many of the sick poor of being treated at all—in fact, except in the metropolis and a few of our large towns, illness of the poor has been officially disregarded; and, as regards the metropolis, if it had not been for the initiative of the Workhouse Infirmary Association, aided and continued as it has been since by the labours of this Association, I question whether the improvement we have witnessed ever would have been made. Similarly, the alterations that have been made at Southampton, Oxford, Birmingham, etc., have been the outcome of the agitation we have kept up. Can it therefore be a matter of surprise that the large number of widows and orphans, the cost of their maintenance, the heavy charges arising from sickness, and the large expenditure on poor relief generally, admit of being distinctly traceable to the imperfect means placed at the disposal of the district medical officer, especially when it is borne in mind that 75 per cent. of all our pauperism is due to sickness.

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* Since the above was written, a circular letter has been issued by the department, dated March 23rd, 1874, in which the Board direct that the district registrars furnish information, weekly, of ordinary deaths, but immediately of those arising from infectious disease or from diarrhœa—each return to be paid for by a fee of twopence. The clerks of the various Boards of Guardians are also required to copy from the district medical officers' relief lists the new cases reported at each meeting of the Guardians, and to forward the same, without delay, to the medical officer of health, or officers of health, acting for each union. No suggestion is made as to any additional remuneration, save in a *leader* of the official journal; but as these gentlemen are mostly solicitors, their friends in the House of Commons will soon see to this. The Board also recommend that the Guardians should request the Poor-law medical officers to give to the medical officers of health, or inspectors of nuisances, acting within their respective districts, the earliest possible information of cases of dangerous infectious disease under their charge; but no allusion is made showing that the department recognises the justice of paying for the additional labour involved therein.

I stated just now that, for a population of 5,500,000, Ireland expended £141,000 on medical relief, while in England, for the pauper sickness of 23,000,000, £290,000 only was spent in the financial years 1871, 1872, and 1872-3. Now one of two things must be obvious, either that the expenditure on medical relief in Ireland is excessive, and ought to be curtailed, or that the outlay on English medical relief is below what it should be, and needs to be increased.

On several previous occasions I have contrasted the respective systems which prevail in England and Scotland with those of Ireland, and have demonstrated that the low amount of expenditure on Irish poor relief has gone *pari passu* with a diminished death rate, and that this has been due to the efficiency of their medical relief system; similarly I have shown that the heavy charges on poor relief, and the higher average rate of mortality, have existed with, and been traceable to the inefficiency of the Poor-law medical relief arrangements which have existed ever since 1834 in England, and for an equally lengthened period in Scotland. These opinions, based on facts and figures drawn exclusively from official sources, have been quoted by journals of every shade of political opinion, and no writer has ever to my knowledge questioned the correctness of my facts, or the cogency of the arguments I have derived from them. After having repeatedly stated them at our various meetings, three years ago, by invitation, I addressed the Central Chamber of Agriculture, where, as is well known, I not only received a most enthusiastic reception, but a resolution was unanimously adopted, condemning the English system of medical relief, and urging an alteration based on the Irish; a copy of this resolution was also ordered to be forwarded to the Poor-law Board. But although this was done, I have not heard that any steps have been taken by the department to give any effect to such resolution, except those abortive clauses respecting the introduction of the dispensary system, which appeared in the first edition of Mr. Stansfeld's Public Health Bill, but which, from some cause or other, disappeared wholly from the second; but although such is the fact, there is, I believe, at present a prospect of an alteration. Among the gentlemen at the meeting I have referred to, were Sir Massey Lopes and Mr. C. S. Reade, both of whom are now members of Mr. Disraeli's Government, the latter occupying the position of Secretary to the Local Government Board. Mr. Reade so far committed himself to my views as to second the resolution, and in his speech strongly condemned that portion of the English system which put the stigma of pauperism (I quote his words) on those applying only for medical relief. And here let me inform you that that enormous extension of out-patient hospital relief, which has attracted latterly so much and such deserved attention, originated when, in 1834, Parliament, in its futile effort to crush out pauperism, affixed the penalty of loss of citizenship on every unhappy poor man who applied for medical relief, either for himself, his wife, or his children. I have stated that the two gentlemen to whom I have referred are now members of the Government. I find that the President of the Local Government Board has also taken an interest in our question. Fifteen years ago Mr. Sclater-Booth accompanied a deputation to the then President of the Poor-law Board, which went to him for the purpose of exposing the imperfect character of English medical relief; and yet, despite all our labours, although pauperism has largely increased, although the cost of the necessaries of life has also increased, the stipend of the English medical officer, so far as the country is concerned, has not increased. I doubt not that Mr. Sclater-Booth is perfectly aware of this; should he not be, I trust ere long we shall have an opportunity of placing this question officially before him. Now this brings me to a new phase of the subject. You are aware that one of the objects of the Association is to secure that the entire salary of the medical officer should be made from the Consolidated Fund; unless we obtain this concession, it is, in my judgment, hopeless to expect any alteration of the country parish doctor's pay or position. It would be necessary for three or four generations to pass away, and for a wide extension of the blessings of education to take place, ere a majority of the English farmers, or urban tradesmen, who form our guardian boards, would learn that any possible benefit could arise from placing our medical relief system on a better footing. They would vote doggedly against any alteration which had the look, in the first instance, of spending a little more money; and no amount of argument, based though it might be on official documents, would convince them that any good could result from treating the sick poor or the doctor fairly. The only thing for us to do is to stick resolutely to this object, and to urge our friends in the House to press it forward whenever the opportunity of doing so effectively should arise. Here let me again remind you that, when I addressed the Central Chamber, I made a point of raising this view of the question, and no part of my speech elicited such general marks of approval from the representative gentlemen who were present as when I urged its adoption.

Now, it may be asked, what is the amount that we should require? I do not think we ask for too much when I state that we shall not be content until we are paid on the same footing as the Irish medical officers. This would involve an outlay of, say, £581,511 annually, instead of £290,000 as at present. From this amount of £581,511 I should propose to deduct £180,000, or thereabouts, which on the Irish scale of expenditure would require to be expended in the payment for drugs and appliances, and rent of dispensary buildings. This I would leave to be levied as a local charge; consequently it would be necessary that £400,000 should be contributed from the Consolidated Fund, instead of £145,000, as now paid.

In urging this view on the Chamber of Agriculture, I gave the grounds on which I founded our claim to this concession; they were as follows.—1. The incidence of local taxation is unequal and limited. 2. The character of modern pauperism is migratory, and has nearly ceased to be parochial. 3. Sickness cannot be localised; for these epidemics which strike first and hardest the poorer classes, extend from them to those above them in the social scale, and were also liable to, and did, spread over large tracts of country. 4. Such epidemics, when occurring among the poor, are entitled to at least as much consideration as when occurring among cattle—and the ravages of cattle-plague have been met by a rate thrown over the whole county—especially as the health of the poor, and their preservation from such epidemic outbreaks, is a subject in which the whole community is vitally interested. 5. Illness among the poor requires the same skill and outlay on medicines, to treat it successfully, in one part of the country as in another. 6. The principle of part payment from the Consolidated Fund having been conceded no valid objection could be advanced why the whole should not be thus paid. 7. Local and often prejudiced opposition to necessary expenditure would be determined, if the whole community contributed equally, upon a basis settled by some central authority. But though those views were well received, I doubt not that many, even here, may hold them to be utopian. To these I make answer, that many an idea which at first has been held to be utopian, has nevertheless become subsequently to be an acknowledged fact.

Now, in urging this view, I confess that I should not have a leg to stand on, could I not demonstrate absolutely that this additional outlay would be recouped, and that speedily, by the greater facilities afforded the medical officers in grappling with the diseases of the poor. Let it not be forgotten that it is the maintenance of the poor man and his family, when overtaken by sickness, that constitutes by far the largest item in that sum of £8,000,000, which we now spend; but, gentlemen, I believe you will support me when I state that if so considerable an improvement in our position should be achieved, we on our part would be ready not only to do our duty more zealously to the sick poor, but would also be willing to give that early information as to the existence of preventable disease, and the causes which, in our judgment, have provoked it; the neglect of any provision for which is the primary blot on Mr. Stansfeld's abortive Public Health Act.

Another point, to which I would fain draw your attention, is the imperfect character and the partial working of the Superannuation Act. You will have read that in some few Unions medical officers have been superannuated; you will also have read that in many others, old and deserving men have been tempted to resign office anticipating superannuation, and have been cruelly disappointed. That has arisen from the nature of the opposition made by those who strove in both Houses to prevent the Bill passing. It was made a *sine quâ non* by some, especially by Lord Redesdale, that a clause should be inserted in the bill, if it was allowed to pass, that no portion of the grant should be paid from the Consolidated Fund, but that it should be solely a local charge. The motive, though crafty, was obvious; if half the superannuation, like the salary that preceded it, had been paid from Imperial taxation, one half the antagonism which our aged friends have experienced in securing superannuation, would have been nullified. It is therefore incumbent on us, whilst trying for a compulsory, instead of a permissive superannuation allowance, that we should also ask, that as our services are in every sense national in their results, so also the nation at large should be called upon to contribute to our pay and to our superannuation.

THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

We believe that there will this year be three vacancies in the Council of the Royal College of Surgeons, to be filled by election. The vacancies are caused by the resignation of Mr. South and the retirement in rotation of Mr. Hilton and Mr. Marshall. Mr. Marshall will offer himself for re-election, and, having been but a short time in office, will no doubt be re-elected. Mr. Hilton, for the reverse reason, does not, it is stated, purpose to claim any further renewal of College honours, of which he has enjoyed a handsome share. There will thus probably be two absolute vacancies to be filled by new men. Among the candidates spoken of, are Mr. Savory, Mr. Baker of Birmingham, and Mr. Cooper Forster. Next to these in seniority stands Mr. Henry Smith, who has not yet, we believe, announced his intention.

EXTENSION OF THE BRITISH MEDICAL ASSOCIATION.

We learn with great pleasure that the North Staffordshire Medical Society (after an existence of more than a quarter of a century) has passed a resolution to become a Branch of the British Medical Association, and, still further to extend its usefulness, has decided to merge into a County Branch, to sink its hitherto northern individuality, and to join with the medical profession of the south of the county in forming what will be, we must hope, an important addition to the already large family of an important and useful parent.

Staffordshire is socially, if not politically, marked into two great divisions, north and south, with the Potteries and Newcastle as the populous towns of the north, and Wolverhampton as the populous town of the south, where is situated the South Staffordshire Hospital. The north has also its hospital situated at Hartshill, the North Staffordshire Infirmary, while the county town has a hospital of its own, the Staffordshire General Hospital.

With three such hospitals in such important manufacturing districts, and the large number of medical men scattered throughout this populous county, the proposed Branch ought indeed to become a successful one. The further proceedings of the proposed organisation will be watched with interest.

ASSOCIATION INTELLIGENCE.

NORTHERN BRANCH.

The spring meeting of the Northern Branch will be held at Bishop Cosin's Library, Durham, on Thursday, April 30th, at 2.45 P.M.

The President, Dr. Heath, will deliver an address, entitled "Reminiscences of a Visit to Vienna and Zurich."

The following papers have been promised.

1. On a Rare Form of Dislocation of the Hip-Joint. By Dr. Heath.
2. Notes of a Case of Injury to the Knee-Joint. By W. L. Emmerson, Esq.
3. Report of a Case of Paracentesis Thoracis. By Dr. Philipson.

Gentlemen who are desirous of reading papers or exhibiting specimens are requested to communicate with the Secretary at their earliest convenience.

G. H. Philipson, M.D., *Hon. Sec.*

Newcastle-upon-Tyne, March 30th, 1874.

STAFFORDSHIRE BRANCH.

The North Staffordshire Medical Society having resolved to become a Branch of the British Medical Association, the medical practitioners of the county of Stafford are earnestly requested to attend a meeting at the London and North-Western Hotel, Stafford, on Thursday, April 30th, 1874, at 3 P.M., when a scheme for the management of the Branch will be submitted for their approval.

J. Weaver, *President*, J. M. Taylor, *Honorary Secretary*,
North Staffordshire Medical Society.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

There will be only one meeting this spring, which will be held at Gravesend, on Friday, May 29th (D.V.); A. Shewen, M.B.Lond., in the Chair.

Frederick James Brown, M.D., *Hon. Sec.*

Rochester, March 30th, 1874.

CORRESPONDENCE.

SEX IN EDUCATION.

Sir,—That the subject of "sex in education" should be reconsidered from the modern point of view, is reasonable and useful. Dr. Maudsley has undertaken to emphasise and recast certain warnings given by a recent American writer, Dr. Clark, who expresses a fear that the intermittent periods of weakness in young women may be overlooked by those who claim for them higher education and more active participation in lucrative pursuits. The claim for due attention to physiological rules of health and laws of life is always well timed. I am inclined to think, however, that it coincides rather than clashes with the tendency to a higher education. The pursuits to which poor women, by the natural laws of social selection, have, by reason of their defective and one-sided education, been condemned, have been those which make the most continuous claims upon their physical frame, and which afford the least chances of the necessary relaxations and intermissions. Physiologically, callings such as those of the sempstress, the overworked dressmaker, the ballet-girl, are among the most inexorable pursuits of modern industry. As to the character of the higher education which, it is intimated, will breed up a generation of invalids, I suppose girls to be as capable as boys of deriving mental strength and refreshment from the study of geometry, the dead languages, and the modern sciences; and I doubt whether there is any form of disease to which they predispose. The sufferings endured and inflicted by young ladies persistently bowed down to the study of French, music, and the globes, are not inconsiderable. It is very truly observed that, if women are to be trained mentally with some such degree of care as is bestowed on boys in our colleges and public schools, they will require physical recreation also—such as boys are now taught to consider of hardly secondary importance, if not sometimes of superior importance, to mental training. It is difficult to see why the corollary should be assumed, that this prevents the possibility, or interferes with the chances, of higher education for women. The importance of the physiological argument is so great, that it is desirable not to lessen its force by connecting it with errors of deduction which a very small experience will detect. The most highly educated ladies known to London society are among the most healthy; and Mrs. Somerville was a notable instance in point. The ladies who have shown themselves thus far apt for higher education practically refute the invalid theory. The facts must go for what they are worth. Twelve thousand midwives practise rudely obstetrics in this country; it would be difficult to imagine that their health would be affected by a little more of the "higher education", which would put them in the way of doing less harm and more good. I do not know how many hundred or thousand women act as nurses, some as day, some as night nurses: to them, too, a little higher education would do no harm.

Girls now work as many hours a day in their schools as boys, and get less physical exercise; but they work at wearisome inanities, and are allowed only third-rate teachers. Any sort of teacher is good enough for a "girls' school". The hours wasted on the music-stool by thousands, aye, millions of girls, who have neither love nor use for musical training, will surely rise in judgment against the present generation, when it comes to answer in future times for its doings. They have no physiological justification, any more than have the other follies of a fashionable female education. Let us by all means enforce upon the earnest women and men who control Girton College and similar higher schools and colleges for young women, the necessity of carefully holding in view the physical education of their scholars, as do the masters of Eton. But there is no good and much harm in allowing by implication the theory to pass muster, under a physiological guise, that frivolity is a way to health, or that the fading inanities of female education have a sound hygienic basis. It is, I can say from experience, quite possible to educate boys and girls side by side, and to see the latter far outstrip the former in their acquirements without sacrificing a grain of physical strength, a minute of physical health, or a shade of feminine grace and delicacy.

Sex in education will declare itself, and find its own expression. The warning is good: the deduction that education must be kept to a low standard, because of any peculiarity of sex, is a libel on Nature, and treason to its highest laws. I am, etc., C. S.

INSTRUCTION OF MIDWIVES.

SIR,—In his last letter, Dr. Steele does me the honour to quote or misquote me seven times. Two of these quotations are correct; five of them are the reverse. When a reader sees words in inverted commas, he naturally believes them to be the identical ones used by the author from whose writings they are supposed to be taken. I am sorry to have to warn your readers against coming to any such rash conclusion when perusing the compositions of my friend Dr. Steele. In one instance he has added to a sentence of mine no fewer than twenty-one words. I have had to point out in a previous letter his desultory mode of writing, and its want of logical sequence; I may now, without being abusive, fairly complain of his want of accuracy. There is, however, one important point upon which Dr. Steele and I are agreed; and that is, the desirability of improving the present race of midwives. He admits that he is "by no means opposed to an attempt to meliorate midwives", and declared at the meeting of the Lancashire and Cheshire Branch, that it was scarcely possible to object to the resolution "That in the opinion of this meeting, it is desirable that the education of midwives be improved". The question, therefore, left is, how this improvement is to be effected? The midwife is a responsible person, and should, I believe, like the chemist, be recognised by the State, and made to pass an examination before entering upon her calling. Some think her instruction should be left to voluntary efforts; and perhaps a very few agree with Dr. FitzPatrick, and would be willing to accept as sufficient the old ladies he so graphically describes, "Many of the women called midwives, acted in that capacity with a charitable object, who never received more than a shilling, or a cup of tea, or a glass of gin, and he never found that they did any harm. Some of them could neither read, write, nor calculate; and, for his own part, he should prefer one of that kind." Dr. FitzPatrick does not say for whom he would prefer one of this kind. Would he wish any one dear to him to be attended by such a woman? There seems, then, to be practically no difference of opinion as to the necessity of instructing midwives. How to do it, is the problem to be solved. It is to be hoped that the Branches will speedily take this into consideration. The report of the subcommittee has been submitted, not necessarily for adoption, but to be discussed, and, if the members see fit, amended. They are now in possession of the opinions of those who have thought most upon the matter. The Parliamentary Bills Committee is now anxious to have the advantage of their deliberations and valuable advice. I am, etc., J. H. AVELING.

1, Upper Wimpole Street, W., April 11th, 1874.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

HASTINGS AND ST. LEONARD'S WATER-SUPPLY.

SIR,—In your last week's number, you have an editorial note which will go far to injure the prosperity of Hastings and St. Leonard's, reflecting, as it does, on our water-supply. Your remarks have been called forth by a perusal of the *Chronicle*. This paper, and a few correspondents to it and other local papers, have ventilated the water question unnecessarily, and without being acquainted with the facts. The St. Leonard's water *was never contaminated with organic or sewage matter* in the sense suggested, but was simply (and only at certain high tides) brackish, from sea-percolation. On this account the supply has been discontinued; and the western part of St. Leonard's is now enjoying a capital spring water, which can be produced at the rate of 180 gallons per minute.

The Hastings supply, derived from several sources (one being a prolific spring), was always, and is now, *good water*, as certificates from Taylor, Stevenson, myself, and others can testify. It supplies Hastings and a great part of St. Leonard's. At times only (after heavy rains), it is turbid from the presence of oxide of iron and minute particles of sand or clay, matters inert and easily got rid of by subsidence or filtering. If it be at other times thick, the cause is certainly to be found in the uncleanliness of the house-tank, and, under such circumstances, the authorities cannot be blamed.

After this explanation, I trust you will at once contradict your last week's report, and if you will kindly publish this letter, it will be the means of informing the medical profession, as well as the public generally, of the fact that Hastings and St. Leonard's does really enjoy a *good water*, free from any organic or vegetable contamination likely to be detrimental to health; and, I may also add, the supply is not likely to run short, as is generally supposed, the complaint as to deficiency being absurdly exaggerated. I am, etc., CHARLES ASHENDEN,

Medical Officer of Health and Public Analyst to the Borough.

Hastings, April 14th, 1874.

⁂ We have received also a letter from the Mayor of Hastings, less detailed, but affirming in an unqualified manner that the published statements in the *Chronicle* on which our observations are based are without foundation, and that the water-supply of Hastings is now pure and abundant. We shall be quite willing to have the water submitted to our analyst, if it be desired, and to publish his report.

THE DRAINAGE QUESTION AT KINGSTON-ON-THAMES.

AN action has recently been tried in which the Rural Sanitary Authority of the Kingston Union were plaintiffs, and the Surrey Land Estates Company defendants. In form, the action was for penalties imposed by magistrates for breach of obligations imposed under the Sanitary Acts. Some years ago, the land company was established for the purpose of purchasing and utilising a tract of land in the neighbourhood of Kingston, which has been since built upon, and is called the Worcester Park Estate. In the course of building, the question of drainage arose, and the company drained their houses into an old watercourse. The sanitary authority objected to this, and took proceedings against the company under the Sanitary Acts to compel them to make proper drainage. The company contended that they had no powers beyond their own land, and that it was for the sanitary authority to create a proper outlet for the drainage. However, as long ago as June 1870, the magistrates, under the Sanitary Acts, made an order on the company to abate the nuisance by cutting off all connection between their sewers and the watercourse. The company did not obey the order, insisting that they could not do so. Last year, the magistrates imposed penalties on the company at the rate of 10s. a day for 160 days' disobedience, amounting to £80, and for recovery of that sum the action was brought. There was a similar action at the last assizes, when the judge (Mr. Justice Brett) ruled in favour of the plaintiffs; but there was a mis-trial, as none of the jurors who had a view were on the jury. The company did not deny the order or their disobedience to it, but set up as a defence, that to obey the order and cut off all connection between the sewers and the watercourse would be to create a nuisance, by forcing back the sewage into the houses; and that, in consequence of the low level of the district, there was no other outlet possible. The company called witnesses to prove this defence, and to show that it was impossible to obey the order. It did not appear to be disputed that, if the order were obeyed and nothing more was done, the sewage would not escape, and a nuisance would be created; and the question seemed to be whose duty it was to provide a proper outlet for the sewage of the district. A sewage-farm was suggested for the disposal of the sewage; and it was elicited that there was a good deal of vacant land in the district, and that each house built had a couple of acres attached to it. But parliamentary powers of purchase would be required; and the farm, if near the houses, would, it was alleged, create a nuisance. One witness stated that he had made a cesspool for his house. It was therefore possible to make cesspools, but it would be necessary to make them very deep. Upon this, the learned Judge ruled that there was an end of the defence, which was, that the order could not be obeyed without creating a nuisance. The jury agreed that there was no reason why there should not be cesspools, and that they did not believe the effect of obeying the order would be to create a nuisance. Thereupon the learned Judge directed a verdict for the plaintiffs, and refused leave to the defendants to move to set the verdict aside on a point of law, having, he said, no doubt as to the law, any more than Mr. Justice Brett at the last trial, in whose view of the law he entirely concurred. Mr. Justice Brett, it was stated, said that, if the nuisance could not otherwise be abated, the houses must be pulled down. Verdict for the plaintiffs for £160.

⁂ This case is one of very considerable importance, and raises a question which is at the very basis of sanitary action: Can a sanitary authority be compelled to provide proper outfalls for the sewage of its district? In the case before us, the rural sanitary authority had not provided such outfall as would enable the owners and occupiers of premises to drain their houses. But this is no defence to proceedings against the owners of premises for creating a nuisance by allowing sulliage to flow into a watercourse, even when the proceedings are taken by the very authority in default. There was clearly nothing to prevent cesspools from being constructed to receive the sulliage of each house or block of houses; and these might have been so constructed and kept as not to be a nuisance. But, granting this, the onus still remains on the rural sanitary authority to provide its district with proper sewers; and the aggrieved ratepayers could at any time forward a complaint to the Local Government Board that the rural sanitary authority had not provided its district with sufficient sewers. Upon the receipt of a complaint, a local inquiry would be held before an inspector; and, if the Local Government Board were satisfied that there was ground for the allegations in the complaint, and that the rural sanitary authority was in default, it could order necessary sewers to be constructed, and, in default of such order being complied with, could itself execute the necessary works. This case is of the greatest importance, as showing that, while the law provides on paper a remedy for sanitary ills, it is possible that the remedy may be so difficult to obtain, that practically it is obsolete; otherwise, why do these owners and occupiers suffer themselves for years to be subject to the expenses and annoyances of protracted litigation, while the evils complained of can only, it appears, be remedied by expedients totally alien to sanitary improvement?

REPORTS OF POOR-LAW OFFICERS OF HEALTH.

NORTH HERTS.—Dr. W. Ogle's first annual report to the combined sanitary authorities of North Herts, contains many points of considerable interest, and points out in a very clear manner many of the difficulties which stand in the way of a proper administration of the existing sanitary laws. After explaining that the necessary data for the preparation of such a report as that which is required by the Local Government Board are not procurable, Dr. Ogle deals with certain details of his sanitary work. Having made every effort to elicit information as to the amount of sickness in his district, the conclusion at which he has arrived is, that there are no available means by which anything reliable can be procured on this subject. It was at first hoped that the returns of the Poor-law Medical Officers would supply the deficiency as far as pauper sickness was concerned; but these are, in the various portions of the district, prepared on such entirely different principles that, however useful they may be as guides in the distribution of relief, they were found to be of no use in drawing a comparison between the healthiness of any two or more areas, and to be quite unfit to serve as the basis of any precise numerical statement. In one Poor-law district, all cases of sickness were found to be returned; in another, the serious cases alone were noted; and of two districts, in which the death-rate was practically identical, one appeared to have ten times as many sick paupers as the former, and twenty times as many in proportion to its population. Statistics founded on such data must, necessarily, be fallacious, and hence mischievous. In point of mortality this district is favourably circumstanced, the general death-rate being sixteen per 1,000 inhabitants, against an average of eighteen for the three preceding years. This diminished mortality, which has effected a saving of 158 lives in the year, is all the more satisfactory, because it is evidently in great part due to a falling off in the fatal cases of zymotic diseases; indeed, there were 152 fewer deaths from these diseases last year than the average, the zymotic death-rate being 1.7 out of every 1,000 living, against a mean rate of 3.6 during the previous three years. The infantile mortality, which Dr. Ogle rightly considers a most useful test of the sanitary condition of a place, is also low, the rate of deaths under one year of age being 11.0 out of every hundred registered births. In dealing with the measures which have been taken in the district to prevent the occurrence of disease, Dr. Ogle takes the opportunity of pointing out some of the principal hindrances which a Medical Officer of Health meets with in the performance of his duties. He cites instances of sanitary areas in which as yet little else has been done than the occasional cleaning out of a few privies, and the removal here and there of a dung-heap and a pigstye; and he informs the authorities that, with the elaborate machinery which has now been created in each sanitary district, something beyond this is not only intended, but could without difficulty be procured. Where most work has been done, it has been founded on a joint inspection of special premises by the Medical Officer of Health and the Inspector of Nuisances, the latter having, in the first instance, made himself thoroughly acquainted with his district by a detailed house-to-house visitation. Dr. Ogle finds serious fault with the manner in which sanitary matters are dealt with by most rural authorities. Except in two districts—and these are the two which have taken the lead in sanitary administration—the consideration of sanitary work is limited to the short space of time which can be spared, often on a busy market day, at the fag end of a meeting of which Poor-law business is the principal object; and hence questions, which require serious and careful attention, are practically set aside and altogether ignored. Cases are also cited in the report, showing the serious results which ensue from the tardy and irregular manner in which information as to the prevalence of infectious diseases is procured. Dr. Ogle has never succeeded in hearing of the existence of cases of scarlet fever until the disease had already had time to spread; and even when the disinfected houses were found out and visited, the absence of any means of isolation or of proper means of disinfection greatly diminished the value of any advice given, or of preventive measures adopted. This report contains a great deal of instructive matter; it shows that many of the practical details of sanitary work and organisation have been carefully considered, and its perusal will repay those who can in any way influence the course of future sanitary legislation and administration.

SANITARY COMMITTEES.

"A Clerk of the Guardians" writes in the *Poor-law Chronicle* on this subject: I apprehend that delegates chosen by each authority were appointed for the sole expressed purpose of choosing a medical officer, and that their functions—that officer having been appointed—are now at an end. I think it probable that some of the delegates who were nominated, conceived that the election of a Medical Officer of Health for the several districts, involved the combination of such districts into a united district, and that they had become a joint board for the purposes of the Sanitary Acts: hence the conclusion to which they have come—that they still have work to do. This position is, however, I think, untenable.

POOR-LAW MEDICAL SERVICE AND ITS REMUNERATION.

SIR,—The following method would seem, from recent events, the most likely to be adopted to reduce the salaries of the Poor-law Medical Officers in large towns. First, by reducing the number of medical orders granted, excluding those cases which give no trouble and responsibility, and retaining only those that do, making the work appear less. Secondly, when that is done, either reducing the salary, or, by enlarging the district, make two medical officers do the work of three. The latter way seems the most probable. I am, etc.,

April 7th, 1874.

A COUNTRY DOCTOR.

MILITARY AND NAVAL MEDICAL SERVICES.

THE NAVY DIRECTOR-GENERAL.

SIR ALEXANDER ARMSTRONG, K.C.B., the Director-General of the Medical Department of the Navy, has been re-appointed to the office he now holds for a further period of five years. Mr. Ward Hunt has very graciously acted upon the recommendation of the late Mr. Corry, of Lord Hampton, of Mr. Childers, and lastly of Mr. Goschen, who, it is well known, left on record before his retirement, a strong expression of opinion in favour of the claims and services of Sir Alexander.

PROSPECTS OF ARMY SURGEONS.

As an incontestable proof and illustration of the disheartening prospects of the army surgeons, we *(Army and Navy Gazette)* offer to those interested the following figures, which we have prepared with considerable labour, desiring that their accuracy should be unimpeachable. The statistics show the number of ordinary promotions made in the general service during the past fifteen years, and the average service in the junior rank of those promoted:—In 1859, 10 promotions were made, 7 years being the average service; 1860, 10 ditto, 8 ditto; 1861, 0 ditto, 0 ditto; 1862, 20 ditto, 9 ditto; 1863, 15 ditto, 9½ ditto; 1864, 25 ditto, 10 ditto; 1865, 30 ditto, 11¼ ditto; 1866, 25 ditto, 12 ditto; 1867, 65 ditto, 12½ ditto; 1868, 25 ditto, 13 ditto; 1869, 10 ditto, 14¼ ditto; 1870, 15 ditto, 14¾ ditto; 1871, 25 ditto, 14½ ditto; 1872, 15 ditto, 14¾ ditto; 1873, 100 ditto, 15 ditto. It is shown conclusively that during the past fifteen years there has been a steady drift to leeward, and no helping hand has been stretched out to save the unfortunate doctors from the rock of disappointment. In India, in 1864, the ranks above assistant-surgeon were augmented at one sweep by 307 officers, in an establishment of 861, by the promotion of all men of twelve years' service. The augmentation of a third of that number, by the promotion of 102 surgeons in an establishment of 959, would, we believe, satisfy all demands of the members of the Imperial Department.

THE MEDICAL OFFICERS IN THE ASHANTEE WAR.

THE omission in the recent *Gazette* of the names of many medical officers who have done good service during the Ashantee War has been acutely felt by those interested, and the *Army and Navy Gazette* expresses the hope that the authorities will not forget the very great claims which they have upon their consideration. Officers who volunteered and did arduous duty in the earlier portion of the war, and when the preliminary preparations for the reception of the white troops had to be undertaken and carried out, should not be forgotten, as neither should those officers who held the arduous regimental appointments at its close. At present, we shall not allude further to this matter, as we are sure the present Chief of the Army Medical Department, who is in the best position to judge of his officers' claims, will not forget to urge those of the ones he thinks most deserving of support.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 9th, 1874.

Bate, George, Camelford, Cornwall
Crawshaw, Benjamin, Accrington, Lancashire
Dawson, Richard Stratheden, Octocamund, Madras

The following gentleman also on the same day passed his primary professional examination.

Weddell, William Henry, St. Mary's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK INFIRMARY—House Surgeon: £120 per annum, furnished apartments, etc., and the privilege of taking an apprentice. Applications, 2nd May, to W. T. Hindmarsh, Honorary Secretary.

BOOTLE BOROUGH HOSPITAL—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 20th instant, to T. P. Dawson, Hon. Secretary.

BRISTOL GENERAL HOSPITAL—Physician. Applications, 22nd instant, to Henry Fox. R.N., Secretary.

CAHERCIVEEN UNION, co. Kerry—Medical Officer and Public Vaccinator for the Valencia and Portmagee Dispensary District: £80 per annum, and fees. Applications, 25th instant, to John O'Driscoll, Honorary Secretary, Knightstown, Valentia.

CHELTENHAM GENERAL HOSPITAL and DISPENSARY—Honorary Medical Officer to the Branch Dispensary. Applications, 1st May, to David Hartley, Secretary.

CHORLTON-ON-MEDLOCK DISPENSARY—House-Surgeon: £120 per annum, lodging and attendance, coals and gas.

CROOM UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Adare Dispensary District: £120 per annum, and fees. Applications, 20th inst., to Matthew O'Flaherty, Hon. Sec., Donoman Castle, Croom.

CUMBERLAND INFIRMARY, Carlisle—House-Surgeon: £100 per annum, furnished apartments, board, etc. Applications, 22nd inst., to John Laver, Sec.

DEWSBURY UNION, Yorkshire—Medical Officer for the Gomersal District.

*DONEGAL UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Pettigo Dispensary District: £60 per annum, and fees. Applications, 23rd instant.

GENERAL HOSPITAL, Birmingham—Resident Medical Officer: £100 per annum, board, and residence. Applications, 27th instant, to W. T. Grant, House Governor and Secretary.

GENERAL INFIRMARY, Leeds—House-Physician; House-Surgeon: each £100 per annum, board, residence, etc. Applications, 30th instant, to Dr. Heaton.

*IRVINESTOWN UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Clonelly Dispensary District: £60 per annum, and fees. Applications, 23rd instant.

KILCHRENAN and DALAVICH, Argyllshire—Parochial Medical Officer. Applications, 1st May, to Rev. N. Mackenzie, Kilchrenan.

LEICESTERSHIRE and RUTLANDSHIRE LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, board, and lodging. Applications, 9th May, to W. Napier Reeve, Clerk to Visitors, Leicester.

LINCOLN COUNTY HOSPITAL—House-Surgeon and Apothecary: £100 per annum, board, and lodging. Applications, 4th May, to J. W. Danby, Secretary.

LINCOLN GENERAL DISPENSARY—House-Surgeon and Apothecary: £150 per annum, furnished apartments, fire, and gas.

LISKEARD—Certifying Factory Surgeon.

LISKEARD UNION—Medical Officer to the Workhouse: £32 per annum.

LIVERPOOL DISPENSARIES—Three Honorary Medical Officers to the North Dispensary. Applications, 29th instant, to W. Lister, Secretary.

LUNESDALE UNION, Lancashire—Medical Officer for Workhouse: £11 per annum. For District No. 1: £49 per annum, if resident in the village of Hornby; any other part of district, £30 per annum, exclusive of usual extras. Applications, 21st instant, to Robert Stephenson, Clerk, Hornby.

MACHYNLLETH UNION—Medical Officer for the Towyn District: £36 per annum.

NENAGH UNION, co. Tipperary—Medical Officer for the Workhouse: £100 per annum. Applications, 30th instant, to J. H. Sheehan, Clerk.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Silvermines Dispensary District: £100 per annum, and fees. Applications, 2nd May, to W. H. Carroll, Honorary Secretary.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTICS, Queen Square, Bloomsbury—Medical Registrar: £50 per annum.

NOTTINGHAM COUNTY and BOROUGH LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, board, lodging, etc. Applications, 29th instant, to Kemp Sanby, Clerk to Committee of Visitors.

OXFORDSHIRE—Public Analyst.

QUEEN'S HOSPITAL, Birmingham—Pathologist. Applications, 16th May, to W. Young, Secretary.

ROATH URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum.

ROYAL LONDON OPHTHALMIC HOSPITAL—Clinical Assistants and Ophthalmic Dressers.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

ST. GEORGE and St. JAMES DISPENSARY, King Street, Regent Street—Accoucheur. Applications, 23rd instant, to J. H. Yorke, Secretary.

ST. SAVIOUR, Southwark—Medical Officer for No. 9 District: £130 per annum. Applications, 23rd instant, to H. C. Jones, Clerk, John Street West, Blackfriars Road.

ST. THOMAS'S HOSPITAL—Resident Physician's Assistant: £100 per annum, furnished rooms, and commons.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

STAFFORDSHIRE LUNATIC ASYLUM—Medical Superintendent: £450 per annum, board, and lodging. Applications, 25th instant, to Chairman of Committee of Visitors.

TOWYN URBAN SANITARY DISTRICT—Medical Officer of Health.

WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 4th May, to the Secretary.

UNIVERSITY OF OTAGO, New Zealand—Professor of Anatomy and Physiology: £600 per annum and class fees, and allowance for passage money and outfit. Applications, 25th instant, to John Auld, Esq., W. S., Edinburgh.

WINDHILL URBAN SANITARY DISTRICT—Medical Officer of Health: £35 for one year.

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, furnished apartments, etc. Applications, 27th instant, to the Chairman of the Medical Committee.

* Held together.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Doran, Alban H. G., M.R.C.S. (Anatomical Assistant to the Museum of the Royal College of Surgeons), appointed Surgeon to the Metropolitan Dispensary, Fore Street, Cripplegate, *vice* A. E. Cumberbatch, Esq., resigned.

*Moore, John, M.D., appointed Surgeon to the County Antrim Prison, Belfast, *vice* H. Purdon, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

Norton—Hill.—On April 8th, at St. Paul's, Bristol, by the Rev. W. Saunders, assisted by the Rev. Dr. Doudney, John A. Norton, M.B., to Charlotte Elizabeth, youngest daughter of the late Mr. James Hill, of Bristol.

Stewart—Connery.—On March 24th, at Christ Church, Belfast, by the Rev. Robert Vance, M.A., *James Stewart, B.A., L.R.C.P.Ed., Assistant Medical Officer, Kent County Asylum, Maidstone, son of Robert Stewart, M.D., County Asylum, Belfast, to Maud, daughter of the late Richard Connery, Esq., of Belfast.

DEATHS.

Adams, Robert, M.D., Staff-Surgeon Royal Army, at Woolwich, on April 10th.
Keal, William Tomblin, M.D., at Oakham, aged 82, on April 5th.
Ransom, Robert, M.D., at Cambridge, on March 30th.

Presentation to Dr. Waller Lewis.—A handsome timepiece, tazzas, and candelabra, were presented by the medical staff of the postal service to Dr. W. Lewis, chief medical officer of the General Post Office, on the occasion of his recent marriage. The subscriptions, confined to their body, and limited in amount, were accompanied by a number of gratifying and cordial letters from all parts of the kingdom.

The Late Dr. Peach.—At the petty session at Derby, held last week, Colonel Mosley, the chairman, on taking his seat, said: "The Bench cannot proceed to the business of the day without recording, with deep regret, the loss the county has sustained in the death of Dr. Peach, who for many years presided at this Bench, and who was an ornament whenever he so presided. He had ever an anxious desire to do justice, and temper it with mercy. He had great perspicuity of intellect, and he was ever anxious to do good to those who came within his influence. He lived highly respected, and dies regretted; but his memory will long live in the recollection of those who had the pleasure of his acquaintance."

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1 30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M —Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King s College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M —Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. The adjourned discussion on Mr. Keene's communication concerning "Death from Chloroform" will be reopened by Dr. Richardson, F.R.S.

TUESDAY.—Pathological Society of London, 8 P.M. Adjourned debate on Cancer.

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Anstie (for Mrs. Garrett Anderson), "A Case of Malignant Disease of the Colon"; Mr. Henry Lee, "A Case of Traumatic Stricture of Trachea"; Dr. Morell Mackenzie, "Cases illustrating Treatment of Cystic Bronchocele"; Dr. J. Althaus, "Faradisation in a Case of Lead-poisoning".—Quekett Microscopical Club (University College), 8 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

CAN Mr. Walters suggest any means by which what he objects to can be prevented?

MR. WALFORD (Reading).—Shall have early insertion.

ROYAL SCHOOL FOR DAUGHTERS OF OFFICERS OF THE ARMY.

AN earnest appeal is made on behalf of Grace Louise Ellen Atkinson, aged 11, a candidate, for the fourth time, for admission into this institution. Her father, Staff Assistant-Surgeon Atkinson, residing at Freemantle, Southampton, is now a helpless sufferer from chronic rheumatism and paralysis of the lower limbs. He volunteered for the Crimea; accompanied the Highland Brigade, took charge of a hospital ship at Scutari, served in the Kinburn expedition, and to the close of the Russian campaign. When serving in the Mauritius, he was ordered to England on account of ill-health. Mr. Atkinson has nothing but his half-pay (eight shillings a day) to support himself, wife, and family, consisting of five children, all requiring education, and three of them younger than the present candidate. He had insured his life for £300; but the insurance office failed, whereby he lost all the premiums he had paid, and the prospect of leaving that small sum as a provision for his family. The case is strongly recommended by the Committee, and (*inter alios*) by the Rev. J. D'Arcy W. Preston, Rector, Freemantle, Southampton (by whom proxies will be thankfully received), Major-General Sir H. C. B. Daubeney, K.C.B., and by Professors Longmore, Maclean, Parkes, and Aitken, of the Army Medical School at Netley.

APPEAL.

DR. ORBY CAREY writes:—I earnestly plead for help for a medical man under my care, who suffers from a painful and tedious illness. His condition is most pitiable, having been obliged, after years of toil and suffering, to give up his home and practise abroad, at great sacrifice, and return to England for treatment. His funds are exhausted. He has no relative able to assist him; and has a wife and three young children. The benevolent are asked to aid, that he may continue treatment.

Subscriptions received by Calvert Toulmin, Esq., 69, Inverness Terrace, Hyde Park, W.; H. Fry, Esq., East Ham, E.; and at National Bank, Bayswater.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

DR. D. BEODIE (Liberton).—We shall endeavour to continue the subject in a further article.

THE CASE OF MR. JACKMAN.

SIR,—As it seems I have not given the full details of my case, as it occurred from the onset, I will endeavour to do so to the best of my ability. I was so sadly stricken in the commencement, that I hardly knew how to begin and how to end, as I wished to represent it to the public in the strict principle of truth, not only for the benefit of myself, but for the good of others.

I was appointed medical officer of the Barnstaple Union by stating, in the first instance, that I would reside (according to the Poor-law Act) in the centre of the district. This overruled the two or three medical gentlemen who put in at the same time; one specially held qualifications wholesale, whereas I was a *boná fide* licentiate of the Apothecaries' Company of London, which carried everything so far back as 1857; and besides, I had previously held an appointment as medical officer for eight years in the Clutton Union, Somerset, at a salary of only £36 *per annum.* I resigned this, and came here at a salary of £60. All this was carried on in a hard-working way, night and day, more like a slave than a doctor; and if I asked for an increase of salary, I was laughed at. So things went on for years. However, the clerk, being a young man, and not long appointed to the office, made a serious mistake, for which I intend to prove my standing. It seems, according to his letter, that I was destined to be out of office at Michaelmas, although I was appointed at Christmas, 1857, at £60 *per annum,* under special contract of notice, giving two months or taking two months. Now, how does the clerk mean to rule this as being yearly? I think, under the old regulations, my appointment was as much destined for a permanency as that of any other medical gentleman under the union.

I have received several anonymous letters lately, and others, begging me to represent my case fully, in order that medical members may report it to the House of Commons as a case of extraordinary comment, and one worthy of being represented in its full sense to the House, where it must stand or fall according to its merits.

I sincerely thank those gentlemen who sympathise with my sad case, and thank them for their contributions, and trust I shall find others who will ultimately help me in my present distress and unsurpassed difficulty. I am, etc.,

Swymbridge, Barnstaple, April 13th, 1874. JOHN HAWKES JACKMAN.

DR. SPENCER'S STETHOSCOPE.

SIR,—Will you kindly allow me space in the next number of the JOURNAL to inform several correspondents that my stethoscope can be obtained of Messrs. Ferris and Co., surgical instrument makers, Union Street, Bristol, and that the price is a guinea? Messrs. Ferris and Co. have worked out my designs in a very skilful manner; and though the manufacture and sale of the stethoscope is to be placed under no protection whatever, those who wish to have an exact copy of my completed designs will, doubtless, prefer to go to the original makers. Personally, I have no interest in the matter, beyond a desire to advance the cause of scientific medicine. I am, etc., WM. H. SPENCER.

Clifton, April 14th, 1874.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, April 10th; The Ayr Advertiser, April 9th; The West County Lantern, April 4th; The Scotsman, April 9th; The Brighton Examiner, April 7th; The Leicester Advertiser, April 11th; The Blackburn Standard, April 15th; The Hull Evening News, April 10th; The Sunderland Times, April 10th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Sir William Fergusson, Bart., London; Dr. Murchison, London; Dr. George Johnson, London; Dr. Ramskill, London; Mr. J. E. Ingpen, London; Our Paris Correspondent; Dr. Rumsey, Cheltenham; Dr. D. Campbell Black, Glasgow; A Correspondent; Mr. A. Parker, Birmingham; Mr. W. Bernard, Londonderry; Mr. Eastes, London; Dr. Gore, Ballinglass; Dr. Edis, London; The Secretary of the Clinical Society; Dr. J. Lockhart Clarke, London; Dr. Hugh Miller, Glasgow; Dr. Farquharson, London; Mr. Bartleet, Birmingham; Mr. Fairlie Clarke, London; Mr. J. H. Jackman, Swymbridge; The Secretary of the Quekett Microscopical Club; Mr. E. L. Jacob, London; Mr. W. H. Michael, London; An Associate; Dr. Luce, Cambridge; Dr. Jelly, Madrid; The Secretary of the Pathological Society; Mr. R. T. Manson, Howden; Mr. Fox, Manchester; Our Dublin Correspondent; Dr. Aveling, London; Mr. Nelson Hardy, London; The Secretary of the Obstetrical Society of Reading; Mr. S. W. Moore, London: A Member; Dr. Kern, Esseg: A. B.; Dr. Crane, Leicester: Colonel Deedes, War Office; Mr. Alban Doran, London; Mr. C. Orton, Newcastle-under-Lyme; Our Edinburgh Correspondent; Mr. James Stewart, Maidstone; Mr. Webster, Merthyr Tydfil; Dr. Bell Taylor, Nottingham; Dr. Whitmore, London; The Secretary of the Medical Society of London; M.D.: Dr. Walters, Reigate; Mr. Howard Hayward, London; Dr. Hill, Birmingham; Mr. Gordon, Linwood; Sir George Burrows, Bart., London; Dr. Bradbury, Cambridge; Dr. J. Knox, Bakewell; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Joseph Rogers, London; The Secretary of the Obstetrical Society; Dr. Moriarty, Woolwich; Our Dublin Corespondent; Dr. Mercer, Beverley; Surgeon-Major Porter, London; Dr. Benham, Wakefield; Dr. D. Brodie, Liberton; Mr. Peacock, Accrington; Dr. Wilks, London; The Mayor of Hastings; Mr. Ashenden, Hastings; Mr. S. Clogg, Love; M. Masson, Paris; Dr. Mackey, Birmingham; Mr. H. E. Trestrail, Aldershot; Dr. T. L. Brunton, London; The Clerk of the Guardians of Marylebone; Mr. Steet, London; Dr. Sheen, Cardiff; Mr. W. Brown, Callington; Dr. J. W. Moore, Dublin; Mr. Lawson Tait, Birmingham; Dr. Morehead, Edinburgh; Dr. Spencer, Bristol; Dr. W. A. Concanon, Lodway, near Briscol; etc.

THE CROONIAN LECTURES
ON
FUNCTIONAL DERANGEMENTS OF THE LIVER.

Delivered at the Royal College of Physicians.

By CHARLES MURCHISON, M.D., LL.D., F.R.S.,
Physician and Lecturer on Medicine, St. Thomas's Hospital.

LECTURE III.

VI. *Derangements of the Organs of Circulation.* 1. *Palpitations and Flutterings of the Heart;* 2. *Exaggerated Pulsation of the Large Arteries;* 3. *Irregularities and Intermissions of the Pulse;* 4. *Feeble Circulation;* 5. *Anæmia;* 6. *Angina Pectoris.*—VII. *Derangements of Organs of Respiration.* 1. *Chronic Catarrh of Fauces;* 2. *Bronchitis;* 3. *Spasmodic Asthma.*—VIII. *Derangements of the Urinary Organs.* 1. *Deposits of Lithic Acid and Lithates in Urine;* 2. *Renal Calculi;* 3. *Diseases of Kidneys;* 4. *Cystitis.*—IX. *Abnormal Conditions of Skin.* 1. *Eczema, Lepra, Psoriasis, and Lichen;* 2. *Urticaria;* 3. *Boils and Carbuncles;* 4. *Pigment-Spots;* 5. *Xanthelasma;* 6. *Pruritus.*—C. CAUSES OF FUNCTIONAL DERANGEMENTS OF THE LIVER.—I. SECONDARY. 1. *Structural Diseases of the Liver;* 2. *Disorders of Stomach and Bowels;* 3. *Diseases of the Heart and Lungs;* 4. *Pyrexia.*—II. PRIMARY. 1. *Errors in Diet;* 2. *Deficient Supply of Oxygen;* 3. *High Temperature;* 4. *Nervous Influences;* 5. *Constitutional Peculiarities;* 6. *Poisons.*—D. TREATMENT OF FUNCTIONAL DERANGEMENTS OF THE LIVER. 1. *Diet;* 2. *Free Supply of Oxygen;* 3. *Aperients—Cholagogues;* 4. *Alkalies;* 5. *Chlorine, Iodine, Bromine, and their Salts;* 6. *Mineral Acids;* 7. *Tonics;* 8. *Opium. Concluding Remarks.*

MR. PRESIDENT, FELLOWS OF THE COLLEGE, AND GENTLEMEN,—In my last lecture I considered some of the more important diseases and symptoms resulting from abnormal disintegration of albuminous matter in the liver. I have still to refer to certain derangements of the organs of circulation and respiration, and abnormal states of the skin traceable to the same cause. I shall then mention some of the chief causes of functional derangements of the liver, and conclude the lecture by a brief sketch of the principal rules for treatment of these derangements.

VI.—*Derangements of the Organs of Circulation.*

1. *Palpitations and Flutterings of the Heart.*—Indigestion has long been regarded as one of the causes of palpitation independent of organic disease of the heart. Many patients with this functional derangement of the heart describe their sensations as that of a transient fluttering rather than a continuous palpitation; and when this feeling of fluttering comes to be investigated, it usually turns out to be produced by a strong thump of the apex of the heart following one or more weaker beats or a decided stop. In some of these cases of palpitation and fluttering, a prominent symptom of the indigestion is flatulence; and then the common explanation of the cardiac symptoms is, that they are due to the pressure upon the heart of the distended stomach and bowels; and this explanation receives support from the fact that, on the removal of the flatulence, the cardiac symptoms are often relieved or cease. But in other of these cases the flatulence may be entirely removed, while the cardiac symptoms remain, while in others there is not the slightest evidence of flatulence, and still the cardiac symptoms are removed by remedies, such as alkalies and aperients, calculated to improve the condition of the liver. It seems probable, therefore, that in some, if not in many, cases, when flatulence and palpitations coexist, they do not stand in the relation of cause and effect, but are both the result of a common cause. Palpitations, and still more, flutterings of the heart, are particularly common in gouty people, whether they suffer from dyspeptic symptoms or not. Every one present must have met with cases of the sort. Scudamore relates cases in which patients suffered from severe palpitations for six months without any relief from medicine; but, on the occurrence of a fit of gout, the palpitations suddenly and entirely ceased.[*] Dr. Garrod, in his work *On Gout*, remarks: "One of the most common symptoms produced by a gouty state of the system is palpitation of the heart, often accompanied by irregularity of its rhythm, and occasionally with pulsation of some of the larger arteries. In the majority of these cases, the condition is secondary to dyspepsia, but at times it may be directly excited by the impure condition of the blood; and I have notes of some cases in which no organic mischief could be discovered in the heart, nor any signs of indigestion, and the symptoms ceased on the occurrence of gout in the joints."[*] These cardiac symptoms are also very common in persons who are the subjects of lithæmia, but who never have gout. They are often the first symptoms to draw the patient's notice to the fact that his health is not what it ought to be; they cause great depression of spirits; and very often they are aggravated by injudicious treatment, and especially by the use of iron, which may seem to be indicated by the patient's anæmic aspect, but which is rarely tolerated until the liver has been brought into a healthy state by alkalies, aperients, and attention to diet. Although in the cases now referred to, the cardiac symptoms result from pneumogastric irritation by a poison in the blood, the fact already referred to must not be lost sight of, that this same morbid state of blood may ultimately lead to degeneration of the muscular wall of the heart, or disease of the aortic valves.

2. *Exaggerated Pulsation of the Large Arteries.*—Dr. Matthew Baillie, in a communication made to this College on December 2nd, 1812, was the first to call attention to cases of increased pulsation of the aorta in the epigastric region, simulating aneurism, but in some instances lasting twenty-five years or longer, and the result merely of "imperfect digestion with an irritable constitution".[†] This exaggerated pulsation, not only of the aorta, but of other arteries, independent of either contracted kidney or aortic regurgitation, is now well known; and one cause of it appears to be a morbid state of blood resulting from derangement of the liver, and often associated with gout. Scudamore relates cases of palpitations in the head occurring in persons afflicted with bilious derangement and gout; and likewise the case of a gentleman who had gout and bilious derangement, and who suffered alternately from palpitation of the heart and pulsation of the aorta in the epigastric region.[‡] Garrod also speaks of an irritable state of the aorta and pulsation of the larger arteries as occasionally resulting from gout.[§] The undue pulsation in these cases is often subdued by treatment directed against the liver.

3. *Irregularities and Intermissions of the Pulse.*—An intermitting pulse, which may, or may not, be attended by the sensation of fluttering of the heart already referred to, may result from a variety of causes, of which the principal are these.

a. Valvular and other diseases of the heart. In organic diseases of the heart, however, irregularity of the rhythm is more common than decided intermission.

b. A weakened or unduly irritable state of the nervous system, such as that which often occurs in old age, or sometimes appears to be constitutional, or those which are induced by fevers, delirium tremens, hysteria, protracted want of sleep, anxiety, etc.

c. Morbid states of the blood, associated with gout or lithæmia, or with other evidence of hepatic derangement. It has been the fashion to attribute the intermission in these last cases to pneumogastric irritation by gastric dyspepsia or flatulence; but, just as we found in vertigo, there is very often neither flatulence, nor other evidence of gastric derangement; and my experience has led me to the conclusion that in most of these cases the pneumogastric irritation has a toxic origin, or is due to the presence in the blood of some morbid material resulting from derangement of the liver. What this material is, we do not with certainty know. It is not uncommon for the pulse to become very slow, or even to be irregular or to intermit, in jaundice. These symptoms do not appear to be due to the presence of bile-pigment in the blood, for in many cases of jaundice they are absent; but some experiments made a few years since by Röhrig showed that the bile-acids paralyse the heart and retard its action, while bile-pigment has no such effect.[||] It is possible, then, that slowness and intermission of the pulse may be caused by the presence in the blood of unchanged bile-acids, even in cases where there is no jaundice; but more probably the cause of the intermission is some other product of albuminous disintegration, inasmuch as it is so commonly met with in connection with lithæmia or gout, and as it is often entirely removed by blue pill, saline aperients, alkalies, and attention to diet. A notable fact in these cases is that the tendency of the pulse to intermit is usually greatest when the patient is at rest, and is diminished or ceases on his taking exercise. As in the case of vertigo or sleeplessness, the intermission may be excited by particular articles of diet. It may last for many years, during which the patient may enjoy very fair health and be capable of considerable exertion. I lately saw a gentleman, aged 80, who had had an intermitting pulse for upwards of fifty years. He had suffered from gout and dyspepsia, but in his eightieth year he could walk long distances and up moderate ascents without difficulty. It is also worth noting that intermission of the pulse may last for years, and then entirely disappear. Dr. C. Lasègue of Paris, who has published an interesting memoir[*] upon intermitting pulse, thinks that it is chiefly met with under two conditions, viz.:—1, as an accompaniment of some chronic general morbid state, which is the prelude of some more acute mischief, on the development of which the intermissions may cease; and 2, as the accompaniment of a general morbid state consequent on the first establishment of some local disease, the general cachexia and the intermitting pulse after a time disappearing, although the primary local disease remains. The following case, communicated to me by Mr. Paul Jackson, is a remarkable illustration of the complete disappearance of the intermission after a duration of several years, and also of its toxic origin.

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[*] *Op. cit.*, pp. 16, 98, 374.

[*] *Nature and Treatment of Gout*, 1859, p. 510.

[†] *Medical Transactions*, published by the College of Physicians, 1813, vol. iv, p. 274.

[‡] *Op. cit.*, p. 98.

[§] *Op. cit.*, pp. 510, 511.

[||] *Archiv für Heilkunde*, August 1863, p. 385.

About the year 1838, Mr. J. T., then forty-two years of age, of nervous temperament, a generous liver, and subject to hepatic derangement, began to suffer from intermission of the pulse, and a fluttering sensation at the heart. He had no dyspnœa or other symptom of cardiac disease, and there was no abnormal cardiac murmur. He saw a great many physicians, but got no relief; but, after upwards of three years, he had a severe attack of urticaria, whereupon the intermission and the fluttering entirely and for ever ceased. He lived for twenty years afterwards, and, with the exception of occasional attacks of gout and of sudden vertigo, he enjoyed good health. He died at last, however, suddenly, of rupture of the heart, at the age of sixty-five.

It may be well to add that, even when intermitting pulse coexists with valvular disease of the heart, it appears to be sometimes due to hepatic derangement rather than to the cardiac lesion. Take, for example, aortic incompetence. The rhythm of the pulse in this lesion is usually regular, but, in rare instances, it is irregular and intermitting. From the supervention of this symptom the patient's condition is often believed to have become more perilous, and yet there may be no aggravation of the other cardiac symptoms. The pulse may become regular, instead of more intermitting, after exercise, and the intermission may be entirely removed by the same remedies as are effectual when there is no cardiac disease. That the intermission of the pulse should be independent of the cardiac lesion is not surprising, when we remember that atheroma of the arteries, which is the main cause of aortic incompetence occurring in middle or advanced life,[†] and intermitting pulse, may both result from the lithic acid dyscrasia. The following case is an illustration of what I have just stated.

A discharged soldier, aged 56, came under my care in July 1873 for what appeared to be muscular or neuralgic pains. He was found to have aortic incompetence, but he had never had any symptom of cardiac disease—pain, palpitation, or dyspnœa—and he had been employed as a porter in a public institution, one of his duties being to carry heavy coal-scuttles up long stairs, from which he had apparently suffered no inconvenience. His pulse was quite regular. He was treated with quinine, but he left the hospital after some weeks not much relieved, and returned to his work. In December, he again came to me, complaining of pain in his right shoulder and constipation; his pulse was now very intermitting, and he had also a frequent feeling of fluttering about his heart. He had no other cardiac symptom, and, on walking, his pulse became regular. He was treated with blue pill, colchicum, aperients, alkalies, and iodide of potassium, and in a short time the pain in the shoulder, the fluttering, and the intermission disappeared.

4. *Feeble Circulation.*—In cases of protracted hepatic derangement, symptoms of feeble circulation, which may be independent of palpitations or irregularities of the pulse, are not uncommon. The patient complains of languor, debility, and coldness of the extremities. The heart is found to beat feebly, but to be free from organic disease; there is evidence of hepatic derangement, and the urine often deposits lithates. Iron, quinine, and alcoholic stimulants, which are frequently prescribed for this condition, may render the patient worse instead of better, and the surest way to increase the strength of the heart is to avoid alcohol and relieve the liver.

5. *Anæmia.*—(See page 474.)

6. *Angina Pectoris.*—The neuralgic affection known as angina pectoris probably arises in many different ways. One cause appears to be the lithic acid dyscrasia. It is now many years since an English physician, Dr. William Butler, described certain cases of this affection as diaphragmatic gout. The patients had been careless as to diet, and "particularly fond of the stronger malt liquors"; the urine deposited "a copious gross sediment"; and the attack might terminate in a fit of the gout.[*] Many writers have since then described a "gouty cardialgia"; and, more recently, Trousseau has pointed out that certain cases of angina pectoris are independent of any disease of the heart or great vessels, and are merely "a manifestation of the gouty diathesis".[†] Not long since, I saw a gentleman, aged 65, who complained of awaking in the night three or four times a week with violent pain in the cardiac region, extending up to the left shoulder and down the left arm. I could discover no sign of disease in his heart. He stated that, six years before, he had suffered for months from similar attacks, but had recovered under medical treatment. He had never had gout, but he was very careless as to his diet, and his brother I knew to be a martyr to gout.

VII.—*Derangements of the Organs of Respiration.*

1. *Chronic Catarrh of the Fauces.*—The subjects of gout or lithæmia are very liable to an habitual excess of mucous secretion in the fauces and at the back of the nose, which usually accumulates during the night, and which may be associated with a troublesome cough. Errors in diet usually increase the amount of phlegm, and may cause an extension of the catarrh, with hoarseness of the voice, and this may account for Scudamore's statement that a cough with much mucous secretion in the trachea sometimes precedes a fit of gout.[‡]

2. *Chronic Bronchitis.*—The researches of Trousseau,[§] of our colleague Dr. Greenhow,[||] and of other observers, have clearly proved that chronic bronchitis has in many instances a similar pathology to that of gout, and, therefore, originates in functional derangement of the liver. Gout and bronchitis are very common in the same families; gout is disproportionately common among bronchitic patients, and the two diseases often alternate with one another in the same individual, gout subsiding on the development of bronchitis, and bronchitis being relieved on the appearance of gout; while the bronchitis is benefited by the same remedies as are useful in gout. Moreover, persons who have never had gout, and do not come of a gouty stock, but who are the subjects of lithæmia, are also very prone to bronchitis.

3. *Spasmodic Asthma.*—Although spasmodic asthma consists essentially in a morbid proclivity of the musculo-nervous system of the bronchial tubes to be thrown into a state of activity, the stimulus to contraction appears in some patients to be toxic, or it consists in the presence of some morbid material in the blood. "When", remarks Dr. Todd,[¶] "the *materies morbi* of asthma has been generated, its effect is to irritate the nervous system, not generally, but certain parts of it, these parts being the nerves concerned in the function of respiration; viz., the pneumogastric and the nerves that supply the respiratory muscles, either at their peripheral extremities, or at their central termination in the medulla oblongata and spinal cord." The nature of this *materies morbi* appears to be very similar to that of gout, and, like that of gout, it appears to be due to derangement of the blood-changes of which the liver is the principal seat. Asthma, like gout, is a hereditary disease; it is common among persons springing from a gouty stock; it is not unfrequently associated with gout in the same individual; and attacks of asthma have been known to alternate periodically with attacks of gout. Moreover, an asthmatic paroxysm, like an attack of gout, of vertigo, or sleeplessness, is often excited by a fit of indigestion and by the use of particular articles of diet. Our late colleague Dr. Hyde Salter, who did so much to throw light upon the pathology of asthma, was of opinion that the asthmatic paroxysm in the cases now referred to was produced by "the actual presence in the vessels of the lungs of the materials taken up from the stomach and intestines";[**] but it seems to me that the *materies morbi* is far more likely to be a product of hepatic derangement consequent on the unwholesome ingesta, as in the analogous attacks of gout, vertigo, etc.

VIII.—*Derangements of the Urinary Organs.*

The remarks which I have already made render it unnecessary for me to insist further on the tendency of functional derangement of the liver to produce urinary symptoms. I will merely repeat that hepatic disorder is a common cause of:

1. *Deposits of Lithic Acid and Lithates in the Urine;*
2. *Renal Calculi;*
3. *Diseases of the Kidneys.*

I will now add that:

4. *Cystitis* is occasionally excited by the lithic acid diathesis.[††]

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[*] "Des Intermittences Cardiaques", par le Dr. C. Lasègue, *Arch. Gén. de Méd.* December 1872.

[†] I do not remember to have met with intermitting pulse in cases of aortic incompetence of rheumatic origin.

[*] *Treatise on Angina Pectoris*, second edition. London: 1806.

[†] *Op. cit.*, vol. iv, p. 379.

[‡] *Op. cit.*, pp. 17, 377.

[§] *Op. cit.*, vol. iv, p. 381.

[||] *On Chronic Bronchitis*, 1869, p. 55.

[¶] *Medical Gazette*, December 1850.

[**] *On Asthma*, 1860, pp. 46, 117.

[††] See Garrod, *op. cit.*, p. 512.

IX.—*Abnormal Conditions of the Skin.*

There is good evidence that many disorders of the skin originate in derangements of the processes of oxydation or disintegration which go on in the liver.

1. Almost all observers are agreed that *Eczema, Lepra, Psoriasis,* and *Lichen* may arise from lithæmia. Many years ago, the late Sir Henry Holland remarked that he had "so often seen psoriasis prevailing in gouty families—sometimes alternating with acute attacks of that disease, sometimes suspended by them, sometimes seeming to prevent them in individuals thus disposed—that it is difficult not to assign the same morbid cause to these results."[*] Our late distinguished President Sir Thomas Watson, in his *Practice of Medicine,* speaks of lepra and psoriasis as blood-diseases depending upon some poison bred within the body.[†] Dr. Garrod also bears testimony to the frequent connection of eczema and psoriasis with gout. My own experience fully bears out the correctness of these observations; but, in many cases, these cutaneous diseases appear to arise from the functional derangement of the liver which often precedes gout, although neither the patient nor any member of his family has ever suffered from this disease. On this point, Dr. Tilbury Fox, in his recent work on cutaneous diseases, makes the following pertinent remarks. "All disorders which are connected with retention of excreta in the system, and their circulation throughout the blood-current, may furnish the exciting cause of eczema. This is a clinical fact of very great importance. Given the tendency to eczema, then the transmission of uric acid through the capillaries of the skin will so far derange as to aggravate certainly, and now and again excite, an eczematous eruption. This is what is meant by gouty eczema; and, by securing the absence of uric acid from the circulation, the eczema will often disappear, and always be more amenable to treatment. . . . Such cases as I now refer to sometimes exist off and on for years, and are saturated with arsenic and mercurials, but are only relieved by recognising the complicating item of the free production and circulation of uric acid, and by instituting a *régime* calculated to arrest the continuance of those conditions."[‡] Dr. Fox also calls attention to the fact that children with eczema have often white stools.[§]

2. *Urticaria* I have not unfrequently met with in connection with jaundice and other derangements of the liver. The late Dr. Graves observed eight or nine instances of persons suffering from acute rheumatism who became suddenly jaundiced from the supervention of hepatitis (congestion of liver?), and in whom the jaundice was followed by urticaria.[‖] Among the causes of urticaria, Dr. Tilbury Fox mentions "the circulation of acrid or effete products, for example, uric acid, bile, etc., which, coming to the surface, become oxydised and more active".[¶] He also mentions that "asthma has been observed to be associated with urticaria in a peculiar manner"[**]—an association which is readily explained by the foregoing remarks. Scudamore refers to violent urticaria as existing for two days before a gouty paroxysm;[††] and I have myself known patients in whom champagne or certain articles of diet have almost invariably produced either gout or urticaria. Recently, I have had under my care a boy, aged 9, with *urticaria tuberosa* and *purpura urticans,* complicated with hæmorrhages from the bowels, kidneys, and urinary passages, and with the discharge of much lithic acid in the urine, which there was good reason for suspecting to be due, in the first instance, to functional derangement of the liver.

3. *Boils and Carbuncles* are occasionally observed in connection with jaundice, and are also excited by the presence in the blood of urea and other effete products. In the connection also between phlegmonous or carbuncular inflammation and diabetes, it is possible again to trace the influence of a disordered liver in the production of skin-diseases.

4. *Pigment-spots* of various sorts on the face, hands, and other parts of the body, are not uncommon in functional derangements of the liver. They are sometimes designated "liver-spots" by non-professional persons, who, perhaps, attach too much importance to them as indicative of hepatic derangement. They may, as Dr. Laycock observes, be induced by imperfect oxydation or excessive production of carbon, in derangements of the liver,[‡‡] but they may also arise in other ways.

5. *Xanthelasma or Vitiligoidea,* which consists in a fatty degeneration of the subcutaneous or submucous tissue analogous to atheroma,[§§] is a remarkable affection of the skin, which was first described in a joint memoir by the late Dr. Addison and Sir William Gull.[‖‖] It occurs in two forms, either as tubercles varying from the size of a pin's head to that of a large pea, isolated or confluent; or more commonly as yellowish patches of irregular outline, slightly elevated, and not at all indurated. The tubercles are most numerous on the face and ears, on the outside and back of the forearms, and especially about the elbows and knees. The yellow patches are always first observed on the eyelids, usually near the inner canthus; but they may subsequently appear on the neck, the palms and flexures of the fingers, and even the gums. The more severe forms are almost always associated with persistent jaundice and great enlargement of the liver,[*] which may subside under treatment; and, in most cases where there has been no jaundice, the patients have been of middle or advanced age, and there has been a history of frequent and severe attacks of functional disturbance of the liver.[†] It may be added that several cases of xanthelasma have been observed where there has been diabetes, but no jaundice.[‡] In some instances, the disease appears to be hereditary.

6. *Pruritus* is a troublesome symptom which often results from hepatic derangement. It is known to be a frequent accompaniment of jaundice; but it is not due to the presence of bile in the blood, for in many cases of jaundice it is absent, and I have repeatedly known it precede the appearance of jaundice by several weeks, or cease while the jaundice persisted. Moreover, I have frequently known itchiness of the skin a source of extreme distress to patients with hepatic derangement, but without any jaundice. It may attack various parts of the body in succession, or it may be universal. It is unattended by any eruption. It is always worse in heated rooms and after stimulating food, and it is greatly aggravated by scratching. This symptom is not uncommon in gouty people[§] and in the subjects of the lithic acid diathesis, and it is often removed by attention to diet and a few doses of blue pill and alkalies. As Dr. Bence Jones has observed "itching, nettle-rash, eczema, and herpes are the outbursts of an over-acid state."[‖]

C.—CAUSES OF FUNCTIONAL DERANGEMENTS OF THE LIVER.

The remarks which I shall make under this head will be restricted to abnormal disintegration in the liver. The causes of diabetes and of certain other functional derangements of the liver have been already referred to. The disorder of the liver which induces lithæmia may be primary, or secondary to other morbid states of the body. It is with the former that we are chiefly now concerned; but the main causes of secondary derangement of the liver may be briefly referred to. They are as follows.

1. *All structural diseases of the liver* derange more or less the functions of the organ. These derangements are usually judged of solely by the characters of the alvine evacuations, and the far more important functions of sanguification and depuration of the blood performed by the liver are lost sight of. But it is well to remember that in structural diseases of the liver these functions may be seriously deranged, without any obvious change in the characters of the stools. In all structural diseases of the liver unattended by fever and involving a considerable destruction of the glandular tissue, there is a tendency to a diminished excretion of urea, and an increase of lithates in the urine, and before long the patient becomes anæmic. At last, symptoms of blood-poisoning may supervene, although there may be no jaundice and plenty of bile in the motions. These results are well seen in acute atrophy of the liver; but are also notable, though in a less degree, in abscess, cirrhosis, cancer, etc.

2. *Disorders of the Gastric and Intestinal Digestion* often lead to secondary derangement of the liver. For example, the liver may become deranged as the result of gastric dyspepsia, or of protracted constipation from atony of the bowels or deficient intestinal secretion; and sometimes it may be difficult to say whether the hepatic derangement is primary or secondary.

3. *Diseases of the Heart and Lungs,* by obstructing the circulation and impeding oxydation, are a common cause of functional, and ultimately indeed of structural, disease of the liver. It is unnecessary for me here to insist on the frequency with which the symptoms of valvular disease of the heart are aggravated by those of functional derangement of the liver, and on the necessity of attending to these in the treatment of the primary disease.

4. *Pyrexia.*—In all diseases attended by pyrexia, whether arising from some general cause, such as a specific poison, or from a local inflamma-

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[*] *Medical Notes and Reflections.*

[†] *Lectures on the Principles and Practice of Medicine,* fifth edition, 1871, vol. ii, p. 1023.

[‡] *Skin Diseases,* third edition, 1873, p. 175.

[§] *Ib.*, p. 11.

[‖] *Clinical Lectures on the Practice of Medicine,* second edition, vol. i, p. 446.

[¶] *Op. cit.*, p. 120.

[**] *Ib.*, p. 121.

[††] *Op. cit.*, p. 103.

[‡‡] Fox, *op. cit.*, p. 404.

[§§] See *Pathological Transactions,* vol. xx, p. 187; and vol. xxiv, p. 242.

[‖‖] *Guy's Hospital Reports,* second series, 1851, vol. vii, p. 265.

[*] See a fatal case recorded by me in *Pathological Transactions* for 1868, vol. xx, p. 187.

[†] See "Clinical Report on Xanthelasma Palpebrarum", by Jonathan Hutchinson, F.R.C.S., *Medico-Chirurgical Transactions,* 1871, vol. liv, p. 171.

[‡] *Guy's Hospital Reports,* second series, vol. vii, p. 268; and Bristowe, in *Pathological Transactions,* vol. xvii, p. 414.

[§] Scudamore, *op. cit.*, p. 103.

[‖] *Lecture on Pathology and Therapeutics,* 1867, p. 84.

tion, there is more or less functional derangement of the liver. The liver, indeed, plays a prominent part in the pathology of the febrile process. It is one of the few parts of the body which do not waste during the fever. On the contrary, it becomes enlarged and congested, while its gland-cells are swollen out with minute albuminous granules; and it is well known that these changes are attended by an increased disintegration of albuminous matter and an increased production of urea and less oxydised products. On the cessation of the febrile process the liver resumes its normal functions; but now and then it happens that, after a severe attack of fever, these functions are permanently impaired. I have repeatedly known a permanent tendency to hepatic derangement induced by a severe attack of typhus, enteric, malarious, or scarlet fever, in persons who had exhibited no such tendency previously.

Functional derangements of the liver, when primary, may be due to a variety of causes. Of these, the principal are—

1. *Errors in Diet.*—There can be no doubt that the present system of living, and especially the consumption of even what are regarded as average quantities of rich food and stimulating drinks, contribute largely to derange the liver. It will be generally admitted, nor would it be difficult to prove, that most persons are in the habit of eating a quantity of food far greater than suffices to maintain the nutrition of the body. Much of this excess is fortunately never assimilated and is got rid of in the fæces; but very often much more is taken into the blood than can be converted into tissue, or pass through the ordinary processes of oxydation preparatory to elimination. The result is that the excess of food is thrown out in an imperfectly oxydised form by the kidneys, lungs, etc., or accumulates in the system; while more work is thrown upon the liver than it can readily perform, and functional derangement of the organ ultimately ensues. With regard to individual principles of food, speaking generally, it may be said that the liver is most apt to be deranged by saccharine and fatty substances. The derangement of the liver which leads to lithæmia or gout is more likely to be induced by even small quantities of these substances than by a moderate excess of purely nitrogenous food, such as meat. Cooked articles of diet containing a large proportion of both sugar and fatty matter are in many persons certain to derange the liver. The excess of carbon in these substances must either be deposited as fat, or must take away the oxygen, so as to leave little free to act on the nitrogenous matter passing out from the tissues or derived from the food; and hence, as Dr. Bence Jones has observed in speaking of gout, "with carbonaceous diet in excess, the whole of the uric acid from the tissues might pass off through the blood unoxydised".* There are also constitutional peculiarities with regard to many articles of food, which always derange the liver in certain individuals, though they are comparatively harmless in others; and some persons who are the subjects of lithæmia get on best with a vegetable diet and milk.

But of all ingesta the various alcoholic drinks are most apt to derange the liver. They do so in two ways. *a.* They may cause persistent congestion of the liver. Even small quantities of alcohol in healthy persons produce a temporary hepatic congestion; but if alcohol be taken in excess, or too frequently, the congestion of the liver becomes permanent, and the functions of the organ are deranged. Like results may ensue from comparatively small quantities in certain persons, who may be said to have a constitutional intolerance of alcohol. Of course, if the congestion be long maintained, structural disease may follow. *b.* But wines and other alcoholic drinks often cause derangement of the liver, which a corresponding quantity of pure alcohol would not produce, and which, in fact, cannot be accounted for by any one ingredient of the offending liquid—neither by the free acid, the ether, the salts, gum, sugar, or extractive matter. This general rule, however, I believe holds good, that the injurious effect of alcoholic beverages upon the liver increases in a direct ratio with the amount of sugar plus alcohol which they contain. It would seem, indeed, that a mixture of alcohol and sugar produces injurious results, which would not be caused by the admixture of a much larger quantity of sugar, or of alcohol alone, with the food. In accordance with this view, the alcoholic drinks which are found from experience to be most apt to disagree with the liver are malt liquors of all sorts, but especially porter and the stronger forms of mild ale, port wine, madeira, tokay, malaga, sweet champagne, dark sherries, liqueurs, and brandy; whilst those which are least likely to derange the functions of the organs are claret, hock, moselle, dry sherry, and gin or whiskey largely diluted.

Derangement of the liver from excessive eating or from other errors in diet usually first shows itself in middle life—from 35 to 45. Young people, who take much exercise, and whose bodies are still undergoing development, require more food, and can often with impunity eat more than they require. But by the age of 40 the body is fully developed, and most persons take less exercise than before, while at the same time they often indulge more freely at table. At any age, errors in diet will be all the more likely to tell upon the liver, if there be any constitutional weakness in the functional power of the organ.

[*To be continued.*]

TEDIOUS LABOUR FROM DEBILITY, AND ITS TREATMENT.

By HUGH MILLER, M.D., Fel. Obst. Soc. Lond., Glasgow.

THE remarks in this paper apply exclusively to labours protracted from debility, but, in other respects, natural. I, therefore, expressly exclude from consideration all cases in which the delay arises from the position of the child, or from an abnormal condition of the passages, and also cases complicated with rigid os uteri, or with spasmodic contractions of a tetanic nature, as well as those in which there exist obstructions arising from inflammation or from surgical interference. My remarks have reference solely to cases in which the delay is due to enfeeblement or failure of the natural powers of the organs specially called into action during the process of parturition.

Most obstetric writers apply the term "tedious" to all labours protracted beyond a certain period, whatever be the cause of the delay. While it appears to me that the physiological conditions of the case preclude the possibility of fixing for all cases a definite period, many obstetricians, following Dr. Ramsbotham, limit the definition of the term "natural labour" to those cases "in which not more than twenty-four hours are occupied from the commencement of true uterine action to the termination of the process". And the same author, in defining lingering or tedious labour, says that it denotes those cases "in which nothing calling for anxiety occurs, except the length of time that elapses under the continuance, so that it differs from a natural labour only in respect of its duration". Is not this method of basing a classification of labours on the element of time highly unscientific? It is in the first stage of labour that the longest time is occupied, and it is in that very stage that the consideration of the factor time is of the least consequence. It is to the natural differences of temperament that we must attribute the greatly diverse energies with which the organs act in different individuals. The standard of natural labour is one, therefore, that should have reference to the conditions under which the organ contracts, and, assuming no unnatural formation to obstruct its progress, it should not be held to have passed into the category of non-natural labour as long as the pains are active, and the labour progressive.

Uterine action may be said to be a violent effort to expel a body in contact with the cavity which is no longer in harmony with it. The action is kindred to that of the bladder in evacuating urine, or to that of the heart during the systole. Taking the latter as the type of uterine action, analogy would teach that labour pains result only when the distension is sufficient to produce uniform contraction; and, having once set in, the action proceeds in a truly peristaltic manner until the organ has been emptied of its contents. The rapidity of the action causes it to be mistaken for a simultaneous general contraction. The nerves which control the womb's action are not those of common sensation, but the sympathetic, which becomes a nerve of sensation only in special circumstances. The true contractions of the uterus originate among the fibres of the cervix and end at the fundus. Were the functions of this organ, like that of the other organs, performed by muscles composed of involuntary fibre, the contractions would be painless. Labour-pains, however, are spasms—violent efforts by an organ to throw out a substance which has ceased to be in harmony with it. Recent observations show that the onset of uterine action is due to a decadence of the membranes, or of the membranes and placenta, and each recurring pain indicates a renewed effort to effect expulsion. Painless uterine contractions do take place, as, for instance, in primiparæ after delivery; but these lack the force to expel other than liquid substances. Under healthy uterine action, then, the rapidity of the delivery bears a direct ratio to the force and frequency of the pains. In certain cases, no doubt, natural labour is hastened or retarded by other circumstances. Thus, in primiparæ, it is usually prolonged from an obvious cause, while, in phthisical cases, it may be accelerated from the attenuated state of the passages. In the case of a woman of average strength, where the pains are regular and effective, the uterus of a multipara may perform its function with sufficient vigour to complete the parturient act within two hours. Dr. Haughton of Dublin and Dr. Duncan of Edinburgh have made independent investigations on the propelling power of the uterus. The maximum power of an uterine contraction is estimated by Dr. Duncan to be equal to 50 lbs., and by Dr. Haughton 54 lbs. The uterus has thus three times the amount of power necessary to complete an uncomplicated labour. Now, to this uterine power nature has superadded the expulsive strength of the abdominal muscles, and the further force resulting from what is called "bearing down"; in this way, an economy of uterine muscular action is provided for, and provision made for the exertion by a healthy woman, in cases of emergency, of a force equal to 80 lbs. (Duncan), or as great as a quarter of a ton (Haughton). But, in large cities, there are forces at work which prevent this healthy standard from being reached, and to the extent to which the patient suffers from constitutional debility will we find her disqualified for continued exertion. It is in consequence of this that many ordinary labours are prolonged unduly. These cases are met with, not only amongst the poorer classes, as the result of insufficient food and overwork, but amongst the working classes, from their indoor life, early sedentary occupations, and their ill-cooked meals; and even among the middle and upper classes, from inactivity and artificial habits of life. The constitutions of a certain proportion of women are thus so deteriorated, that there results a very serious impairment of the parturient powers. Such women are unable to complete labour without much exhaustion. The labour often sets in fairly, with regular and effective pains, till, perhaps, the first stage is completed; after passing into the second stage, the pains alter in character, become more frequent and less defined, without periods of complete rest between them. Symptoms of acute fatigue are present. The muscles are irritable from exhaustion; they are losing power, are responding feebly, or not at all. The sufferer becomes irritable and anxious, thinks she should be assisted, and, perhaps, vents some ill-natured remark at the accoucheur standing listlessly by. On examination, the head is presenting naturally, and is usually found in the floor of the pelvis. Another digital examination in half an hour likely enough reveals no progress, owing to a true transient paralysis of the organ having ensued.

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* *Op. cit.*, p. 142.

In another class of cases, the pains are slow and feeble from the beginning. The patient is usually the victim of disease, and the enfeebled parturient action is a fair indication of the lowered vitality. After a time, the pains become irregular, and seem to produce no effect on the os uteri, and they ultimately cease. In these cases, the powers of life appear to fail in the violent efforts required for expulsion. The uterus acts in sympathy with the general state of the system. Even when deficient or irregular action continues, the labour has ceased to be natural. From the resulting condition, spring many of the most troublesome complications connected with parturition. It is a condition which should by every possible means be avoided, and, when it does occur, it should be relieved with the least possible delay.

Much, however, might be done for these classes of patients prior to the onset of labour. Even with the enfeebled woman, frequent and judicious administration of beef-tea and other kinds of nourishing food may obviate the tendency to exhaustion. Benefit may also be derived from the administration of the tincture of perchloride of iron; and, if near her confinement, I have even seen more benefit from the use of the liquid extract of yellow cinchona in fifteen-minim doses every four hours; while rest may be secured for a day or two when the non-effective labours happen during the first stage by the exhibition of a sedative. Until this first stage of the labour has been completed, I allow the patient her usual diet, she is not restricted to the recumbent position, and, if the labour be tedious, I endeavour to persuade her that no mischief is likely to result from the delay. My experience is at one with Dr. Hamilton of Falkirk, who, in his able article on the proper management of tedious labours, says: "I now rarely attempt to interfere with the progress of the first stage of labour, even when this is protracted for some days. Indeed, when I can, I keep as much as possible out of the way of my patients, recommend them to walk about or lie down, as they may incline, to take a little sherry and water to support the strength, and, in fact, I get over it the best way I can without interference." Indeed, if I differ at all from Dr. Hamilton, it is through paying more attention to the dieting than he appears to have done. I prefer beef-tea to his sherry and water, and, instead of keeping out of the way, I see my patient at least daily, so that she may feel in no way anxious about her condition.

As illustrating my treatment of the first stage, I will read over the notes of a case.

Mrs. G., aged 35, of slender make, was confined with her third child; her pains were weak, short, and irregular; these had continued for some hours when I first saw her, she said about fourteen hours. The os had now opened about the diameter of half a crown. After waiting a little, finding the pains doing so little good, I left her. About six hours after I saw her again, the pains had become more frequent, teasing, and so constant as to prevent sleep, yet the os gave hardly any appreciable evidence of progress. To relieve her anxiety, I gave her an opiate, and arranged that she should receive her usual diet, with a good supply of beef-tea daily, until the labour was over. Four days afterwards, I got a message to come at once. When I reached the house, the child was born, I was told, by a few very strong pains. She made a good recovery. In this case, it appeared to me that the uterine fibres were so relaxed and weakened as to cause the power of contraction never to get beyond the cramp-like initiatory efforts of the onset of labour. The pains were of a colicky character, the vagina was hot, and the secretion of mucus scanty. I have no doubt the rest in bed, along with the generous diet during these four days, helped very much to render the termination of this case so favourable to mother and child.

Whenever a woman has passed fairly through the first stage of labour, I remain with her and carefully mark the progress of it. With Dr. Hamilton, I have noticed "that the ratio of mortality to mother and child . . . is most intimately connected with the duration of the second half of the labour". The pains of expulsion vary in rapidity and in strength; sometimes a very severe one may be followed by several weak, useless ones; yet, on the whole, progress is made. When debility sets in, the pains become short, sharp, and recur more frequently. Indeed, like the feeble heart, the uterus is trying to make up for its weakened power by a quickened, excited action. With the onset of this condition, little or no further progress is gained. On examination, the passages are found quite sufficient to permit a natural delivery; but each recurring pain makes no permanent advance on the vertex, or may make no impression on it whatever. Should the obstetrician in attendance not deliver at this stage, he will soon find, in the quickened pulse, the furred tongue, the anxious countenance, the drooping spirits, and the failing strength, along with the gradually subsiding pains, that he can gain nothing by the delay. I have ceased now to wait for these symptoms, and, as soon as the strength begins to fail, I gently inform the patient of her condition; by the time she has made up her mind, it is time to interfere, and, these cases being the most favourable for the forceps, I have used these instruments without difficulty and without injury to mother or child. Thus Mrs. W., a young lady born and reared in the city, was lately confined of her first child. On the first day when I was called, she had labour-pains, but they were weak, and, after a few hours, these passed away, and she had seven hours' remission. At 5 o'clock on the following morning, the pains recommenced stronger and continued steady; the os uteri was opened sufficiently to admit the finger; the stomach was irritable, vomiting beef-tea and refusing all food. At 10.30 next morning, the first stage was completed, the head presenting naturally in the first position and at the brim. Bearing-down pains were regular, but short; she was very uneasy, speaking between and even during her pains. At 12.40, the head was in the pelvic cavity, and, as she was making no progress, I now delivered with the forceps. Mother and child did well.

I believe this timely application of the forceps to be a direct gain; for, when labour is retarded, we have induced a condition which, sooner or later, can lead only to mischief. It is true that nature is kind, and serious injuries to the passages have taken place without producing after suffering; but a careful obstetrician should not run any risk. Many look upon the forceps as a *dernier ressort*, and prefer to give ergot. This remedy, if good, is one of a known power. In ten or fifteen minutes, it begins to exert its influence, and often for nearly an hour its effects continue upon the uterus, if the fœtus be not by that time expelled. Ergot acts by inducing sharp uterine action, recurring with brief intervals of rest, and, even during these remissions of pain, maintaining the womb in a continued state of action. The drug can only be judiciously given when a speedy termination of the labour is reasonably to be expected. With regard to the forceps, we know when to employ them, when to modify their action, and when to cease using them. It seems also *à priori* more reasonable to assist a weakened organ by giving help from without than by endeavouring to effect relief through stimulants; and I believe we should use the forceps as a better, because a safer, plan of treatment than ergot; at all events, until the birth of the child, it appears best to relieve the exhausted uterus by some other means than that of applying force to an organ already overworked.

Professional opinion is still undecided with reference to the time when the forceps should be applied. Dr. Ramsbotham (page 242) says: "When the head is impacted for four hours without advance and recession, I think we are warranted in delivering." In the Rotunda *Clinical Report* (page 21), Dr. Johnston says: "When we found there was no advance, say, for two hours, we usually administered a stimulating enema, then waited for an hour or two, according to circumstances, and, if the pains were not producing any effect, a second enema was given, and, if this did not succeed, in another hour, we gave a dose of ergot (particularly if it were a multiparous case); and, if the patient were irritable, we put her under chloroform, and then, after passing the catheter, we proceeded to apply the instruments." And Cazeaux, in his *Treatise on Midwifery*, says (page 992): "If the head were low down in the excavation, and it had made no progress for seven or eight hours, the forceps ought to be applied." Probably these authorities express the limit to which forbearance on the part of the attendant could be justified. I am certain these rules could not be followed, in many cases, without serious risk to mother and child. Dr. Burns seems to have appreciated the necessities of the case when he said that, "when mischief arises from the application of the forceps, it is always owing either to harsh and unskilful conduct, or to a state induced by delaying too long." It appears to me that the time for bringing effective assistance is unmistakably indicated by the increasingly feeble efforts of the uterus. Nature should be helped when she shows that she can no longer, unaided, help herself. It has been urged that, from the sudden emptying of the uterus, flooding may take place. I have never met with this complication in any case I have delivered with the forceps, but I can understand how it may occur with those practitioners who apply this remedy "after the head has been impacted for four hours", for then the power of the uterus would be exhausted, and contraction rendered improbable. In these cases, the delay in delivery produces uterine inertia; if not the true inertia as obstetricians define it, it is at least an inertia similar to the temporary paralysis of the over-distended bladder, and, in this condition, the sudden emptying of the womb, doubtless, exposes the patient to this complication. But the case is otherwise if effective aid be given in time. The sudden relief from pressure of an organ which still retains a certain amount of vital force will give rise to renewed vigour. A timely delivery should thus prevent, instead of cause, *post partum* hæmorrhage. When I have found it necessary to deliver in cases where labour-pains were absent, I took special precautions to avoid flooding, and it would only be when the condition of mother or child rendered delivery at once necessary that I would resort to this dangerous step. But the chief object of preventing delay in the passages, is to obviate any tendency to the very distressing diseases which occasionally follow inflammatory action. The late Sir James Y. Simpson said that vesico-vaginal fistula was "most commonly found as a consequence of difficult and prolonged labour, more especially the latter" (*Diseases of Woman*, p. 32); and there can be no doubt the long continued pressure of the fœtal head on the maternal passages is a very certain way of "producing mortification and sloughing of the vagina and part of the uterine wall". Kindred results have so frequently been observed by surgeons to take place when even, for a few hours only, the hernial sac is strangulated, and also in other diseases accompanied by compression, that I believe the onset of inflammatory disease in the vaginal passages to be due more to the detention of the fœtus than to any temporary injury which the judicious application of the forceps could give. When I began to apply the forceps at the onset of the patient's failing strength, it was with a view of securing, if possible, a living child, for the delay seemed to act as prejudicially against the fœtus as the mother. In my private practice, I find, on an average, every twenty-sixth labour suffer from the symptoms of debility; these I have delivered with the forceps, and in not one of them was the child still-born.

ON GENERAL PARALYSIS AND FRAGILITAS OSSIUM.

By N. G. MERCER, M.D.Edin.,

Medical Superintendent, East Riding Asylum, Beverley.

THE fact has been some time pretty well known that, in not a few cases of general paralysis of the insane, there exists a brittle condition of the bones, which must render them especially liable to fractures. The subject is evidently one deserving the most attentive consideration, as, in all instances of serious injuries taking place in asylums, we must steadily bear in mind the possibility—in average asylums not the *probability*—of the patients having been subjected to ill-treatment at the hands of their attendants. A few years ago, the public mind was greatly agitated by a concurrent series of asylum catastrophes, whose startling and common distinguishing feature was a large number of dreadful fractures of the bones of the chest. Sensational and garbled accounts of these cases were given in the general press, and served to propagate a wide-spread, though ill-founded, feeling of mistrust in the management of public asylums. It will not have escaped recollection, that a criminal prosecution was in one of these cases successfully instituted against two attendants upon a charge of manslaughter, the result being their conviction, and a sentence of seven years' penal servitude. Without calling into question the truth of the verdict, or the justice of the sentence, or the propriety of that jubilant frame of mind with which, outside asylum walls, the result appeared to be universally hailed, it has always seemed to me that it would have been a judicious course on the part of those who were entrusted with the charge of the defence, had they summoned the evidence of some high and competent surgical authority, to deliver his opinion, founded on an exceptional experience of chest-fractures, as to what amount of "kneeing," given a healthy condition of the skeleton, would have sufficed for the production of fifteen fractures of the ribs. At this trial, an opinion was unhesitatingly expressed that such multiplied fractures could not have been caused by heavy falls against a wooden bedstead. Whether or not such an event were possible, and whether or not the bones were so changed in their composition as to render fractures a probable circumstance from any slight accidental cause, are questions which would scarcely modify the complexion of the offence, seeing that deliberate violence was held proved by direct evidence; nevertheless, the subject of fragilitas ossium, in any class of lunatics, must be regarded as one both of medico-legal importance and pathological interest. It would be an useful contribution to surgical practice as affecting asylums, if some surgeons, with the highest opportunities of being well informed, would give their experience respecting the maximum amount of injury to the bony chest-wall which can be accomplished by one healthy man thrusting his knee with all his might against the prostrate breast of another. Would a fractured sternum *plus* nine rib-fractures, as in one case or fifteen rib-fractures, as in another, be foreign, or would it be familiar to such experience? The case which I am about to describe, and which was recently under treatment in this asylum, will afford an illustration of the fact that an important fracture of the chest, which might readily have been attended with fatal complications, may occur in a person suffering from general paralysis, while, at the same time, there was no reasonable explanation of the cause of such fracture but the patient's own restlessness.

J. H., aged 58, engine-fitter, was admitted here, September 24, 1873. His case was at once diagnosed as one of general paralysis in an advanced stage. The phenomena of mental unsoundness were rapidly losing their maniacal or monomaniacal aspect, and assuming that of dementia. The lips and tongue were able to frame speech with the utmost difficulty; his power of recognising persons was all but gone; and the functions of deglutition and progression were very much impaired. The patient was not of meddlesome or aggressive habits, as general paralytics not uncommonly are, but was, on the contrary, a particularly quiet, inoffensive, harmless man. His symptoms, both bodily and mental, gained ground with a rapidity seldom witnessed in this disease, and, in the course of a few days after his admission, he was, in consequence of helplessness, removed for additional care to the hospital ward. Shortly after being transferred thither, he became rather more uneasy in his mind, and insomnia developed itself. Having been put to sleep in a dormitory with eight other patients, he got out of bed in the night time and rambled about the room, and a fellow-patient described how, in the course of this restlessness, he fell rather heavily and helplessly on the carpeted wooden floor. He was then placed to sleep in one of the ordinary single-bedded rooms; here, however, his restless conduct underwent no improvement, and he was found by the night-attendant out of bed, tottering about the room, very wakeful and uneasy. His powers of locomotion at this period were becoming much more feeble, and his tendency to fall heavily was increasing in an alarming degree. After a two nights' residence in this apartment, therefore, he was considered no longer safe in any other than the padded room, and thither he was accordingly carried. Although there was then no injury discoverable upon him, I still considered it quite a probable event that, during his past restlessness, he might have suffered some hurt. The progress of the case was naturally attended with much anxiety to me, and the rapid advance of the paralysis in all his functions rendered necessary the utmost possible care and gentleness in his management. After he had been two days an inmate of the padded room, a bruise on the right side of his chest, in extent approaching the size of the palm of the hand, was pointed out to me, by his attendant, at the morning visit. This bruise appeared to be of a few days' standing, but beneath its site, nothing, upon careful examination, was detectible in the way of crepitus from fractured ribs, nor was there present any functional disturbance of the respiration to favour the idea that any deep seated injury had happened. During the subsequent progress of the case, too, there was a total absence of dyspnœa, although the symptom was anxiously watched for from day to day. About a fortnight before his death, the dysphagia became so extreme that fluids only could be ingested, as any solid nourishment of which he partook appeared to stick in his pharynx, so much in abeyance was muscular energy in those parts. While in the padded room, he tossed and tumbled about a good deal, but there was no evidence, as indeed, so complete was the padding, there was scarcely any possibility, of his having sustained an additional bodily injury whilst there. Although he was very little in one position, yet vital power had grown so depressed that the slight intermittent pressure, to which the skin was exposed, produced an extensive bedsore over the sacrum, and small sores of similar character formed on the upper surfaces of several toes and one knee. During the last three days of his life, there was a total cessation of his habits of restlessness, this disappearance of perverted motor-power being entirely due to the extremity of the paralysis. Under these circumstances, it was deemed safe again to put him to sleep in an ordinary bedstead and common bedroom. His restlessness did not return, and he gradually sank, and died exhausted on November 13.

The case afforded, in many respects, quite a typical illustration of general paralysis, although it differed from all other cases known to my experience in its terrible rapidity of progress towards fatuity, helplessness, and death. It might be added that, just before his removal to the padded room, the patient had an attack of severe epileptiform convulsions, attended with perilous prostration, from which, however, he at once rallied. Sanction having been given by the relatives to my performing a *post mortem* examination, I commenced this thirty-two hours after death, on November 14. On denuding the chest, however, I discovered a transverse fracture of the manubrium of the sternum, and at once abstained from proceeding with the necropsy until I had communicated with the coroner, and received his instructions as to what steps further should be taken in the presence of such an important injury. It was arranged that, as an independent medical witness, Dr. Boulton, senior, of Beverley, should be present with me at the *post mortem* examination, and should also give evidence at the inquest which the coroner decided to hold. We accordingly made the examination in concert; and the following were the various appearances noted in course of it.

Head.—There was an inconsiderable degree of adhesion between the skull-cap and dura mater. Effusion of serum in the membranes existed to the amount of probably half-a-pint. The arachnoid was in many places, but especially at the base of the brain, opaque and of a pearly whiteness. The grey substance of the convolutions was not obviously affected. On making the usual sections of the brain, there was noticed, when the centrum ovale minus was exposed, a remarkable difference in the vascularity of the two hemispheres, the left being much congested, and its cut surface presenting multitudes of dark bloody points, while the right was tolerably healthy. This difference was perceptible throughout the entire area of the section, but nothing further was observed until, on displaying the centrum ovale majus, the posterior lobe on the right side was found to be extensively affected by softening, portions of the diffluent mass having clung to the blade of the knife whilst finishing the section. The greater portion of the posterior lobe was the seat of this morbid change, and it reached to close upon the upper surface of the cerebellum. The brain-substance was transformed into a reddish, pulpy, semifluid mass, having no resemblance to the original brain, and in some parts of it suppuration had evidently made progress. The posterior cornu of the corresponding lateral ventricle was invaded by the diseased action, and the ventricle itself was distended with a sero-purulent fluid, which had passed in great abundance into the opposite ventricle, through the broken down and disorganised layers of the septum lucidum.

Chest.—The fracture of the manubrium sterni first and principally claimed attention. This portion of the bone was broken straight across at about the middle part of its length. The fractured ends were bathed in a small quantity of fluid, which had a grumous oleaginous appearance, only remotely partaking of the physical character of non-laudable pus. There was no attempt at reparation; and, although a few weeks was suspected to be the age of the injury, yet this could not be alleged very positively. (I need scarcely say that at no time during his residence here, had there been any external bruise on this part of the man's chest.) The cancellous texture of the bone was far gone in disorganisation and disease, its colour being deep red, and much resembling that of a muscle. It was soft and boggy, and a knife could with perfect ease be made to sink into and scoop out a portion of it. Experimentally, in course of the further dissection of the chest, the sixth rib on the right side was removed from the body, and its degree of fragility tested. Outwardly it had the character of a well-developed bone, but, on the application of very gentle violence, it snapped in two, revealing a brittle exterior periosteal shell, and, internally, the same dark-red spongy material which had been seen in the broken sternum. A slight quantity of oleosanguineous fluid exuded from its fractured ends. With the exception of the cranium, the examination of the bones was not further pursued. In opening the head, the easy and pleasant manner in which the saw did its work, excited the astonishment of the attendant who did this duty; and, when removed, there was no difficulty in cutting the skull-cap with a knife. The heart and lungs were perfectly normal, and so likewise, although the patient had been much addicted to habits of intemperance, were the viscera of the abdomen. All the structures in the neighbourhood of the fractured sternum were quite uninjured, there being indeed no displacement calculated to do any damage to adjoining organs. The original certificate of death was not therefore impugned; it stated that deceased died from "disease of the brain and general paralysis", and Dr. Boulton agreed with me, that the injury found upon the body had not in the slightest degree accelerated the man's death.

I will take leave to say that the importance of the facts above recorded can hardly be over-estimated. Fracture of the sternum is a form of injury very rarely witnessed by the busy general practitioner, and, when it is seen, I think I am correct in saying, that it usually springs from the application of some strong mechanical violence, such as a cart-wheel passing over the chest. It is also a very grave accident, occasioning much anxiety in its treatment. When I communicated my discovery of the injury in J. H.'s case to Dr. Boulton, who is well known as a practitioner of great experience, he was greatly surprised and at once expressed an opinion that some cruel act of violence must be accountable for it. When, however, he came to the *post mortem* examination, and inspected the fracture, his suspicions of ill-treatment immediately vanished, and he gave it as his decided opinion before the jury that, with such a friable condition of the bones as existed in this man, some very trifling cause, as for instance a fall on the floor, which the patient was known to have sustained, and which would not have hurt a healthy person, would be quite sufficient for the production of the fracture. If this patient, instead of having been no earlier than was necessary put into the padded room, had received only such care as would be implied in allowing him, restless and helpless as he was, to knock and tumble about an ordinary bedstead, the discovery of many additional fractures of the chest, with their common attendants of penetrated pleura, pleuro-pneumonia, and empyema, would have been a more than probable event. As a principle of practice, then, the case illustrates how indispensable are good padded rooms in sufficient number for the proper equipment of an asylum. And it also teaches us to be careful when we find important and, it may be, mortal injuries after death, how we impute these to the violence of attendants, without the most convincing proofs of guilt, as it can no longer be regarded as a matter of doubt, the intemperate rhapsodies of that non-professional author who has produced "Shilly-shally" notwithstanding, that, let our nurses be ever so gentle and humane, the victims of certain kinds of mental disease may at times succumb in our asylums to accidentally contracted bodily injuries.

PRIMARY CANCER OF THE LUNG.

By GEORGE F. ELLIOTT, M.D., B.A.,
Physician to the Hull Infirmary.

MRS. H., aged 28, first consulted me on November 18th last year, and gave the following history. About four months previously to that date, she began to suffer from darting pains in the chest, described as shooting from the lower part of the sternum backwards, at times to the right shoulder, at other times up into the throat. Two months after the commencement of these pains, she noticed a feeling of fulness in the throat and a sensation of "fluttering" in the cardiac region. When first seen, she presented the following symptoms. The face was congested, and the neck enlarged from fulness of the thyroid body; the jugular veins were prominent. Percussion showed normal resonance in the whole of the left lung, and complete dulness in the right lung anteriorly; posteriorly it was tolerably clear, but less so than the left. Vocal fremitus was very marked in the upper and anterior portion of the right lung. Stethoscopic examination showed the respiration puerile over the left lung; in the right, the respiratory murmur was absent, even on forced inspiration, in front; behind, it was tolerably natural at base and apex, but at one point between the spine and lower angle of the scapula it was decidedly bronchial. She complained of dyspnœa, greatly increased on exertion, of violent paroxysms of coughing, and slight frothy expectoration. The heart-sounds were normal.

On December 4th she sent for me, saying she had spat up some clotted blood and "matter" after a more than usually violent fit of coughing. I could find no trace of what she called matter; the blood consisted of two or three small dark clots, and was along with clear and viscid-looking mucus. She remained in much the same condition, occasionally expectorating a little blood, until the 13th of the same month, when she complained of an intolerable aching in the throat. Shortly after my visit on that day, I was again summoned with an intimation that she was dying. I found, so far as I could gather from the attendants, that she had had an epileptic seizure. This was repeated on the two following days, when bromide of potassium was given and the fits ceased. Continued cough and sleeplessness became now very distressing; and from these chloral, hydrocyanic acid, etc., gave but little relief. Three days before her death, the temperature rose, for the first time, one degree above normal; her pulse increased from about 95 to 120; and there was complete orthopnœa. During this time, the expectoration became of an olive-green colour; it was at all times devoid of odour. She died on December 26th, about seven months, according to her friends, after the first mention of the intrathoracic pains.

The *post mortem* examination, kindly made for me by Mr. Plaxton, House-Surgeon of the Hull Infirmary, gave the following results. The right pleura contained a considerable amount of fluid and many adhesions. The lung was puckered up and nodulated, and in the part exposed to view (we were only allowed to make the examination on the condition of not displacing any other organ) had been converted into a hardish white substance, rather creaky in parts when cut. The disease had invaded nearly the whole of the upper part of the lung, the base and posterior portion being free and containing air. There was a small quantity of serum in the pericardium, and the same growth made its appearance at the root of the heart in the form of a round nodule projecting between the right auricle and the aorta. The left lung was quite healthy, and so were the abdominal organs. Subsequent microscopic examination of a small portion of the growth showed it to be of the usual encephaloid character.

REMARKS.—The extreme rarity of such a case as the foregoing renders it worthy, I think, of record. Dr. Walshe, in his work on *Cancer*, says —"We have not materials for deciding the proportion borne by cases of cancer limited to the lungs to those in which the implication of the pulmonary substance is merely an element of the diathesis." In judging of the probable existence of malignant disease in internal organs, we are naturally, to a certain extent, guided by the appearance of the patient; but, in the case of the lungs, we can draw, it seems, no inference from it. Laennec remarked that, in all the cases seen by him, death took place before emaciation was apparent; and in the patient referred to there was, up to the last, little or no sign of it. The profuse night-sweats, said to be frequently an accompaniment of the disease, were absent. The nature of the case was at first, of course, doubtful; but the peculiar lancinating pains, the presence of hæmoptysis without pyrexia, and the existence of a family history of cancer, enabled me eventually to diagnose with tolerable certainty what the *post mortem* examination revealed. I have omitted to mention that hyperæsthesia of the integuments of the affected side, a symptom alluded to by Dr. Walshe, was present in a marked degree.

HOW TO ANALYSE AND HOW TO STATE THE MINERAL CONSTITUENTS OF NATURAL WATER.

By J. ALFRED WANKLYN, Esq.

IN giving the results of an analysis of a water-residue, it used to be the custom to state the different salts of which the water-residue was composed; but of late years a different fashion has grown up, and many chemists are now in the habit of stating the results in terms of the different metals, and in terms of the different acids or acid-radicals of which the water-residue is made up. The reason for this alteration was the perception of the fact that, when a solution contains various acids and various bases, the assignment of a particular base to a particular acid must be, to a certain extent, arbitrary; and that so it might come to pass that one and the same water could be made to appear different by mere tricks of statement, whilst waters which were dissimilar might be made to look tolerably similar by appropriate manipulation of the analytical results.

This objection is undoubtedly weighty; but, on the other hand, if we turn to prominent examples of the modern form of representation, we are not encouraged by them, and cannot fail to be struck by their singularly impracticable character, and by their want of perspicuity. In Watts's *Dictionary*, published in 1871, under the article "Water", will be found an admirable example of the modern mode of representation, where the water-residue is most strictly and rigidly broken up into its constituent metals, and constituent acid-radicals; and from this example we may judge how much is lost and how little is to be gained by the adoption of the modern form. For general purposes I am in favour of reverting to the older form, and, by the adoption of appropriate conventions, I would propose to get over any difficulties as they may arise.

The older form of representation fulfils one essential condition, which atones for all its faults. It exhibits certain waters as containing some one greatly predominating constituent, and other waters it exhibits as containing no greatly predominating constituent, whereas the new form of representation hides and buries these fundamental facts, as is most strikingly exemplified by the tabular statement in Watts's *Dictionary* to which I have referred.

In sea-water, the predominating constituent of the water-residue is common salt, which forms about three-quarters of the water-residue. Sea-water is, therefore, a solution of common salt, containing certain other mineral matters in subordinate quantities. But, if we turn to the table in Watts's *Dictionary*, this fact is not apparent; and only by study do we find it out at all.

Certain very common forms of land-water—the entire water-supply of London, for instance—yield water-residues in which carbonate of lime predominates. These waters are, in fact, very dilute solutions of carbonate of lime (held in solution by carbonic acid), all other constituents of the water-residue being collectively subordinate in quantity to the carbonate of lime; and this fundamental fact is not apparent in the table.

For general purposes, we must adopt a form of representation which gives prominence to important facts such as these. In dealing with the water-residue of potable waters, it will be convenient to treat the carbonate of lime as a constituent apart from all the rest, and, so to speak, to regard these waters as dilute solutions of carbonate of lime.

Water which drains from granite, and from the igneous rocks generally, as also from the older stratified rocks and from the millstone grit, contains very little mineral matter in solution. But if such water encounter limestone or chalk, its character changes at once; and, from containing less than five or six grains of solids per gallon, it at once comes to contain sixteen, twenty, or thirty grains—the gain in solid contents consisting mainly of carbonate of lime which has entered into solution.

Now, abstraction being made of the carbonate of lime, drinking-waters, as a rule, do not exhibit very great variation in the solids contained by them. For the determination of carbonate of lime in waters we are provided with a variety of methods, which may be made to control each other. There is the direct determination of the amount of lime in the water, which will be treated of at length by and bye; there is, likewise, the determination of hardness; and there is a third method, which is, I believe, new, but which is a very obvious one. The indications afforded by these three methods enable us to fix the proportion of carbonate of lime with considerable accuracy and certainty.

Here a sketch may be given of the third method, which consists in determining the soluble and insoluble constituents of the water-residue. This is a very simple operation: 700 c. c. of the water are evaporated to dryness at 100 deg. C. in a platinum dish, and the water-residue weighed. It is then treated with small successive portions of boiling distilled water, and the resulting solution is passed through a very small filter and evaporated to dryness. The washing must be managed neatly, so as to make a very little water accomplish it. The filtrate is then to be evaporated to dryness in platinum in the water-bath, dried at the temperature at which the total water-residue was dried, and weighed. In this way we get the amount of soluble and the amount of insoluble water-residue yielded by a water. The amount of wash-water to be employed should be 35 to 70 c. c.; and with neatness, and in the absence of more than traces of sulphate of lime, it will be found to be possible to obtain as high a soluble-residue using 35 as using 70 c. c.

The Water of the New River Company as supplied to London.—The total solids in this water appear to range from 13.6 grains per gallon to 21.0; the mean for the year 1865 being, according to Dr. Frankland, 17.7 grains per gallon. According to a recent determination in my own laboratory, the solids in this water on March 4th, 1874, amounted to 20.7 grains per gallon.

The first point of interest in relation to these solids is, that they consist mainly of carbonate of lime, and that the variation in the total solids in the water is mainly due to variation in the amount of carbonate of lime which it happens to have dissolved. The 20.7 grains of solids were submitted to the action of successive small quantities of boiling water, whereupon 5.5. grains dissolved out. Hence:

Soluble salts	5.5	grains per gallon.
Insoluble (mainly $CaOCO^2$) . .	15.2	,, ,,
	20.7	,, ,,

The hardness of the water was found to be 15 degrees, which, as will be explained in next chapter, signifies 14 grains of carbonate of lime, the one degree pertaining to the water itself. I made likewise very careful determinations of chlorine and of sulphuric acid, and obtained these results.

Chlorine, per gallon	1.10 grains.
Sulphuric acid (SO^3), per gallon . . .	0.19 ,,

The amount of nitric acid in New River water has been estimated by Frankland and Armstrong on various occasions, and amounts to about 1.0 grain per gallon.

Further material for deducing the chemical history of New River water is furnished by the loss on ignition, which was carefully determined by Frankland in 1865, and is, in mean, 0.7 grain per gallon. The loss on ignition consists mainly of exchange of 2 (NO^3) for CO^3; and, as will be perceived, on making the requisite calculation, one grain per gallon of nitric acid would require a loss on ignition of about 0.5 grain; wherefore the loss on ignition is an additional confirmation of the determination of nitric acid.

A further point to be determined is the following. Is the "soluble part" of the total solids alkaline, and to what extent? We are now in possession of materials for arriving at a tolerably certain knowledge of the mineral constituents of the New River water. The 15.2 grains of insoluble portion contains 14 grains of carbonate of lime, the difference being made up of a little silica (according to some published analyses this amounts to 0.5 grain per gallon) and to a trace of iron, and possibly of alumina and phosphoric acid, and to a trace of organic matter retained by the carbonate of lime. Magnesia is all but absent. The 5.5 grains of soluble salts contain no lime, and consist entirely of salts of the alkalies. They contain:

Chlorine	1.1 grains.
Nitric acid (NO^3).	1.0 ,,
Sulphuric acid (SO^3)	0.19 ,,

The Thames Water, supplied by the London Water Companies.—The highest amount of total solids found by Frankland in the water of the Thames companies during the year 1865 was 22.8 grains per gallon, and the lowest 13.2 grains, the mean being 18.7 grains per gallon. In an experiment in my own laboratory, I found, on March 2nd, 1874, 22.9 grains of solids per gallon; and on the 27th of March of the same year I found 21.7 grains per gallon: as in the case of the New River, these solids consist chiefly of carbonate of lime. The 22.9 grains of solids was treated with a little boiling woter, and yielded up 7.8 grains. The 21.7 grains also yielded up to boiling water 7.42 grains. And here the remark may be made, that in the latter case double as much water was employed as in the former, showing the efficiency of this process. We have, therefore:

	2nd March.	27th March.	
Soluble. . . .	7.8 .	. 7.4	grains per gallon.
Insoluble . . .	15.1 .	. 14.3	,, ,,
	22.9	21.7	,, ,,

The hardness taken on March 27th was found to be 16.5 degrees, signifying 15.5 grains of carbonate of lime per gallon. I have no determination of the hardness of the water-supply on March 2nd, and so we must confine our attention to March 27th. On this day, at any rate, the carbonate of lime, as measured by the soap-test, was larger than the insoluble residue. The meaning of this circumstance is, that the soluble portion of the solid residuc contains lime-salts. We have, therefore:

Soluble salts (including lime-salts equivalent to about 1.2 grains of $CaOCO^2$) . .	7.4	grains per gallon.
Insoluble salts (mainly $CaOCO^2$) . .	14.3	,, ,,
	21.7	,, ,,

And here attention may be called to the confirmation which is afforded by the "permanent hardness". In 1865, Frankland found the permanent hardness of Thames water always sensibly greater than that of New River; the mean "permanent hardness" of Thames water being 4.3 degrees, that of New River was found to be 3.6 degrees. The explanation why waters sometimes exhibit a degree of hardness in advance of that which can be due to the solubility of carbonate of lime in boiled water, is that such waters contain more permanent acid than is enough to saturate the alkalies proper (*i.e.*, more hydrochloric, nitric, or sulphuric acid than will saturate the potash, soda, etc., in the water). Further determination in Thames water shows 1.2 grains of chlorine and about one grain of nitric acid per gallon. A recent determination of sulphuric acid showed 1.6 grains (SO^2) per gallon.

Guildford New Water-Supply.—According to an analysis of my own in 1871, this water contains 19.7 grains per gallon of solids, whereof 14.7 grains are carbonate of lime, and magnesia is almost entirely absent. In this water, therefore, there are four or five grains of salts of the alkalies per gallon.

Determination of Lime in Drinking-Water.—The usual manner in which the lime in drinking-water is determined is faulty in detail, and is not calculated to yield the most accurate results. The manner of proceeding, as is well known, is as follows. A considerable volume of the water, having been measured or weighed out, is evaporated to dryness in a platinum dish, a little hydrochloric acid having been added, so as to impart a distinctly acid reaction. The residue is then moistened with a few drops of acid, treated with distilled water, and passed through a filter. To the filtrate excess of ammonia is added, and then the liquid is boiled and passed through a second filter. In this way silica, alumina, oxide of iron, and phosphoric acid, are got rid of as precipitates, and the filtrate is next mixed with oxalate of ammonia, which throws down the oxalate of lime; this is then washed, etc.

Now, the two precipitations to remove traces, before the precipitation of the main ingredient of the water-residue, are very objectionable, and involve a sacrifice of accuracy in more ways than one. The plan which I recommend is this: I take 700 c. c. of the water, and, having ascertained that it is quite bright, I add about half a *gramme* of crystals of oxalic acid, and some two or three c. c. of strong ammonia, taking care to have excess of both reagents. Then I stir up and filter through a small filter, and when the filtrate has run through, I wash with a very little distilled water. The filtrate is meanwhile set to evaporate down in a large platinum dish, and is evaporated to 10 c. c. in bulk. If necessary, a drop or two of hydrochloric acid is added, and the liquid is put into a small beaker and mixed with a little ammonia, which will throw down a fresh quantity of oxalate of lime, which is put on a very little filter and washed, and the filtrate and wash-water sent through this filter should not much exceed 30 c. c. altogether.

By this manner of operation we gain several advantages. We precipitate most of the oxalate of lime in very dilute solution, and ensure the completest washing. At the same time, by making the second minute precipitation, we avoid the great disadvantage of complete washing—viz., loss of some of the precipitate in virtue of its solubility. Inasmuch as the second precipitate is very small in quantity, and in very little bulk of liquid, we can make a very minute filter serve to retain it, and can make a very little wash-water serve to wash it several times.

The question of the carrying down of silica, etc., along with the oxalate of lime, is best reserved; and after the oxalate has been converted into carbonate of lime, or into sulphate of lime, and weighed, a correction may be made, if necessary, for traces of these substances.

Magnesia.—There can be little doubt that the magnesia in drinking-water is, as a rule, very badly determined. The second precipitate of oxalate of lime is, in the ordinary way of analysis, very apt to be confounded with the magnesia. The only special directions which I have to give are, that, having separated the second precipitate of oxalate of lime, the filtrate, which is small in volume, is to be mixed with a slight excess of phosphate of soda and a considerable quantity of strong liquor ammoniæ, left to stand, and the resulting ammonia-phosphate washed, dried, ignited, and weighed.

Alkalies.—Evaporate a considerable bulk of water down to dryness in platinum in the water-bath; treat the residue with a little boiling water, filter and wash; treat the filtrate with a slight excess of baryta-water (to precipitate magnesia), filter, concentrate in platinum, and then precipitate with a little carbonate of ammonia (to remove baryta and lime), filter and evaporate the filtrate to dryness, ignite gently, and weigh. Notice whether the weighed residue is sensibly alkaline, and if it be so, acidify with a drop of hydrochloric acid and water, dry down in the water-bath, heat to low redness, and weigh. The alkalies will be in a state of chlorides, and may be further investigated in various obvious ways.

NOTE ON HÆMATOMA OF THE EXTERNAL EAR.

By WILLIAM P. PHILLIMORE, M.B.,

Superintendent of County and Borough Asylum, Snenton, Nottingham.

Since the name of this disease, hæmatoma auris, with its synonyms, has been placed second on the list of diseases of ear in the official nomenclature now in use, the attention of the profession has been more prominently directed to it. Hitherto the notices and descriptions of the affection have more frequently emanated from medical men engaged in the treatment of the insane than others, but its study is of equal importance and interest to those employed amongst the general public. The papers upon this subject, published in the British Medical Journal, are calculated to revive inquiry, which is the more needed from the circumstance that, while some pathologists hold that it is a morbid condition observed as an intercurrent phenomenon of cerebral disorders, others contend that its presence is due to physical injury, and as such preventable.

Mr. Cobbold, in his concise account of a dissection, published in the British Medical Journal, 18th October, 1873, says, "I do not find in the essay by Dr. Stiff any account of the *post mortem* examination of hæmatomatous ears". He refers to an article published by myself in the *British and Foreign Medico-Chirurgical Review* for January, 1858, p. 223, which was illustrated by engravings of the several stages of the lesion in living subjects, and he has doubtless overlooked a second and supplementary essay of mine in the British Medical Journal of August 1st, 1863. In this number the *post mortem* results are given, and coincide substantially with Mr. Cobbold's investigation, namely, ossification with presence of Haversian canals. Of this there can be no doubt, as the dissection was most carefully conducted by the late Mr. Toynbee of Savile Row, a great authority on aural diseases. That gentleman wrote to me in October 1859, stating that he was working at a book, to be brought out in parts, entitled *Illustrations of the Pathology of the Ear*, and asking for drawings and specimens of hæmatoma. In December of the same year, I had an opportunity of obliging him, and did so upon the occasion of the death of a patient, whose ear is engraved at page 223 of the *Review*, in the paper first referred to. The lunatic was the subject of acute dementia, admitted into the asylum August 1856. The alleged cause of insanity was the fall of a weight on his head two years previously, but it was subsequently ascertained that he had been intemperate in spirit-drinking. In June 1857, hæmatoma of the right ear supervened without the occurrence of violence. Three months afterwards, it began to subside, and ultimately the fluid became absorbed, leaving the ear shortened, narrowed, thickened, and inelastic. Two months prior to his death, in December 1859, from general paralysis, the left ear also showed signs of congestion and induration. The following is Mr. Toynbee's description of the dissected specimens, which he produced to the Pathological Society on 17th January, 1860.

"The right ear was so very much thickened as to have lost its normal appearance; the only portions of cartilage which were not greatly thickened, were the tragus and the thin narrow slip at the posterior margin forming the helix. Upon making a section of the cartilage, it was found in some places half an inch in thickness, but not harder than natural. This thick part of the cartilage did not present any appearance of a cyst, and under the microscope was observed to consist of hypertrophied cartilage-cells and intercellular matter. In some parts, this cartilage was converted into true bone, containing Haversian canals and well defined cells. This ossific matter was also found in the left ear, which was scarcely at all deformed, and had not passed through the cystic stage of the disease."

I may remark that I have never observed hæmatoma unless accompanied by disease of the brain or its membranes, and in no case upon the posterior surface of the pinna or in the lobule. Dr. Brown-Séquard has found that injuries to the corpora restiformia cause hæmorrhages of the external ear in guinea-pigs.

OBSCURE CASES OF SPINAL AND THORACIC DISEASE.

By WILLIAM JELLY, M.D., Madrid.

I WISH to place the two following cases before my medical brethren in Great Britain, in the hope of obtaining other opinions in reference to diagnosis and treatment.

CASE I.—There was brought to my "Consulta Publica", on September 1st, 1872, Elisa Catalá, aged 22, who stated that, during the Revolution of 1868, she was walking with her mother hurriedly through the Calle Arenal (one of the principal central streets of this city), when an artilleryman fired his gun or cannon close to them quite unexpectedly, their backs being towards the butt-end of the gun. She felt herself pinned to the spot in an erect position, not able to move one inch. She was carried to a cab and driven home. She felt no pain or discomfort in any way, only the lower limbs were rigid. Next day she got up all right and went about her duties as usual, feeling only a slight weakness in the left knee and leg. This went on gradually increasing, and the right knee and leg became similarly affected, so that, when her mother brought her to me, at the above date, her acts of progression were performed by a heavy awkward rolling or semicircular movement from side to side, she using all her energy and power to get ahead at all, but without pain in any part. When told to sit down, she dropped heavily on the bench. After some time, I told her to stand up, when she gave a most sarcastic laugh, and said "I can neither get up without help, or stand up without support". I found her utterly helpless in attempting to stand, or to be erect a moment without support. At the same time, I found she could get up with the smallest aid, viz., the tip of the little finger, and could remain erect some time with only the same little aid, and with it she rolled or ambled into the inner room. I had her stripped, and examined her most carefully. I found her well nourished, plump, and round in every part. Sensibility to touch was perfect in every part, from the soles of the feet up to the head on both sides of the body; there was no paresis of the bowels or bladder. The catamenia were most regular; the appetite was excellent; and she was bright, cheerful, and most lively in spirits at all times. On percussing the whole length of the spine rather severely, she said she felt a dullish obscure pain from the eighth dorsal as far as the third lumbar vertebra on each side of the column. Both legs, from the knees downwards, and especially the ankles and feet, were intensely cold. These are the only two abnormal symptoms I can detect in her system up to the present day. Having seen, in various parts of the world, on land and board ship, numbers of gunners and artillerymen with lacerated tympana from atmospheric concussion, I diagnosed this case as rupture of the spinal meninges between the two points above stated from atmospheric concussion. I have treated it accordingly.

Before stating the treatment and results, I would ask whether my diagnosis is correct? If so, is the lesion of all the meninges, or of only one or two of them? If only of one or two, which of them? The family history is excellent. The patient is the youngest twin daughter of eight of a family. The father and mother were still alive, active, and healthy. The treatment consisted of five-grain doses of iodide of potassium with aromatic spirits of ammonia three times a day, with blisters over the suspected lesion, a fresh one being applied after the first had healed. With this she began to improve, and in four or five months lost the heavy rolling gait; her progress was somewhat more direct, but still she had no power to stand alone or trust herself to walk a single step. I then gave her iron and quinine, accompanied with faradisation. In a month she was as bad, if not worse than ever. I discontinued faradisation and gave iron and strychnia with shampooing, when she again plucked up somewhat, lost her ambling, and, when supported, could point her toes a little, but still the want of power and coldness in the legs remained. I sent her to the country, with arsenic and quinine to take, and to continue shampooing. She there fell into the hands of a horrible so-called magnetiser, and returned worse than ever, broken down in health and spirits. I ordered rest and quiet, and gave her solution of phosphorus for a month, without the least impression. I then empirically tried Dr. Harley's doses of succus conii without benefit, and then bromide of potassium in ten-grain doses three times a day for some time without result. I now fully began to feel my absolute impotence in this most interesting case. Every time she comes to see me, when I make the inquiry "How are you?" she, as all Spaniards do, shrugs up the shoulders, and, with a most courteous ironical grin, replies "Lo mismo" (Just the same); at this moment she is sitting before me smilingly happy. About two months ago, I drove her out a little way, and got her out of the carriage to try to walk her over a rough cobble-stone path. She fell twice in a peculiar way; she seemed to twist round on the heel of the left foot, making half a turn of the body, and falling on the right side. To get her again into the carriage was a great trouble; it took myself, coachman, and another, to place her in; she could not get in her right leg. I had to use all my strength to put her leg safely in; she felt no pain whatever, and rather seemed to enjoy the whole affair. Her sleep has never been disturbed a single night; and, with the aid of the tip of a finger and her eyes closed, she can stand or hobble along as if her eyes were open. If she sews a long time, her arms feel weak and her eyes fail, so that she cannot thread her needle. To sum all, I must express my deep regret at being able to do so little for this most interesting case. After twenty-eight months' constant care and supervision, the only improvement noticed is the loss of the heavy rolling side-to-side movement; when walking, she points her toes, but the exertion required in walking is all she possesses. Her health is now all that can be desired, but she has no power to stand or walk alone. I shall feel deeply grateful if some of my brethren in England could throw some light on this stubbornly obscure disease, and devise some plan or remedial measure that I could adopt for her relief or recovery.

CASE II.—On March 5th, Don Angel Muñaroz, a student in pharmacy from Navarre, aged 23, came to my "Consulta" with the following statement. He had slight short cough. He said he had pneumonia six years ago, but felt otherwise quite well. His appearance was typically healthy for a Spaniard; he was fair, ruddy, tall, and stout, quick in movement, and in high spirits. He could walk eight or ten miles without fatigue, walk up hill, or take a day's shooting without inconvenience; but for the last four years, every day at 11 A.M., and during the hot weather at 5 P.M. also, he spat up, without coughing or vomiting, in one great mouthful, something which he said was sweet. Unless the same fluid came away every day, or if it should be retained an hour longer than the above periods, he felt rather uncomfortable, and could not eat his full meal. I examined his chest most carefully, and found it well developed in every point; there was a little bulging over the base of the heart; on measurement, I found the left side of the thorax an inch and a half wider than the right. The percussion-sound was normal in the back and front; breathing was perfect. The apex-beat of the heart was four and a half inches below the nipple, and a little to the right; the heart-sounds were normal. Nothing was revealed by auscultation. I told him to come to me the following day at 10.30 A.M., so that I might see him discharge his "sweet stuff". He came; and, at 11 A.M., I got him to perform. He put a basin which I brought him on the floor, inclined his body forward, and discharged easily, at one large mouthful, about three and a half ounces of healthy pure pus. He never has had a rigor or chill, or ague, nor sweats. Whence can this pus come, with such regularity every day for four years, the patient being without cough, or vomit, or wasting, but in the best of health? Can it be abscess in the œsophageal tube? It is assuredly not in the bronchial tube, or any of its appendages, above or below.

ON PERCHLORIDE OF MERCURY IN THE DIARRHŒA OF TYPHOID FEVER.*

By T. L. WALFORD, M.R.C.S.Eng., Reading.

CASE I. On November 27th, 1873, Matthew F., aged 20, was admitted into the Fever Hospital of the Reading Union, with typhoid fever, having been ill one week. The treatment consisted of acetate of ammonia and a chloral draught at bedtime, milk and beef-tea, a poultice over the ileo-cæcal region, and five grains of powdered rhubarb, with two and a half of soap, in two pills at bedtime. The symptoms of typhoid fever were distinct; the relaxed condition of the bowels and the character of the stools being such as are commonly observed in the disease.

On the 29th, he had four grains of blue pill at night, and a draught of rhubarb and sulphate of potash the following morning.

On December 3rd, he took a few grains of the bicarbonate of potash, instead of the acetate of ammonia, the relaxation suggesting the alteration. On December 5th, he had diarrhœa mixture, without opium, four times in the twenty-four hours. On December 6th, he had it only twice.

On the 7th, it was omitted. The semifluid condition of the alvine discharges had given place to a more solid state. But the quantity seemed enormous—large in form, and as if passed through the canal without having been acted on. His state otherwise had so much improved that he was allowed fish, middle diet, milk, and beef-tea.

On the 13th, diarrhœa mixture was ordered once in the twenty-four hours.

On the 17th, he had ammonia mixture twice, and was allowed to be dressed and lie outside the bed.

On the 21st, he was ordered to bed again, in consequence of pain and swelling in the right leg, with tenderness on pressure of the calf towards the bone; and a poultice was applied.

On December 27th, he was ordered bark mixture twice, and was allowed to get up again. On the 29th, he was again confined to bed, as the left leg now became affected with swelling, tenderness on pressure, and pain. Once in two nights he took the rhubarb and soap pill, the quantity of large solid stools leading to their use.

On January 2nd, two drachms of castor-oil were given; it being hoped thereby to clear out the bowels and bring about a more healthy state of the excretion. It may be remarked here that the natural odour of stools had not been observed. On the 6th, he was permitted to get up again; but on the 8th, the condition of the limb was such that the poultice was removed. The quantity passed from the bowels being so large, it appeared to me desirable to find some means of acting upon the mucous membrane of the intestines, and, calling to mind the ulcerated condition of the lower end of the ileum or the colon, I resolved on trying one drachm of the liquor hydrargyri perchloridi every twelve hours. This was on the 8th. On the 10th and 12th, it was continued. On the 14th, it was suspended; and on the 16th, he was allowed to get up. Two days after the commencement of the perchloride, the stools altered most manifestly. The quantity was nothing like so much; there was no appearance of undigested food; the fæcal odour returned, and he went on uninterruptedly to regain his strength, and in due time left the house to earn his living.

CASE II. On January 8th, 1874, Charles W., aged 29, was admitted with typhoid fever, having been ill seven days. He had acetate of ammonia mixture and fever-diet. On the 10th, he took four grains of blue pill and one and a half of ipecacuanha, followed by the sulphate of potash and rhubarb draught in the morning. The bowels were cleared out, and that is all that could be said. On the 13th, no improvement having taken place in the quantity passing from the bowels, and there being hepatic fulness and tenderness on pressure, four leeches were applied, and a grain and a half of calomel with four grains of blue pill, followed by the above-mentioned draught, were given. The leech-bites bled freely, and the medicine acted well, with evident relief to the febrile symptoms, but without any impression on the quantity and number of the alvine discharges. He was ordered the potash mixture; and on the 16th, he wanted something solid, and was allowed some bread and butter and some rice. On the 17th, 18th, and 19th, the general condition was improving, but the bowels continued to discharge the same unnaturally large amount of ill digested excreta as in the former case. We had arrived at the eighteenth day of the case, but the radically typhoid condition of the intestines seemed no better. Remembering the happy termination of the first case, I ordered one drachm dose of the solution of perchloride of mercury every twelve hours; and continued it through the 20th, 21st, 22nd, 23rd, and 24th, when it was taken only at night, and discontinued on the 26th. He had taken twelve doses, and it was reported that there was no evacuation yesterday, and one this morning, natural. On the 24th, he was given fancy diet. On the 28th, he had the acid mixture, which, after two days, had to be suspended. On February 1st, there being a slight return of the diarrhœa, he was ordered the perchloride for three doses. On the 7th, he was sent to the General Infirmary, and in due time left the house well and able to work.

Such are the facts which I think it right to bring before you. I am aware they are but *two*—some may say they are not facts at all. I can only, in reply to such a denial, say, that time of administering the perchloride was a very fortunate hap for me, if its use were not the cause of the change which followed. I must, however, be permitted to add, that I see nothing unreasonable in the reasoning which led to the adoption of the practice. We all admit the special properties of different drugs and chemicals, whether we be solidists or humoralists, and this surely involves the capability of the different structures of the body being acted upon by the special properties of drugs.

At any rate, I hope the practice will not seem so unreasonable but that gentlemen will make trial of it. I have only to remark that, should any be induced to try it, they should not do so before the third week. Should experience allot it any value, then the propriety of giving it earlier may come to be considered.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. THOMAS'S HOSPITAL.

CASES UNDER THE CARE OF DR. MURCHISON.

WE are indebted for these notes to Mr. DONKIN, Resident Clinical Assistant.

Typhoid Fever: Death from Perforation of the Bowel at the End of Seven Weeks.—A stout woman, aged 44, was admitted on December 12th. She stated that she had suffered from "winter cough" for ten years, but that otherwise her health had been good. She had been ailing a little about two months, but only took to her bed about three weeks before admission, complaining of fever, aching in the limbs, insomnia, and rapidly increasing weakness. Her bowels had been relaxed, at first six or eight times a day, but less often lately. During the last fortnight, she had wandered at night, and latterly had become deaf.

On admission, the patient was deaf and stupid; pulse, 110; temperature, 102.8 deg.; tongue furred and dry; sordes on lips. There was a moderate amount of bronchitis, and a mottling of the skin over the abdomen, but no distinct rash.

A few days after her admission, the fever began to abate; and on the 18th, her temperature was normal, and the patient felt much better.

On December 28th, she was complaining of hunger, and was evidently in process of convalescence.

On January 2nd, as she continued to improve, she was allowed meat diet. During this time, she was troubled with constipation, and required occasional doses of castor-oil; there was no tenderness anywhere in the abdomen.

On January 7th, the patient was not so well. Pulse, 100; temperature, 104 deg. (at 11 A.M.); tongue furred. The bowels were somewhat relaxed; they acted three times on the 6th. She did not complain of any pain.

Next day, she was again worse; the tongue was dry and furred; the bowels were still relaxed; and she had great pain in the abdomen. Vomiting next supervened, and the patient gradually sank, and died on the 13th.

At the necropsy, signs of general peritonitis were found, most intense at a point nearly under the umbilicus. On injecting water into the duodenum, a small perforation of the small intestine was found near this spot. On opening the bowel, about twenty ulcers were found spread over the lower three feet of the ileum. Those close above the ileo-cæcal valve were shallow and nearly cicatrised; those higher up were deeper, with thickened and somewhat undermined edges, but with the floor clean and free from sloughs. The perforation was in the floor of an ulcer about two feet above the valve, and near this were two others, of which the floors were composed of little more than peritoneum. All the ulcers were irregular in shape; some were round, and some oval, with the long axis across the gut; they measured generally from half to three-fourths of an inch in diameter, and were all situated at the point most remote from the mesentery. The mesenteric glands were only moderately enlarged.

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* Read before the Reading Pathological Society.

Dr. Murchison remarked that there were two symptoms which, when they occurred in a patient recovering from enteric fever, should always excite a feeling of caution. These were, constant tenderness at some points in the neighbourhood of the right iliac region, and persistent, even though slight, relaxation of the bowels. If either of these symptoms were present, the patient should be carefully watched, kept very quiet, and strictly dieted. In this case, these symptoms were absent; the patient was, without the least warning, seized with acute peritonitis just three weeks after the commencement of convalescence. He had met with cases in which even a longer interval had elapsed. Accidents of this kind after typhoid fever were not so rare but that the possibility of their occurrence should always be borne in mind, and a somewhat guarded prognosis given accordingly.

Case of Pyæmia Simulating Ague: Recovery.—A man, aged about 30, was admitted on December 10th, 1873, for "ague". Four years previously, he had suffered from real tertian ague, which was cured by quinine. On admission, the patient said that the attacks began on December 2nd, and had occurred every other day since; but the periodicity had not been absolute—the fits had not always occurred at the same time of the day. Moreover, he had two on the 8th, another on the 9th, and then none till three days after his admission. His aspect was heavy, and his mind somewhat confused; it was found also that he had a constantly elevated temperature between the fits, and that he had a small abscess in the ball of the left thumb, one on the right little toe, and a third on the outer side of the right leg.

On cross-examination, it was elicited that, about a month previously to admission, or three weeks before the appearance of the rigors, he had suffered from "a cold in his head", accompanied by acute pain in the right temporal region, giddiness, deafness of the right ear and scanty discharge from it; and that the commencement of the rigors was coincident with the appearance of the multiple abscesses abovementioned. He had not previously suffered from any disease of the ear. Scruple doses of quinine had little effect upon the pyrexia, but when the abscesses were opened it ceased at once, and the patient made a good recovery. The blood of this patient was microscopically examined by Dr. Sanderson and by Mr. Wagstaffe, and was found to contain large numbers of bacteria.

Two other patients were admitted under Dr. Murchison's care about the same time, suffering from the same primary disease; one died of pyæmia with multiple abscesses, and pus was found in the aural cavities. The other case was also fatal, from meningitis.

Double Aortic Disease, with Severe Angina Pectoris: Marked Relief from Nitrite of Amyl.—The patient was a stoutly built man, aged 42; he had suffered from heart-disease for nineteen years, and had been subject to attacks of angina for six years; still, he had been able to continue at his work (labourer in a timber yard) until two years ago, when the attacks became so frequent and severe that he was obliged to give up. When he was admitted into St. Thomas's, there was great cardiac hypertrophy, the area of dulness measuring five inches transversely, and there was a loud double murmur audible all over the front of the chest, but loudest over the aortic valves. The attacks of angina came on almost daily, sometimes two or three times a day; they were characterised by urgent dyspnœa, cardiac palpitation, sweating, and intense pain in the cardiac region shooting down the left arm. This lasted from twenty to thirty minutes, and was followed by a feeling of weakness in the arm.

Many remedies, stimulant and sedative, were tried without success, but the inhalation of five or six minims of the nitrite of amyl at the time of an attack was followed by immediate relief. It not only diminished the severity of the fits, but also their frequency, so that he was free for several days together; and at the end of March the patient left the hospital greatly improved.

In a neighbouring bed was another labourer, aged 35, suffering from the same disease; there was, however, rather more aortic regurgitation; the murmur was chiefly diastolic and the "Corrigan's pulse" very marked. The attacks of angina were, however, precisely similar, yet in this case the nitrite of amyl seemed almost useless. It relieved the symptoms only for a few minutes, and a slight increase of the dose produced disagreeable throbbing in the head, flushing of the face, etc. He became steadily worse, and eventually died.

The heart was found to measure nine inches by five and a half, and weighed two pounds; no other special change could be found to account for the angina.

Large Doses of Arsenic.—In Mary Ward, was a child ten years old, but small for her age, who was taking fifteen minims of liquor arsenicalis three times a day (forty-five minims in all), with the greatest benefit, and without any symptom of arsenical poisoning. When admitted, she was almost covered with chronic eczema. Her mother and a maternal aunt had both suffered from the same disease during childhood. Under the arsenical treatment, the eruption for a time almost completely disappeared, but there were some signs of its returning when the child left the hospital, although there had been no intermission of the treatment.

ABERDEEN ROYAL INFIRMARY.

CASE OF DYSIDROSIS.

(Under the care of Dr. ALEXANDER OGSTON.)

[Reported by Mr. CHARLES BROOMHEAD.]

JOHN SMITH, aged 45, granite polisher, a patient in the hospital, suffering from spinal disease in the upper part of the lumbar region, directed attention to an eruption on his feet on the 9th of March. He said he had often had a similar eruption before, especially in warm weather after much walking and sweating, but never to such an extent as on the present occasion, there having been in previous attacks only a few vesicles scattered over the dorsum of each foot. It had appeared for about a week before attention was called to it, whereas on previous occasions it never lasted more than two or three days, often disappearing in a single night.

The patient said he had nothing to complain of except an extreme itching, which annoyed him very much, and often kept him from sleeping at night.

When first seen, on the right foot the eruption extended from the tendo Achillis, along the inner margin of the foot, as far as the commencement of the first phalanx of the great toe, but it afterwards spread all over the inner side of the toe. A few vesicles and papules were found over and behind the internal malleolus. The dorsum of the foot was covered with them, and while he was under observation it spread over all the toes. On the left foot, the eruption covered pretty much the same extent as on the right, but was rather better marked behind the external malleolus.

Although the vesicles spread over the dorsal aspect of the toes, yet none could be found between the toes, nor on the hard plantar skin of the feet or toes, nor, indeed, was there a single vesicle discernible on any other part of the body. When the patient was dismissed, the eruption was still spreading.

All over the dorsum and sides of each foot there were vesicles, either solitary or in groups, and solitary papules scattered among them. The papules were more abundant around the malleoli on each foot. The number of vesicles in the groups varied from six to sixteen, but there was a greater number in the group on each great toe. Commencing behind the external malleolus, and extending forwards along the dorsum of the right foot, there was a group of vesicles, four inches long by one broad. On the inner side of the metatarsal bone of the great toe of the left foot, a group ran together forming a bulla, which was the only one on either foot. The vesicles varied in size from small pin-heads up to sago-grains. Some of them had red bases, while the skin beneath the rest was quite natural. They looked like boiled sago-grains shining through the skin, and were *distinctly raised.* When the vesicles were pricked they collapsed, and a clear fluid exuded, while a continuous oozing took place from the bottom of the vesicles, which clearly showed that the vesicles were formed by the distension of the ducts of the sweat-glands. The fluid had an alkaline reaction. There were no crusts, the fluid in the vesicles remaining quite clear till it dried up or escaped, when the cuticle in the neighbourhood shrivelled and peeled off.

The patient was dismissed, about a fortnight after the eruption first made its appearance, with orders to wash his feet well with soft soap and water. He returned in about a week; and the eruption had entirely disappeared.

The eruption was evidently a case of dysidrosis, similar to that related by Dr. Tilbury Fox in the BRITISH MEDICAL JOURNAL of September 27th, 1873, but differing from it in many respects, viz., by the feet alone being affected, by the absence of the eruption on the plantar aspect, between the toes, and of the small white patches at the junction of the toes with the feet, by the absence also of bullæ, by the sweat-follicles being raised, and, lastly, by the simple means that sufficed to effect the entire removal of the disease in so short a time.

The means that effected a cure clearly shows that the disease is just a disordered condition of the sweat-follicles, produced by the secreted sweat not finding proper means of escape, thus obstructing the flow of the perspiration, and causing distension of the follicles.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, April 1st, 1874.

E. J. Tilt, M.D., President, in the Chair.

Five-and-a-half Months' Fœtus.—Dr. Edis exhibited for Dr. George G. B. Willing of Great Wakering a fœtus presumed to be of only five months and ten days, dating from the last catamenial period. Premature labour resulted from a fall a week previously. "Immediately the child was born, it cried so loudly that it was heard distinctly downstairs, and continued at intervals to cry as loudly as a full-grown infant. It was fed by a spoon with gruel, which it took without any trouble; but it could never be made warm; indeed, it was almost stone cold. It passed meconium, but no urine. The eyelids were perfectly closed. Its weight was just one pound and a quarter, and length eleven inches. It lived just forty-four hours." Dr. Willing stated that, in all his practice, extending over twenty-five years, although he had attended between two thousand and three thousand cases, he had never met with a similar instance.—Dr. Barnes alluded to his previous researches, where, on examining the lungs, although the children had cried, the lungs sank in water. The air-cells were not properly developed, and the children were not viable. A child might have potential life, but must breathe to be alive.—Dr. Heywood Smith referred to a case similar to the one narrated, occurring in a patient at the Soho Hospital, where premature labour had been induced on account of cancer of the uterus.—Dr. Wynn Williams related an instance occurring in his practice, where an infant of about five months' gestation had cried after birth, and then died shortly afterwards. In this case, he had given a certificate of still-birth, regarding it as non-viable.—Dr. Savage doubted if a child could cry without breathing.—Dr. Playfair thought there must be air to produce a cry. He alluded to the case of Mungo Park, the celebrated traveller, who had craniotomy performed on him at the time of his birth, but yet lived for many years.—Dr. Cooper Rose remarked that a simple effort at respiration resulting in a sound resembling a cry could hardly be accepted as evidence of a living child; and he instanced a case of craniotomy occurring in his presence, where the brain was utterly destroyed, and yet an effort to cry was made after birth in consequence of the medulla oblongata not having been disorganised. In such a case, no one would certify to the birth of a living infant.—Dr. Routh said that the specimen was one of interest chiefly as bearing on the question of viability, but he could not doubt that, if a child had cried lustily, it must have lived, and he could not agree with Dr. Williams that it should be returned as still-born to save the expense of a funeral. It might not be viable, but it was alive, and, by English law, that was sufficient to prove right of inheritance. Indeed, he believed there was a case in law in which a child moved distinctly after birth, but showed no other signs of life; yet it was adjudged alive, and the father became consequently seized by right of inheritance of considerable property. The Society might remember a case he had brought forward of a child only five and a half months advanced, which had lived eighteen days and then died of atrophy. It appeared to him (Dr. Routh), although, as in this case, viability was impossible if a child only lived a minute, it could not be returned as still-born, it was only a question of degree after all. It would be interesting if a committee could report on this case and ascertain the condition of the lungs as alluded to by Dr. Barnes, as well as the exact age of the child.—The President suggested that Dr. Routh and Dr. Savage should examine and report upon it.

Lying-in Night-dress.—Mr. Stewart exhibited a night-dress, designed at Dr. Barnes's suggestion, for ladies during their lying-in, where frequent changes are necessary without raising the patient. It was entirely open at the back and closed in front, excepting apertures at each breast. The patient being on her back, both sleeves are drawn on the sides, being then tucked under without moving her, except on either side to allow of the dress being buttoned behind. Messrs. Burden and Keir, of 51, Conduit Street, were the makers. Mr. Stewart also showed a legging for varicose veins, substituting a rigid material for the elastic; it was cool and washable, and exerted uniform pressure.

Chloroform Inhaler.—Dr. Thomas Liddard exhibited an inhaler for chloroform alone or in combination with alcohol or ether. It was cylindrical in shape, and divided into two chambers by means of a revolving band, which opened or closed the holes, admitting air to the chambers. The proportion of chloroform inspired by the patient was estimated and regulated. In midwifery, by first setting it to the required strength, it could be safely entrusted to a nurse.

Perforators.—Dr. Wiltshire showed some protected perforators which he had devised. They were modifications of Oldham's and Simpson's perforators, each being furnished with a guard or sheath completely covering the point and blade of the instrument. So protected, it could be introduced into, and withdrawn from, the vagina without the slightest risk of injury to the maternal parts, the guard being withdrawn only when the fœtal head was reached, and, after perforation, being restored before withdrawal so as completely to obviate the possibility of injury to the mother. The instruments were quite powerful enough, though considerably lighter than the unprotected perforators now in use, and they could readily be cleaned, the guard being movable.—Dr. Heywood Smith spoke of the advantages of the point being curved.

Puerperal Thrombosis.—The adjourned discussion on Dr. Playfair's paper on Puerperal Thrombosis then took place. A short abstract was read, briefly referring to the principal points of interest. The term thrombosis was applied to blood-coagula formed at the point where they were found, embolism to travelled blood-clots impacted in a distant vessel. Every case of embolism, therefore, necessarily implied an antecedent thrombosis. Phlegmasia dolens he regarded as one only of the local manifestations of puerperal thrombosis. As regards the pathology, he held that, although there was obviously something beyond mere obstruction of the vessels requisite to account for the peculiar form of swelling, yet that was the principal and primary morbid state. He then alluded to the conditions favouring the coagulation of the blood in general, showing that these were all present to a remarkable degree in the puerperal state. He believed in the spontaneous origin of pulmonary thrombosis; in these cases, death generally ensued before the fourteenth day, whereas, in true embolism, death occurred at a remote period after delivery. The history and symptoms were then considered, as also the possibility of pulmonary obstruction occurring without proving fatal, several illustrative cases being given. The existence of a blowing murmur over the site of the pulmonary artery was insisted on. The mode of death was next considered. Virchow attributed it to syncope, Panceau to cerebral anæmia; Paget to an altogether peculiar condition—in some respects resembling anæmia, in others syncope; Dr. Playfair endeavoured to support Berlini's views that it was referable to apnœa. The *post mortem* appearances and treatment were also given.—The President referred briefly to previous speakers' remarks, and cited the clinical history of a case in Dr. Fordyce Barker's work on *Puerperal Diseases.*—Dr. Savage had been an attentive listener to Dr. Playfair's paper, but had failed to discover anything in it which had not been already discussed and recorded. He should regret having moved for the adjournment, if the discussion must be limited to puerperal phenomena. The subject was a wide one, and could not, with profit, be partially entertained. Thrombosis, embolism, and Virchow were, of course, inseparable; but, in the present communication, he thought the germ of Virchow's doctrine was altogether omitted. Embola, Virchow said, except under special circumstances, did not come from the primary thrombus, because it entirely stopped the blood-stream; but, should it project, as it often did, into a larger vein, of which it was a branch, the blood-stream through the latter rapidly deposited upon it a succession of thrombus-layers; from this secondary thrombus, the embolic particles were derived; they were, in fact, carried on by the blood-stream to the right heart, and so on to the pulmonary artery and its primary branches, with the usual now well known consequences. Dr. Playfair, however, was in antagonism with Virchow; he had, after much research, traced out twenty-five cases of pulmonary embolism, ten of which were not peripheral; but he omitted all mention of the multitude of Virchow's cases, proving the prevalence of this source of the disorder. In the year 1855-6, Virchow, owing to a puerperal epidemic which lasted quite a year and a half, had under his immediate notice a multitude of fatal cases; in every one of these, attended by pulmonary embolic complications, he found pelvic venous thrombus, more or less; moreover, the character of the embolic particles in the pulmonary artery always corresponded exactly with that of the pelvic thrombus. By way of crucial test, particles of brain and other substances were introduced into the jugular veins. The same substances composed the embola subsequently found in the pulmonary arteries. A secondary thrombus as large as the thumb might be derived, Virchow said, from a primary thrombus in a vein no larger than a knitting-needle. Dr. Playfair's ten exceptions might, after all, have been peripheral with the primary thrombus overlooked. In a recent railway accident, the subject of the injury died rather suddenly forty-eight hours afterwards; a piece of crushed liver was found blocking up the pulmonary artery, and, equally, it was possible that the secondary thrombus might become loose and pass bodily up the vena cava. The peripheral production of pulmonic embola need not be a slow process, as stated in the paper; an idea that it must be slow seemed at the root of Dr. Playfair's chief difficulties, assuming that his cases were really thrombic—a conclusion by no means well warranted, and not at all in accordance with the necessary import of dyspnœa in the eyes of the experienced practitioner; but Virchow did not assert that pulmonary embolism must have a peripheral origin; any of the few minor cardiac veins opening into the right auricle might be the seat of the primary thrombus, and give rise to a large secondary thrombus within the auricle. Nor did the doctrine exclude primary heart-thrombuses, such as had been recognised from the time of Dioscorides, and, for the last half-century, distinguished in text-books as *post mortem*, *in articulo*, and *ante mortem* thrombi, the latter agreeing with the false polypi of Laennec. Dr. Playfair considered phlegmasia dolens as "correlated"; that is, that it came under the thrombic class of affections. This was precisely the view of it taken by Davis in 1822, and more emphatically established by Robert Lee some years later; that pathology of it has stood its ground ever since. Dr. Playfair had omitted septic and non-septic uterine venous thrombi from the "correlation". In a paper of this length, some notice might be expected to be taken as to the rarity of pulmonic complication with phlegmasia dolens, the frequency of it in the worst forms of septic uterine thrombus, and the liability to ordinary pulmonic embolism in non-septic uterine thrombus. Another point not yet, perhaps, entirely cleared up was the invariable congestion of the pulmonary arteries and capillaries on the distal side of the embolic plug or plugs. Was Dr. Playfair satisfied with Ludwig's explanation?—Dr. MADGE observed that, although he had attended three thousand cases, he had never met with a case of thrombosis. He thought the analogy between phlegmasia dolens and thrombosis rather a forced one.—Dr. RICHARDSON, who had been invited by the President to take part in the discussion, commenced by expressing his thanks for the friendly and able manner in which Dr. Routh had mentioned him and his early labours at the previous meeting. He then proceeded to vindicate the English School of Medicine for the advancement it has made in the knowledge of this subject of separation of fibrin in the body during life. The study was as essentially English as was the discovery of the circulation of the blood, of which, indeed, this was but a corollary. This position was briefly, but forcibly, maintained by reference to the different authors who, commencing with William Gould in 1684, had continued up to the present day. Referring to his own observations, which were first brought before the Medical Society of London in the session of 1850-1, and which had been followed up to the present time, Dr. Richardson described, from his experience, the conditions that lead to separation of fibrin within the circulatory channels during life, especially the two conditions of cachexia and acute pyrexia. The physical qualities of the fibrinous separation varied in respect to the amount of water from 3 to 30 per cent. The cause of the separation of the fibrin was noticed as a disturbance in the relations which naturally subsist between the fibrin and the water of the blood—a disturbance that might be excited by increase of water and by increment of heat in the blood. Whatever led to these two conditions favoured the process of separation, and when, in addition, there was obstruction to the due course of the blood, so that there was friction of blood at some particular point, the separation was all but inevitable. The action of an organic or septic poison might produce conditions leading to separation; but the same condition, as Dr. Richardson had shown experimentally in 1854, might be induced by other causes and with the same secondary results; viz., the separation of fibrin. From the author's experience of cases of this in the human subject, he estimated that the separation occurred on the venous side of the circulation in not less than six cases to one in the arterial. After describing the different forms of separated fibrin found in the venous system, in the heart, and in the pulmonary artery, viz., the solid, the spiral, and the hollow cylinder, the layer or false lining, the irregular mass loose or moulded to the part from which it was taken, Dr. Richardson maintained still the view he had held all through the course of his labours that, as a rule, the separation took place on the venous side at the spot where it was found. In the numerous inspections he had made of fibrin separated in the pulmonary artery after death by surgical fever, pneumonia, the puerperal state, and various other forms of death, he had not in a single instance been able to come to the conclusion that the fibrinous mass had been carried from a distant part of the venous circuit. On the contrary, he had always discovered the clearest evidence of formation *in situ*. He had found, in some instances, separations in other parts of the venous circuit; he had seen such a case within the last few weeks; but these separations were coincident; they, too, were formed at the places where they were found, and they indicated only a general condition of blood favourable to separation. On the question of diagnosis of separations of fibrin in the pulmonary artery and in the venous circuit, Dr. Richardson entered into careful detail. He first defined a class of cases in which the symptoms of separation were simulated, and afterwards the symptoms, general and physical, that lead to an absolute diagnosis. The mode in which cases terminated when the obstructing fibrin was on the right side of the heart and in the pulmonary artery was varied; unfortunately, it was almost always at once fatal; but he had records of other modes of termination; one in which the obstruction produced œdema of the lower extremities and a lingering death; others in which the separated substance was retained in the heart for a long period of time, killing at last suddenly by obstruction to the course of the blood; lastly, in three cases, he had seen what he believed to be actual recovery by the resolution of the separated fibrin. In concluding his observations, Dr. Richardson dwelt on the subject of treatment. Opium, excess of wine or brandy, and movement of the body he held to be injurious, and even dangerous, methods of treatment. The plan he pursued was to maintain perfect rest of the body in the recumbent position, to reduce the temperature by iced drinks, and to sustain by milk and soda water. Medicinally, he administered ammonia in ice-water until it suspended the coagulability of the blood, and he kept this action up by large and frequently repeated doses. From fifteen to twenty minims of the strong solution of ammonia, or, better still, the strong alcoholic solution of ammonia, might thus be administered in the course of every two hours in divided quantities, and the effect might be sustained until the blood-corpuscles began to show signs of solution. The details of two severe cases thus successfully treated were related, and those of a third case, in which, although death took place from secondary lesion, the effect of the alkali in resolving the fibrin was well marked. It was not assumed by the author that, under this treatment, a majority of affected persons would recover; but the practice was simple and sound, and, in every clear case, if commenced early enough and persisted in firmly, would at least save some from what was otherwise inevitable death. For this reason, he pressed it earnestly on the attention of the Society.—Dr. PLAYFAIR said that any reply to the observations that had been made seemed unnecessary. Dr. Savage had found fault with his paper, as treating of a subject which he seemed to think was exhausted. So far was this from being the case, that there was not a single English text-book on midwifery in which it was even alluded to, not even in the recent and admirable work of Dr. Leishman published only a few months ago. Indeed, the present paper was the first attempt to collect together the information which existed in regard to thrombosis and embolism in reference to the puerperal state. It showed he remembered that Virchow's writings referred to the subject in general, not to its obstetric relations; and, when the paper was written, Dr. Fordyce Barker's work had not appeared. He (Dr. Playfair) contested Virchow's view as to the invariable embolic origin of pulmonary and cardiac clots, and to this Dr. Savage took exception. He was gratified to find, however, that he had Dr. Richardson's high authority in support of his view. There was little in Dr. Richardson's remarks that called for comment; they contained nothing in opposition to what was stated in his paper. With regard to the ammonia in the blood maintaining the fibrin in solution, Dr. Richardson's remarks showed that he had abandoned the theory. The administration of ammonia on the hypothesis that it would aid the solution of the fibrin already deposited, was an entirely different thing, and, on that ground, the remedy might be well worthy of trial in future cases.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, JANUARY 16TH, 1874.

JOLIFFE TUFNELL, Esq., Vice-President, in the Chair.

Rupture of Bladder.—Dr. MORGAN showed the bladder of a man, who had fallen forward, while partially intoxicated, some days previously. On the next day, he was admitted to Mercer's Hospital, and four or five ounces of bloody urine were drawn off. He died on the sixth day from admission. At the *post mortem* examination, evidences of old disease of the bladder, and of a partial urethral stricture, were found. In the vesical wall, a long rent had occurred. There was no very intense peritonitis.

Fatty Tumour (?) of Thigh.—Mr. ORMSBY exhibited a large tumour, which he had removed from the internal and superior aspect of the right thigh of a man, aged 36. Eighteen months before, the patient had first noticed the growth, like a small "kernel". It grew with regular rapidity, painlessly, and without constitutional symptoms. Its deep attachments to the gracilis muscle were firm. It was about as large as a goose-egg, weighed 1 lb. 2 oz., and presented the naked-eye appearance of a fatty tumour. There was no history of injury.

Laryngo-Tracheotomy in Syphilitic Disease.—Dr. MORGAN read a paper on this subject. The larynx became first the seat of ulceration, and subsequently of gummatous deposits. To this latter condition acute œdema might succeed, or the ulcerated surface might give way. The resulting dysphagia was more marked in the case of fluids, which trickled down into the rima glottidis; while more solid, or pasty, substances passed down the pharynx and œsophagus. The author then described a case at length. The patient, a woman, with a syphilitic history of eight or nine years' duration, was in imminent danger of death from inanition. The base of the epiglottis had ulcerated away, and this structure lay hanging over the orifice. The surrounding parts, including the rima, were bathed in pus, and there was gummatous deposit in the soft palate. Immediate relief followed the operation of laryngo-tracheotomy. By the aid of the laryngoscope, caustics were applied; the ulcerations healed, the wound closed, and the patient left the hospital well on the twenty-sixth day. A somewhat similar case was treated constitutionally, but without operation, and the discomfort still remained. A third case proved fatal two days after the laryngo-tracheotomy; the ulceration had extended far down into the trachea, and gummata were also present in the liver. In a fourth case, similar to the first, the larynx was extremely sensitive, and the patient was *in articulo mortis*, having, indeed, ceased to breathe when the operation was performed. On September 1st, Dr. Morgan dilated the lungs by insufflation, and the woman rallied. On October 16th, she gave birth to a six-months' child, but died suddenly at the end of nine weeks, apparently from spasm. There was some narrowing of the trachea, from thickening of the mucous membrane and submucous tissue, the result of prolonged inflammatory action. The author believed that the operation was often too long postponed.

Sarcoma Testis.—Mr. TYRRELL described a case of "spindle-celled" sarcoma of the testis. A farmer, aged 45, married fifteen years, and father of five children, had a small scrotal tumour on the left side. It was not translucent, and there was no enlargement of neighbouring glands. Mr. Tyrrell strapped the testicle with emplastrum ammoniaci cum hydrargyro, and gave the man one-sixteenth of a grain of corrosive sublimate twice a day. After fifteen months, he again came under observation, and on September 24th, 1873, Mr. Tyrrell operated. A portion of omentum was attached to the tumour, having apparently been carried down with the testicle, in its descent from the inguinal canal. Mr. Tyrrell tied the portion of omentum with carbolised catgut, and gave opium freely. No bad results followed, and twenty-five days afterwards the man left for his home. The author had removed the testicle on four occasions, without pyæmia, tetanus, or even severe pain.—Mr. FLEMING and Dr. MONTGOMERY WARD made a few remarks.

The Physiology of Pyrexia.—Dr. CORLEY exhibited two *post mortem* specimens of the spinal cord, after injury in the region of the fifth cervical vertebra. He said that he had been generally led to believe that there was a heat-regulating portion of this nervous centre, injuries of which were attended by peculiar calorific symptoms—symptoms varying much in presence, absence, and degree. Pathological observation and physiological experiment had led him to conclude, that the immediate governance of those nutritive changes, which resulted in increased disintegration of tissue, and consequent elevation of temperature, resided in a portion of the spinal cord, coincident *quàm proximè* with the cilio-spinal region of Waller and Budge—that is to say, from about the third cervical to the fifth or sixth dorsal vertebra; that this function had its origin in the grey matter of the cord; and that the peculiar nature of the injury could in no way explain the variability of the subsequent symptoms. Thus, if the cord in this region were simply cut or torn across, no heat-phenomena could result; but if it were partially divided, and if some permanent source of irritation, such as pressure of a spiculum of bone, or of effused blood, should remain, the remarkable increase of temperature might be looked for with certainty. Generalising from these observations, without denying the existence of an original blood-poison in fevers, he considered that the subsequent calorific symptoms could be explained most rationally, by assuming that the *materies morbi* acted on this particular region of the cord, and increased general disintegration of tissue immediately followed. If the proximate cause of the excessive waste—which was one of the principal (if not the principal) factors in producing the complex phenomena of fever—could be referred to a particular region, the methods of treatment, which aimed at limiting or reducing the waste, whether by "neuro-dynamic medicine", or hydro-therapeutics, would have a more rational basis. Dr. Corley desired the assistance of all those who had opportunities of observing spinal injuries, in noting the variations of temperature, the condition of the urine, and the precise *post mortem* results. His observations made the following conclusions probable. 1. There is a heat-regulating region of the cord, extending from about the third cervical to the upper dorsal vertebræ. 2. This function resides in the grey matter. 3. The effects of injury differ—a simple lesion giving negative results, whilst a continual irritation produces thermal symptoms. 4. Nearly all the phenomena of ordinary fevers may be explained by an irritation, such as a blood-poison, acting on this particular region.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

THURSDAY, APRIL 2ND, 1874.

RUTHERFORD HALDANE, M.D., President, in the Chair.

Exhibition of Pathological Specimens.—Mr. JOSEPH BELL showed a child, aged 2, suffering from a rare Congenital Malformation. The left leg was nearly perfect; the right leg below the knee consisted of only one bone, and the foot was represented by one tarsal and one metatarsal bone, and two phalanges. Both hands were cleft in the middle, the thenar and hypothenar eminences being perfect; but in the right three metacarpals and three digits were absent; in the left, one was absent from the centre.

Dr. P. H. WATSON showed: 1, a fracture of the sixth Dorsal Vertebra, with Myelitis, the result of an accident, followed by death in seven days; 2, a large Fungating Sarcoma of the Scalp, excised with success; 3, the scaphoid, cuboid, three cuneiform bones, and base of the metatarsal bones, removed in the previous week from a lad, aged 18, by Dr. Watson's new operation of Excision of the Tarsus; 4, parts removed by Pirogoff's Amputation; 5, a Molluscous Multiple Tumour from the forehead, closely resembling a cavernous venous nævus with phleboliths; 6, parts removed from the end of the humerus in a case of Partial Excision of the Elbow-joint, resulting from injury and chronic rheumatic arthritis; 7, a Mucous Growth from the posterior border of the septum narium in an infant, which had threatened suffocation, and which he had excised through the mouth; 8, Cast of an Amputation at the Ankle-joint for a cancerous affection of the heel, which had been performed by a triple flap; 9, A Patient on whom, six months ago, Dr. Watson had performed his new operation of Excision of the Tarsus. The patient walked briskly about on her bare foot, which was very little shortened.

Poisoning with Coal-Gas.—Dr. TAYLOR read an account of a case of poisoning with coal-gas. The patient had accidentally been exposed to its vapour in a small bedroom of a hotel for eleven hours. When discovered, he was quite insensible, with slow breathing and tendency to suffocation. His breath had a strong smell of gas. The treatment, which was conducted by Dr. Sanders, Dr. Maclagan, Dr. Coghill, Dr. Taylor, and two students, for more than a day, consisted of cold affusion, dragging forward the tongue, Marshall Hall's method of artificial respiration, nutritive and stimulating enemata, tickling the fauces, galvanism, etc. It was all unsuccessful, and the patient died. No *post mortem* examination was obtained. Dr. Taylor gave calculations as to the probable volume of gas inhaled and its proportion to air, and described other cases which he had heard of, or read of, chiefly in French literature. He concluded by showing the dangers of gradual or rapid poisoning from the prevalent use of coal-gas.—Dr. P. H. WATSON related the case of his coachman and his family, who had been nearly poisoned by the escape of gas into a drain about a hundred yards from the house. He asked why oxygen had not been tried as a remedy in Dr. Taylor's case.—Dr. BALLANTYNE (Dalkeith) mentioned three cases he had seen in London under Dr. Sieveking's care, in which oxygen had been used. All three recovered.

Excision of the Tarsus.—Dr. P. H. WATSON read a paper on excision of the anterior tarsus and base of the metatarsus—a new operation. This operation, he said, was suitable for cases in which the disease was limited to the region named. It involved removal of the segment of the foot lying between the limits of Chopart's and Hey's operations. Theoretically, three questions presented themselves, which only experience in the living body could solve. 1. Will the parts consolidate and make the foot an useful one? 2. Will the foot be extended and rotated, as often happens after Chopart's operation, so as to render the limb useless? 3. Will disease return in the other bones? The experience of six cases in which Dr. Watson had now operated was that all had done well, except one, which had to be amputated, from the wound having been allowed to heal before the deeper parts were consolidated. The operation was performed by two lateral incisions, one on each side of the foot, from which, aided by the thumb-nail as a guide, all the soft parts were very carefully dissected from the bones in question. The tarsal bones were then disarticulated by a probe-pointed bistoury, and then the base of the metatarsal bones was divided by a keyhole-saw. The wound was then tightly and carefully plugged with oiled lint, and the foot bandaged before the tourniquet was slackened at all; the lint plugs were changed daily, with the precaution of continuing them till the deeper parts of the wound gradually became consolidated. —Mr. JOSEPH BELL thought that this operation was a great advance in true conservative surgery. He ascribed the progress lately made in such operations chiefly to the success of the method of stopping bleeding by plugging, and also to the principle in which the best possible egress to discharge was given, by delay in bringing the skin-wounds into contact.—Dr. Taylor referred to a case somewhat similar to those mentioned by Dr. Watson, which he had lately seen in the wards of St. Thomas's Hospital in London.—Dr. Watson said that in another patient he had lately excised the ends of the tibia and fibula, all the bones of the tarsus except the astragalus, and the base of the metatarsus. The case promised well.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

Treatment of Acute Rheumatism by Immovable Bandages.—Dr. Oehme reports, in the *Archiv der Heilkunde*, vol. v, 1873, the observations made by Heubner in the hospital at Leipzic, on the treatment of acute rheumatism by fixing the parts immovably. Similar experiments had already been made by Seutin and Gottschalk; and in more recent times by Concato of Bologna, with good result. Heubner used pasteboard; but for small children and restless patients, the plaster of Paris bandage was necessary. In applying the pasteboard splints, the upper limb was bent at a right angle at the elbow, and the leg was straightened at the knee; the splints were well wadded, and fastened by bandages. The apparatus was generally applied immediately on the admission of the patients, and was allowed to remain, not only until all pain and swelling had left the joint, but until the constitutional symptoms had disappeared, and especially until the temperature had returned to the normal standard. The results of this treatment were extremely favourable as regarded the pain, the fever, and the duration of the disease. Even when the pain had been most severe, the fixing of the part was followed in a few minutes by so great an amount of relief, that the patients were almost free from pain. Of forty-five cases collated by Dr. Oehme, this result occurred in all without exception. After a time, varying generally from one to two days, all pain finally disappeared in the joints which were fixed. The period of final cessation of pain is later in those joints—the hip and shoulder—which cannot be so securely fixed as others. To show the effect on the duration of disease, Dr. Oehme gives tables, comparing forty-five cases treated by fixing the joints with forty-five similar ones treated otherwise. While in the latter the average duration of the pain was 21.75 days, in the former it was only 13.11 days. The treatment by fixing the joints had also a favourable influence on the duration of the fever, which was distinctly shortened. It seemed also as if the fixation of a joint acted as a prophylactic in preventing the other joints of the same limb from being affected. From the observations now made, it may with safety, Dr. Oehme thinks, be asserted that the treatment of acute rheumatism with the immovable bandage reduces the pain to a minimum, shortens the duration of the fever, and essentially cuts short the course of the whole disease.—*Medicin.-Chirurg. Rundschau*, March 1874.

Hydrate of Chloral in Incontinence of Urine.—Dr. E. Vecchietti, in a communication made to the Medico-Physical Society of Florence in December last, after citing the observations of Thompson, Bradbury, and others, on the use of hydrate of chloral in nocturnal incontinence of urine, relates five cases of the malady occurring in his own practice. All had been treated unsuccessfully; and all the patients recovered under the use of rather less than half a gramme (about 7½ grains) of hydrate of chloral, given in a little water in the evening; abstinence from drinks being at the same time enjoined. The effect was rapid, and in most cases permanent after taking the first dose. He explains the action of the chloral by supposing that the bladder is under the influence of two sets of nerves, one connected with the cerebro-spinal system and the other with the sympathetic; that incontinence of urine depends on irritation of the bladder at the same time that the sphincter is withdrawn from the action of the will; and that the chloral reduces the exaggerated excitability of the organ.—*L'Imparziale*, March 1874.

Medicinal Uses of Chloral.—Dr. Joseph Pollak of Salzburg concludes an elaborate paper on chloral hydrate and its uses in medicine, published in the *Wiener Medizinische Wochenschrift* (Nos. 4, 5, 6, 8, and 9, 1874), with the following summary. 1. Chloral is a good hypnotic. In all diseases consisting of or complicated with abnormal irritability of the brain, it tends to produce sleep and tranquillise the patient. 2. It allays pain by producing sleep; without sleep, it has no power to allay pain, and when pain is very intense, it has little hypnotic power. In such cases, it is very useful to combine the chloral with morphia. 3. It relaxes the muscles, single or in combination, voluntary and involuntary; and is an excellent remedy against the most varied forms of convulsion. 4. In cases of diseases of the heart and lungs, with disorder of the digestive canal, it is sometimes inoperative, and sometimes produces unpleasant and even dangerous symptoms; hence it is here either contraindicated, or should be given with caution. 5. In general, it cannot be used as an anæsthetic for great operations. 6. Its continued use is generally not followed by any unpleasant after-symptoms; and if such appear, they are of no importance, as it does not produce congestion of the brain or disturbance of digestion and nutrition. 7. In most diseases in which it is used, it is an excellent palliative, but it has almost no influence on the disease itself. It may be briefly said, that chloral hydrate is especially indicated where morphia would be indicated, except for its unpleasant after-effects. It is contraindicated in diseases of the heart, lungs, and digestive canal.

Subcutaneous Injection of Carbolic Acid in Erysipelas.—Dr. Aufrecht of Magdeburg says (*Centralblatt für die Medicinischen Wissenchaften*, February 21st) that, having last year under his care four cases of erysipelas of the limbs in old persons, in all of which treatment was unsuccessful, he was led to try the effect of carbolic acid. If erysipelas were the result of the entrance of minute organisms into the subcutaneous connective tissue and of their multiplication, and if carbolic acid had the property of destroying such germs, then, he argued, it should arrest the spread of erysipelas. To ascertain that the hypodermic injection of carbolic acid was harmless, he injected into his own subcutaneous tissue six decigrammes (about ten minims) of a one per cent. solution. No local or general disturbance followed. In July of last year, he applied this treatment in the case of a woman aged 56, with erysipelas of the forearm and hand, following a slight abrasion; and in January he used it in the case of a man aged 82, who had erysipelas of the leg after the breaking out of a cicatrised ulcer. In the first case, he injected carbolic acid night and morning for three consecutive days—making five injections in all; in the second, four injections in two days: they were made into the healthy subcutaneous tissue in the neighbourhood of the erysipelatous portion lying nearest to the body. The erysipelas did not spread in the direction of the part where the injection was made; but some isolated patches above the points first injected necessitated the more frequent repetition of the remedy. Not only was the erysipelas arrested, but the fever and the frequency of the pulse were reduced, and the general condition of the patients was improved. The erysipelatous swelling and redness diminished perceptibly, remaining only two days after the injection.

PATHOLOGY.

Tumours of the Spleen in Primary Syphilis.—Dr. A. Weil of Heidelberg, in a short article on this subject in the *Centralblatt für die Medicinischen Wissenschaften*, March 7, remarks that the syphilitic affections of the spleen are numerous. Besides gummata and amyloid degeneration, Virchow described an indurated and a soft hyperplastic tumour, the latter depending chiefly on a multiplication of cell-elements, and indicating a slighter degree of irritation. Some of these diseases may be diagnosed during life with more or less accuracy. Gee, Eisenchitz, and others, have attached especial importance to the presence of splenic tumour as an indication of hereditary syphilis. Dr. Weil says that, contrary to all previous statements, so far as he has been able to find any allusion to the subject, he has ascertained, by palpation and percussion, the presence of enlargement of the spleen during the stage of primary syphilitic induration in three cases under his notice in the hospital at Heidelberg. Two of the patients came into hospital soon after infection, three or four weeks before the first appearance of a syphilitic exanthem; the third had already had a macular eruption for a month before admission. The splenic tumour was well marked in all the patients at the time of their admission. The breadth of the splenic dulness in the axillary was from 4 to 4¾ inches; in front, the dulness extended to the ribs, where in one case the spleen could be distinctly felt. Under antisyphilitic treatment, the splenic enlargement completely disappeared within periods varying from five to ten weeks. As there was no other apparent cause for the splenic tumour, Dr. Weil attributes it to syphilis. He has not found it in cases of blennorrhœa, or of local contagious ulcer; and it is absent in many cases of constitutional syphilis. He believes that the best explanation of the origin of these splenic tumours is, that they arise from syphilitic infection of the blood, and are analogous in this respect to the splenic enlargements arising from the circulation of irritant matters in the blood in typhus and intermittent fevers and in the acute exanthemata. According to this theory, the anatomical substratum of the tumour will be hyperæmia and multiplication of the cell-elements of the splenic pulp; this, however, remains to be proved by pathological examination.

Epithelioma Contagiosum in the Domestic Fowl.—Under this name, O. Bollinger describes in Virchow's *Archiv*, vol. lviii, 1873, a disease which he had the opportunity of observing in his poultry-yard at Zürich. The first symptom was the appearance of a nodular exanthem on the head, especially on the part not covered with feathers. The nodules were firm in consistence, of a yellowish or greyish yellow colour, and in a time varying from five to seven days become as large as peas. On microscopic examination, they were found to consist of circumscribed growths of polygonal epithelial cells, with nuclei having a peculiarly fatty glistening appearance, and a scanty vascular stroma. Similar growths were also observed in the mouth and fauces, but soon fell off. The animals often died with inflammation of the mucous membrane of the larynx and progressive cachexia, three or four weeks after the first appearance of the nodules, and four or five weeks after the commencement of the infection. Dr. Bollinger produced the disease in two healthy hens by shutting them up with the diseased ones; but this did not occur in pigeons or in domestic mammalia. He regards the disease as analogous to molluscum contagiosum in man.—*Centralblatt für die Medicinischen Wissenschaften*, March 14.

MIDWIFERY.

Imperfectly healed Cæsarean Section a Cause of Death in subsequent Labour.—A. Willigk describes in the *Prager Vierteljahrschrift* for 1873 the case of a woman on whom Cæsarean section was performed in 1870, on account of narrow pelvis, and who died of general peritonitis after a subsequent labour. On *post mortem* examination, the cicatrix in the abdominal wall was found to be as large as the palm of a hand, and like the cicatrix of a burn; the fundus uteri was firmly adherent to the cicatrix. From the point of attachment a gaping wound, more than two and a half inches long, extended into the uterus. The edges of the laceration were covered with red granulation-tissue; and this led Willigk to suppose that it was the result of the Cæsarean section, and had lasted throughout pregnancy. It must be assumed that during pregnancy a recess was formed in the uterine cicatrix, which, closed at first by the surrounding tissues, was torn open during labour; and that effusion of ichorous matter into the peritoneum took place and produced peritonitis.—*Centralblatt für die Medicinischen Wissenschaften*, April 4.

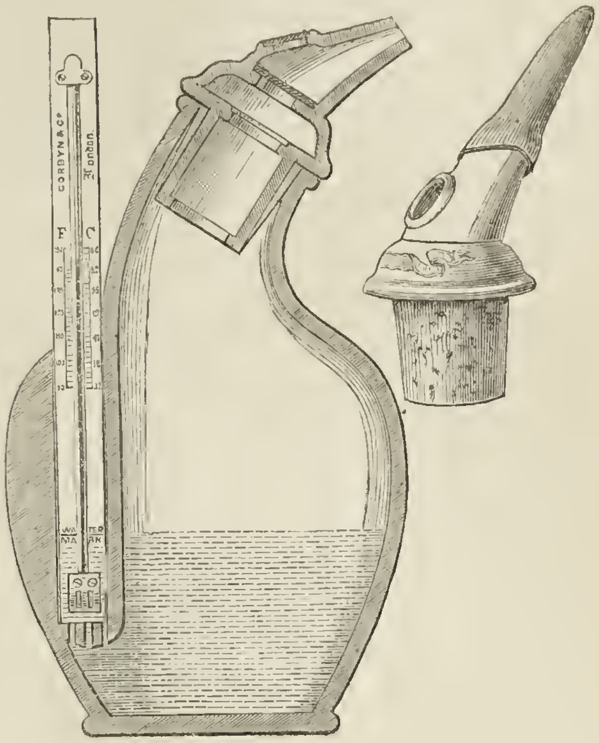
REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

CORBYN'S IMPROVED DOUBLE VALVE-INHALER.

This instrument is adapted for the use of a thermometer which indicates the requisite quantity of water as well as registers the temperature. Most practitioners are acquainted with the principles of Maw's double valve-inhaler, which is as convenient and efficient an instrument of the kind as any hitherto introduced, whilst its moderate price brings it within the reach of all classes of patients.

The apparatus represented in the annexed figure, while retaining all the advantages of that of Maw, has been greatly improved by Messrs. Corbyn and Co., at the suggestion of Mr. Lennox Browne. The side aperture is made larger, and is carried lower into the inhaler. This enables the thermometer to be kept *in situ* during the whole time of inhaling, and ensures that the water is very thoroughly impregnated with the active ingredient to be inhaled. One great difficulty in preparing an inhalation with all previous inhalers, is to know exactly how much water is required. A pint of water is not sufficient in an ordinary Maw's inhaler; and it is not easy to follow the printed directions, that "in all cases there must be sufficient boiling water to cover the holes at the end of the tube inside the inhaler", since the steam arising from the water prevents one from seeing how high the water has risen. Messrs. Corbyn have, therefore, had a water-mark placed on the thermometer, which indicates exactly the amount of water necessary for use. The thermometer is further marked with the Fahrenheit scale on one side, and (approximatively) with the *centigrade* on the opposite side—a great convenience for foreigners.

For nasal inhalation, which is a most valuable remedy in cases of ozæna, Eustachian congestion, and other affections of the naso-pharynx, a very simple and easily adapted India-rubber nasal piece has been added; and the worse than useless piece of sponge placed at the orifice of most inhalers is in this instrument "conspicuous by its absence". The whole apparatus is packed in a strong case lined with green baize, and it is recommended that in cases where it is desirable to maintain a high temperature the inhalation should be taken from the inhaler in the case; for while, if this be done, the thermometer descends only 10 deg. Fahr. in as many minutes, more than twice that amount of heat will be lost in the same period if the inhalation be taken from the inhaler unprotected by the case. By thus utilising the box, all necessity for the expense of a spirit-lamp or other similar means of keeping up the temperature is avoided.



BROMO-CITRATE OF LITHIA WATER.

Mr. Hogg, of Albion Place, Hyde Park, who is already well known as a manufacturer of reliable mineral waters, forwards us a specimen of a new mineral water called "bromo-citrate of lithia". It contains bromine, with the citrates of lithia, potash, and ammonia in the doses usually prescribed, varying from five to twenty grains of these preparations. It is strongly charged with carbonic acid gas, and forms an elegant preparation, and one which will, we have little doubt, be found a valuable adjunct in the treatment of rheumatic affections.

PHOSPHORISED COD-LIVER OIL.

We can speak favourably of this preparation, of which a sample has been forwarded by Messrs. Young and Postans, 35, Baker Street, W. Convenient forms for the administration of phosphorus are among the desiderata of modern pharmacy: for need of such forms, physicians occasionally give themselves, their dispensers, and their patients, a good deal of unnecessary trouble. One teaspoonful of this cod-liver oil contains one-hundredth of a grain of pure phosphorus, the taste of which is simply and effectively disguised by the addition of a little essence of lemon, so that the preparation itself is nearly tasteless.

Vaccination.—Mr. W. F. Lovell, of Compton Martin, has been awarded the sum of £9:15:4, by the Local Government Board, for his efficient performance of vaccination duties.

Dr. Ryott of Thirsk was thrown from his dog-cart on Sunday, and received severe internal injuries and a concussion of the lower part of the spine, from which he is lying in a precarious state.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, APRIL 25TH, 1874.

ST. GEORGE'S HOSPITAL.

WE printed last week a memorial which has recently been presented to the Board of Management of St. George's Hospital. We understand that this memorial has been largely signed by influential persons residing in the neighbourhood, and we have no doubt that it will receive the attentive consideration which it deserves. St. George's Hospital has shown a praiseworthy desire to bring itself into harmony with the requirements of the day, and we feel assured that the Board of Management will be ready to consider whether any further steps could with advantage be taken in the direction pointed out by the memorialists.

There has long been a growing conviction in the profession, that some great change must be made in the mode of administering sick-relief to the working classes; and it would appear that this opinion has impressed itself also upon the minds of many of the most thoughtful of the laity. The working class are rising in so many ways, that we all feel the necessity of inducing them to accept the responsibilities which the improvement of their social position carries along with it. The recent elections have reminded us of their political importance; the School Boards keep before us the arrangements which are made for the education of their children; the higher price of all commodities betokens the increase in their wages; and the struggle which is at this moment going on in the Eastern Counties is only one among many marks of their growing independence. We are not finding any fault with these things. Far from it. But we say they serve to indicate the general prosperity of the working man, and they entitle us to expect that, as his condition improves he will be more desirous of helping himself and of providing for the most necessary wants of his family. Now, any system whereby he may be enabled to supply these wants is inconsistent with a large and indiscriminate distribution of gratuitous advice. If we wish to inculcate habits of sobriety, we do not open the public houses to all comers, as was formerly done in electioneering times. If we wish to encourage the working man to provide for the education of his children, we are jealous of the establishment of free schools; and similarly the distribution of doles of bread or of soup is very properly restricted to those who, for some reason or another, are unable to earn their own livelihood. Now, there is no substantial difference between these illustrations and the case of sickness. The education of his children is a charge which the working man must look forward to and provide for; happy it is for him that his richer neighbours have done so much to cheapen schooling, and to enable him to obtain it at a very moderate rate. What reason is there that he should not in like manner be encouraged to help himself in the matter of sickness? There is none whatever; and there are many reasons which make it desirable that he should have the opportunity of so doing. Until quite recently, the means of insuring himself and his family against sickness were not within his reach. Of the greater part of the metropolis, unfortunately, this is still true. But there is one district in which provident dispensaries have been multiplied, and that is the district around St. George's Hospital. From the Marble Arch to Pimlico, the working man is now within an easy distance of a well appointed provident dispensary. The St. George's, the Royal Pimlico, and the St. Barnabas dispensaries, which have all been lately placed upon this footing, are ready to supply his ordinary medical wants. It is this fact—this newly developed fact—to which the memorialists desire to call the attention of the Managers of St. George's Hospital. That the efforts which have been made by the Duke of Westminster and other gentlemen have been appreciated by the class for whose benefit they were intended, is sufficiently proved by the figures which were quoted in the memorial. Now, the question arises—Shall the hospital lend its influence to foster and to develope the rising tide of providence, or shall it enter into competition with it, and thus, in reality, check and restrain the moral good which is being effected by the growth of the provident system? We cannot doubt that the hospital would wish well to any plans that are calculated to improve the condition of the poor. The noble objects for which it exists are a guarantee of this. What is needed is to bring the hospital and the dispensaries into such harmonious association, that each may be mutually helpful to the other. It has often been suggested that much good would arise from dispensaries being affiliated to hospitals; and why should not every large hospital have dispensaries attached to it, just as many colleges have schools connected with them? the latter serving as feeders to the former, and the greater institution taking a cordial interest in the smaller, and finding a part of its prosperity to be derived from their success.

There are few hospitals in London which have shown a more reforming spirit than St. George's, and we cannot but hope that some means may be found of granting the request of the memorialists, which shall not only not prove detrimental to the hospital, but which shall even enhance its value and give facilities for the development of its medical school.

THE NAVAL MEDICAL DEPARTMENT.

WE called attention last week to the important but difficult task which lies before Sir Alexander Armstrong in the new term of office which he has undertaken. It is opportune to state in detail the grounds of discontent which at present affect, and have for some time affected, the usefulness and popularity of the medical department of the navy. We believe that we faithfully interpret the views of the most moderate and able of our numerous correspondents in the following statement, to which we invite the attention of the naval medical authorities.

The Netley School has been the creation of genius which has overcome its makers. The young men trained there bring away military, and not naval, notions, which undermine their future utility. As soon as they get on board ship, they become discontented, and often resign. In large ships, they find the staff-surgeons dissatisfied with the cabins they hold. The right to select by seniority given by the Warrant of 1866 was very soon nullified by an undercurrent which gave to chaplains and paymasters rights, not of seniority, but absolute priority of choice. The sick-bays of most ships are badly placed, and do not please young men who have received instruction at Netley qualifying them for the post of Health-Officer under the Local Board. They are at once disgusted on finding the dark holes in which they will have to practise their profession in diagnosing disease and treating the sick; and it requires many years to overcome that. When a little advanced in the service, they discover too little recognition of that service in the present order of working and designations. The staff-surgeon of nineteen years and eleven months' service cannot be distinguished by uniform or title from the surgeon of six years' service. Looking forward, they see that, on the present scale of pay, they must serve nineteen years to double that of their first year's service, which, in the ordinary state of the profession, is inconsistent with the characteristics that ensure fixity of labour during that term of life. Full pay must be increased; certainly, at fourteen years it should be double, and at twenty-one years threefold, what it was on entry; and the pay of the inspectorial officers should be relatively increased, as they possess none of the lucrative appointments of army officers of their grades, and have long periods on half-pay.

Staff appointments on foreign stations may, as a rule, be for three years, as men wish to return home, and their waiting for the turn of employment is less irksome. Home appointments should be for five years, to cover the expenses to which officers are put in shifting homes and furnishing. This should follow as a natural sequel to the extension of office granted to the Director-General, who stands as an Inspector-General on the list, as without it that extension is unjust to other officers, as checking the promised steady flow of promotion. The principle that "relative rank shall carry with it equality of allowances" has never been acted up to with medical officers; and this has become a notorious wrong, which should be rectified in every particular as an act of good faith. Retirement must be granted on different principles: for the younger men, there must be the unrestricted right to retire, after twenty years' service, on the half-pay earned; and for the older officers, after thirty years' service, on the full pay on which they last served; and for the intermediate periods, on the regulations of 1870. Inspectorial officers were omitted from the retirement scheme of 1870, which gave to all other officers an addition to their half-pay on retirement, leaving them only bare half-pay as retired pay. Thus the head of the list is kept clogged, and the chances of promotion are very limited. Good-service pensions should be honestly dispensed only to the ranks for which they were founded, and not to officers of junior rank, to meet the temporary convenience of the Admiralty. Widows' pensions require adjustment. Lastly, the office of Director-General should be limited to the same term as in the army—seven and a half years—to afford due prospects of advancement.

We assert these as the just claims of our naval brethren; and, from our wide ramifications, we are in a position to state our views that the naval medical service cannot be maintained efficiently without an early and extensive reform. The inequalities with the army cannot be filled up, but they may be bridged over; and that is to be done by a special system adapted to the peculiarities of the service. Last quarter, six young surgeons resigned their appointments; and we hear already of four excellent young surgeons of high reputation and prospects having resigned in the month of April. Speedy reform is necessary to prevent dissolution.

THE QUEEN'S VISIT TO THE SICK AND WOUNDED INVALIDS FROM THE GOLD COAST AT NETLEY.

THE Queen, accompanied by Princess Beatrice and Prince Leopold, paid a visit to the invalids from the Gold Coast who are under treatment in the Royal Victoria Hospital, Netley, on the 16th instant. Her Majesty arrived from Osborne in the Royal yacht *Alberta*, with the *Elfin* yacht in attendance, and disembarked at the hospital pier punctually at 11.30, the time named for the visit. Here Her Majesty was received by the military commandant, Lieutenant-Colonel Gordon, and by the principal medical officer, Surgeon-General Dr. Balfour, F.R.S. All the officers forming the staff of the hospital, as well as the candidates for commissions attending the army medical school, were drawn up in two lines near the head of the pier, and the Queen, Princess, and Prince, with the suite in attendance, walked between them. The road from the pier to the hospital was lined by men of the Army Hospital Corps with their officers. Nearly all these men had recently returned from duty on the Gold Coast, a large party having arrived only a few days before in the *Victor Emmanuel* hospital ship. The Queen and royal party, attended by Colonel Gordon and Dr. Balfour, entered the hospital by the great door opening into the central hall, and ascended the stairs to the nurses' quarters, the principal entrance to which is on an upper gallery of the hall. Mrs. Deeble, the lady-superintendent of nurses, was in attendance at the entrance to the quarters. The Queen passed through the nurses' quarters, and, by another door, entered the medical division of the hospital. Here the Queen was received by Surgeon-General Maclean, C.B., who conducted Her Majesty through the several wards in which the invalids were under treatment. The men were either lying in their beds or stood at the feet of them in their hospital dresses. A brief account of each patient was given to the Queen by Professor Maclean as she passed from one to another; and to many of the men, especially to those who appeared the most debilitated and blanched by the effects of the African climate, Her Majesty said a few kind words of sympathy, and expressed a hope of speedy recovery. In the medical division, Surgeon-Major Dr. Bleckley, C.B., who was in medical charge of the *Victor Emmanuel* hospital ship during the war, and Surgeons J. Fleming and W. R. Kynsey, who had recently returned from the Gold Coast, had the honour of being presented to Her Majesty.

Surgeon-General Longmore, C.B., received the Queen in the surgical division, and explained to Her Majesty the nature of the injuries of the invalids who were suffering from the effects of wounds received during the late war. Her Majesty's attention was particularly called to one severely wounded non-commissioned officer, the Sergeant-Major of the "Black Watch", who had not only served in the recent Ashantee war, but had previously gone through the Crimean war, and the war of the Indian mutiny. In the latter, he had been one of a small party, consisting of one officer and thirty-seven men, who had withstood for fifteen hours, and ultimately repulsed, a force of 7,000 sepoys from an important position—an act of bravery which had been ordered to be specially entered in the record of service of each soldier engaged in the memorable struggle.

After seeing the wounded men, in whom Her Majesty evinced much interest, the Queen proceeded to another part of the building, where the quarters of the sick and wounded officers are placed. Here Her Majesty visited Major Butler, who, though still confined to bed, is gradually recovering from a very severe attack of African fever; Captain North, 47th Regiment, who was a volunteer in the Gold Coast expedition, and badly wounded in the elbow; and Lieutenant Sherston of the Rifle Brigade, who was severely wounded in the upper arm, and is still suffering greatly from the effects of the injury. The Queen also visited in his quarters Captain Gordon, 108th Regiment, an officer invalided from India.

The gracious visit of the Queen to the officers and men of the army, who are still suffering from the effects of their service in the pernicious climate of the Gold Coast, or from wounds received in action with the enemy in that trying region, was a source of manifest pleasure to all concerned; and Her Majesty's kind manner and sympathetic words left behind impressions which are not likely to be soon effaced from the memories of the invalids to whom they were addressed.

The royal party and suite returned from the hospital in the same manner as they had arrived: the men of the Army Hospital Corps still lining the road, and the medical and other officers being drawn up in two lines on the pier. After leaving Netley, the royal yachts steamed out into the Southampton water, and made a close circuit of the *Victor Emmanuel* hospital ship before returning to Osborne.

It may not be without interest to give our readers some slight sketch of the various injuries and diseases now under treatment at the Royal Victoria Hospital. On April 11th, fifteen men were admitted from the *Victor Emmanuel* into the medical division, of whom three belonged to the 23rd Fusiliers, five to the 42nd Highlanders, four to the 2nd Battalion Rifle Brigade, two to the Army Hospital Corps, and one to the 1st West India Regiment. The cases comprised one of remittent fever, three of hepatitis, six of dysentery, four of debility, and one of phthisis.

In the case of remittent fever, no hepatic complication could be made out, although the patient had previously been treated at Netley for abscess of the liver; but one of the cases of hepatitis owed its origin to remittent fever, another to intermittent, whilst the third was the sequel of an attack of dysentery contracted after fording a river.

Two of the cases of dysentery were primary in their origin, whilst in the other four it appeared to be the direct sequela of remittent fever; and in two instances the symptoms only became developed after embarkation.

No scorbutic complication, fortunately, has been observed; and, although all the cases just mentioned are of a serious nature, all are going on well, and afford no ground for immediate anxiety. One point worthy of note is, that the men do not seem to have suffered in direct proportion to the length of their residence on the coast; some having been attacked with illness after a few days spent on shore, whereas others only broke down after more lengthened periods of residence, or on their return home.

The number of surgical cases amounted to fifteen, and consisted of two from the 23rd Regiment, eleven from the 42nd Regiment, and two from the Rifle Brigade. We have already drawn attention to the most interesting of these, and should only now wish to remark how strikingly these casualties illustrate the inevitable conclusion that our late successes were largely due to the superior nature of our arms. Most of the wounds seem to have been inflicted by irregular pieces of iron stone, about one-third of an inch long, very light in texture, and running from seven to eight to the charge. Unless at very close quarters, these had hardly any penetrating power; and it is notorious that some of the worst wounds in the late campaign were inflicted by our own troops upon themselves during the bustle and confusion of bush-fighting.

We have heard with regret that the man with paralysis of the limbs from a slug-wound in the neck died towards the close of last week, with comatose symptoms, apparently due to effusion on the brain.

THE MEDICAL DEPARTMENT OF THE ARMY.

We mentioned last week that a correspondence is in progress between the War Office and Mr. Ernest Hart, as Chairman of the Parliamentary Committee of the British Medical Association, with reference to the documents submitted by him on behalf of a deputation from the Committee to Mr. Gladstone's Government on the subject of the late Army Medical Warrant. The reply of Mr. Cardwell, while containing some nominal concessions, was in substance entirely unsatisfactory to the service and to the profession. The subject has, therefore, been reopened in the sense of the observations submitted through Lord Lansdowne before the resignation of the late Government.

It is proposed that a further deputation shall wait upon Mr. Gathorne Hardy; and meantime, in accordance with the request of Colonel Deedes, the following abstract of suggestions has been prepared as a basis of discussion. They have been drawn up after communication with experienced and moderate-minded officers at home and on foreign stations; but we shall be very glad to receive further remarks upon them from any member of the service.

Abstract of Suggestions for the Improvement of the Condition of the Army Medical Department.

1. It is proposed that, on the completion of twenty years' full-pay service in any rank, a medical officer should be permitted to retire on 18s. 6d. *per diem;* but, should this be necessitated by the state of his health, the amount should be increased to 20s. *per diem.* This scale to apply to a surgeon or surgeon-major. For a deputy surgeon-general, or surgeon-general, the retiring pension should equal three-fourths of the pay. The clause compelling retirement at fifty-five for surgeon-major, and sixty-five for administrative service ranks, to be compulsory. In case of promotion to the administrative ranks, surgeons-general should retire after five years in rank, unless promoted to higher rank. Total service in administrative ranks should be limited to twelve years.

2. That a bonus retirement for a certain number of each rank, somewhat similar to what has been done in the Navy, and particularly in the Royal Artillery, should be granted; and it has been suggested that two surgeons-general should be permitted to retire on £150 a year additional to the amount to which they would be entitled by the Warrant of 1873. At present, the maximum of retiring pay for a deputy surgeon-general is only £465. It is therefore proposed that, as a surgeon-general has £680, although the duties are practically the same, the deputy surgeon-general compulsorily retired might be allowed to go on full pay (37s. *per diem*), which would make it equal to that of surgeon-general. Officers retired under this clause might still be eligible up to sixty-five years of age for the appointment of Director-General. Twenty-five surgeons-major should have £100 a year additional; fifty surgeons, £50 a year additional.

3. That medical officers attached to regiments ought to be honorary members of the mess; or, if this be not conceded, they should pay no more than the current subscriptions, at the same rate as combatant officers of relative rank.

4. The question of forage to be settled by the granting of a consolidated allowance *de jure*, as in the case of the Royal Engineers.

5. It has been thought advisable that, whilst the 2s. 6d. extra pay granted after fifteen years' service should be retained, some approach to guarantee of promotion before that period should be laid down.

6. Precedence in relative rank, as regulating choice of quarters, should be more distinctly recognised than in paragraph No. 5 of the Warrant of March 1873. Precedence on mixed boards, courts of inquiry, etc., ought to be restored to medical officers.

7. The circular regarding the duties of principal medical officers in general hospitals and the like, requires modification in some ways. The military element should be eliminated. The medical officer should have the power and authority, as well as the responsibility; the hospital and every one in it being under his sole command. If he is to be held responsible for stores, material, etc., a liberal charge-pay may be granted.

8. It is suggested that the Army Hospital Corps should be officered by the medical officers, as in the case of the Royal Engineers and the Control Department.

The King of Prussia has conferred the royal order of the Crown of the third class on Sir Alexander Taylor of Pau.

Dr. Burow, senior, of Königsberg, formerly Professor of Surgery in the University of that place, died on the 15th instant, after a long illness.

Mr. Barrett, for many years Dental Surgeon to the London Hospital, and Lecturer on Dental Surgery in the London Hospital Medical College, has, we understand, resigned his appointments.

We understand that the postponement of Her Majesty's intended visit to the naval invalids of the Ashantee war at Haslar Hospital, was at the suggestion of Her Majesty's medical adviser, Sir William Jenner. It was due to the fact that some patients, believed to be ill with scarlatina, had been brought into the hospital.

At the Worship Street Police Court several persons were lately summoned for selling adulterated mustard, and were each fined 20s., and 12s. 6d. costs. Some of the defendants said that they sold the mustard as they received it from the makers, and knew nothing of its adulteration. Mr. Bushby said that they could recover any penalty inflicted on them from the person selling the article.

THE NURSING QUESTION AT KING'S COLLEGE HOSPITAL.

We understand that at the meeting of the Governors of King's College Hospital this day, the award of Lord Hatherley and Lord Selborne will only be received, and ordered to be printed and circulated. A subsequent meeting will then be called, at which it will be formally discussed.

LEGAL SECURITIES TO LOSS OF LIFE AT SEA.

The following resolutions have been passed by the Council of the National Association for the Promotion of Social Science, for presentation, by deputation, to the President of the Board of Trade.

1. That it is advisable to secure medical registration and legal inquiry by the coroner, in the case of deaths on the high seas in registered British ships, with a view to diminish mortality in the British mercantile marine.

2. That in case of all deaths during the voyage, the causes and treatment should be inquired into by a medical officer, appointed to attend the shipping office when the crew is being paid off, and that he forward, without delay, to the Registrar-General, a medical certificate of the cause of death, the same as would have been required had the death occurred on land.

3. That in the case of suspicious, accidental, or violent death, the medical officer or Registrar-General of England should invoke the aid of the coroner of the district, as if it had taken place on land, and the body were lying in the district in which the ship is paid off, although the body shall not be forthcoming.

4. That in case the coroner's jury inculpates any person in connection with the death, the local police, acting under the direction of the Attorney-General or Solicitor to the Treasury, should take charge of the prosecution.

5. That the expenses of medical registration of deaths at sea might be defrayed out of the unclaimed wages of deceased seamen.

THE MURCHISON ADDRESS AND TESTIMONIAL.

On Saturday last, Sir Thomas Watson, Bart., M.D., delivered an address to Dr. Murchison, in the presence of a number of ladies and gentlemen assembled at his (Dr. Murchison's) house for the purpose. The address—which was signed by about a hundred persons, among whom were the Baroness Burdett Coutts, Lord Alfred Paget, Sir Thomas Watson, Sir William Jenner, Colonel Stuart Knox, Sir Charles Nicholson, Mr. John Wood, Mr. Erichsen, Mr. Campbell De Morgan, Dr. Fayrer, and others—was in the following terms.

"To Charles Murchison, M.D., F.R.S., LL.D.—We the undersigned, late customers of the Dairy Reform Company, and others interested in public health and pure milk-supply, desire publicly to express to you our sense of the skill and perseverance with which you traced and established the cause of the late alarming and fatal epidemic of typhoid fever. We owe to you the vigorous proceedings which forced an inquiry and arrested the epidemic. We wish to express our sympathy with you for the serious illness of several of your family, and our indignation at the manner in which you have been publicly attacked by the Manager and Secretary of the Dairy Reform Company."

In presenting it, Sir Thomas Watson introduced it by a speech of great eloquence and force, at the same time presenting a timepiece and a pair of candlesticks as mementos of the services rendered by Dr. Murchison to the subscribers in particular, as well as to the public at large. Dr. Murchison, in his reply, alluded very feelingly to the melancholy circumstance that Dr. John Murray and Dr. Fuller, who had been among the earliest promoters of the address, had both passed away; and that Mr. Christie, another warm friend, and the most active agent in this matter, was so seriously ill that he was unable to be present. Both Dr. Murchison and Sir Thomas Watson gave a number of instances in confirmation of the theory that the epidemic of typhoid fever had been caused by the milk supplied by the Dairy Company to the infected families. The timepiece had on it the following inscription:

"Presented to Charles Murchison, M.D., F.R.S., LL.D., on April 18th, 1874, in admiration of his sagacity in detecting, and his courage in exposing, the cause of the outbreak of Enteric Fever in the Western Districts of London in 1873."

After the ceremony of presentation, Lady Burdett Coutts personally thanked Dr. Murchison, and his friends came round him and cordially offered him their good wishes and congratulations.

VENTILATION OF SHIPS.

On the 13th instant, a lecture on "Ship Ventilation" was delivered at the Royal United Service Institution by Dr. J. D. Macdonald, R.N., F.R.S., Assistant Professor of Naval Hygiene in the Netley Medical School, under the presidency of Admiral Sir Spencer Robinson, K.C.B. The lecture opened with a review of general principles, and the notice of particular systems of ventilation proposed or adopted. The names of Desagulier and Reed were associated with the rotatory fan; those of Sutton and Mapleton with extraction by heat; of Hales and Arnott with the bellows and piston principle; and those of Perkins and Thiers with exhaustion by gravitation during the rolling of ships. The relative merits of extraction and plenum ventilation were considered, and the preference was given to the former. Amongst the numerous diagrams illustrating the lecture, was a vertical athwart-ship section of one of the sides of a wooden ship, showing how advantage might be taken of the openings between the timbers for the more efficient ventilation of the hull, by substituting an iron tubular shelf-piece for the solid wooden one now in use. By this means each deck might be separately ventilated, and foul air would be carried off from the locality in which it is always sure to accumulate—namely, in the angle between the beams and the ship's side. Thus a number of air-tubes would be obtained, in communication with the intercostal channels, for the removal of vitiated air, by rotatory fans, the funnel-casing, furnaces, hollow masts, or its own ascensional force. The particulars of this arrangement would require a figure to render them intelligible to our readers who may not be acquainted with the structure of ships; but enough has been said to show the importance of such a scheme to hospital ships and to merchant vessels generally, but especially to those carrying offensive cargoes—bones, hides, and guano, for example. It was shown that the loss of utilisable air conveyed by ventilating tubes arising from angles, divisions, and diminishing calibre, was much greater than was commonly supposed or provided for in our low free-board ships. In the discussion which followed the lecture, Dr. de Chaumont spoke upon this question mathematically, and supported the views of the lecturer as to the superiority of extraction to the plenum principle in ship-ventilation. The chairman also expressed his sentiments in favour of conclusions already arrived at, giving the preference to extraction, by whatever means effected.

NEWCASTLE-ON-TYNE EYE INFIRMARY.

At the annual meeting of the above institution, the balance-sheet showed a surplus of £84 : 12 : 6. Regret was expressed that there was not more ample provision in this institution for in-door patients, who were not unfrequently debarred from taking advantage of the institution because they were unable to pay for the cost of provisions and nursing. It was finally decided that a beginning should be made by the help of a Samaritan fund to supply this deficiency in the future.

THE LATE DR. RANSOM OF CAMBRIDGE.

Much regret has been felt at the sudden death of Dr. Robert Ransom. The deceased gentleman was a son of the late Mr. Henry Ransom, of Trinity Street, and was born about the year 1820. He became L.S.A. and M.R.C.S.Eng. in 1842, F.R.C.S.Eng. and L.M. in 1858, and M.D. of St. Andrew's University in 1862. He was also a Fellow of the Obstetrical Society of London, and a member of St. Andrew's Medical Association. His local professional and other connections were very extensive. He entered the Cambridge Town Council in November 1858, and continued a councillor till October 1863, when he was appointed Surgeon to the Borough Police Force. He had been up to the time of his death an Improvement Commissioner for the parish of Holy Sepulchre since 1865, and a member of the Board of Guardians since 1871, prior to which he was for many years a medical officer of the Union for the Castle End district. He was district surgeon on the Great Eastern, Great Northern, and Midland Railways, and medical officer to most of the benefit societies of the town. On the occasion of his funeral, the sides of the roads were lined by hundreds of those poor persons whom in life he had faithfully cared for, and numerous others, who wished to pay a humble tribute of respect to their late friend. At the subsequent meeting of the Board of Guardians, the following resolution was unanimously passed.

"That this Board, having heard of the sudden and unexpected death of the late Robert Ransom, M.D. (since the last meeting, on the 25th, at which he was present), express their regret at the loss sustained, believing that the poorer classes at the Castle End district will have great cause to mourn over the bereavement of a benefactor and a friend; and express to his widow and family the sympathy of the Board upon the mournful event."

KING'S COLLEGE: ADDRESS TO THE DUKE OF EDINBURGH.

The following address has been accepted by H.R.H. the Duke of Edinburgh. We would recommend its perusal to those who are prone on such occasions to make long-winded harangues by the introduction of all sorts of irrelevant matter, which, we should fancy, must rather bore the distinguished personages concerned.

"We, the Committee, on behalf of the students of the medical department of King's College, London, desire to offer to your Royal Highness our sincere and respectful congratulations upon the auspicious event of your marriage. We venture thus to address your Royal Highness, not only trusting to your gracious acceptance of the expression of our loyalty as Englishmen, but remembering the special interest in our Medical School which you were pleased recently to show by consenting to distribute our honours and to address to us words of kindness and encouragement. We desire accordingly to convey to your Royal Highness, with our respectful and loyal congratulations, the expression of our special gratitude for the favour which you were thus pleased to bestow upon us, and of our humble and heartfelt wishes for the constant and unclouded happiness of yourself and your illustrious Consort."

REPUTED REMEDY FOR HYDROPHOBIA.

MR. C. L. PRINCE, M.R.C.S., Crow Borough Beacon, Tunbridge Wells, writes in the *Sussex Advertiser* of April 15th, that he is "desirous at the present juncture to inform the public of this country, and especially of Brighton and Hove, that he has succeeded, by the great liberality of a friend, in purchasing, for a considerable sum of money, the recipe of a preparation which for upwards of a century has been held in high repute throughout the counties of Kent, Surrey, and the northern part of Sussex, both as a prophylactic against, and a cure of, hydrophobia. Hitherto this reputed remedy has never been in the hands of the profession; and the present crisis appears to be a favourable opportunity for thoroughly testing its value, should it unfortunately happen that the injuries received by the bitten persons result in cases of hydrophobia." He adds: "With respect to the reputed remedy, for which a prescription is now in my possession, I will remark, in conclusion, that in the year 1872 I published in the BRITISH MEDICAL JOURNAL a list of many cases of persons bitten by dogs undoubtedly mad which occurred in my late father's practice and my own, all of which were successfully treated by that medicine. It has also been administered with great success to various animals." We apprehend that Mr. Prince's first duty is to publish to the profession, without any delay whatever, the precise nature of the treatment of which he has thus become possessed of the formula. It is especially so in this instance, since the most important feature in all treatments of hydrophobia is, that they be immediately applied. If Mr. Prince have the conviction that this remedy is likely to succeed where so many have been found utterly to fail, it is important that every medical practitioner should be in a position to employ it without delay. This we say, of course, without offering any opinion as to the probable value of the treatment. That is a subject on which it is difficult to be very hopeful.

LIVINGSTONE MISSIONARY MEMORIAL.

THE directors of the Edinburgh Medical Missionary Society have determined to erect a Livingstone Memorial Medical Mission Training Institution to commemorate the memory of the great African traveller. The object of the Edinburgh Medical Missionary Society is to promote, in every possible way, the consecration of the healing art to the service of Christ, especially in connection with missions to the heathen. It, to accomplish this object, educates at the University or Medical School approved Christian young men, desirous of devoting themselves to Medical Missionary work, and provides means for training them for that work; and it also supports as many medical missionaries at various mission stations as the funds at its disposal will admit, and supplies the various Evangelical missionary societies with properly qualified medical missionaries. The Society's Training Institution is an extensive local charity, ministering on an average to about 8,000 poor patients annually, and an agency which encourages Christian effort among medical students generally. It is a training institution for medical missionary students for the whole world. This Society, which is the only one of its kind, has at present thirteen students, Presbyterian, Episcopalian, Congregational and Baptist, in course of preparation for medical missionary service. The number of applicants for the training afforded by the Society is increasing month by month, still the demand for medical missionaries is greater than the supply. The premises in which the Society at present carries on its work are most inadequate and old. The directors, for sometime past, have had in view the urgent demand for a well-trained nursing agency, as an auxiliary to Evangelistic efforts both at home and abroad, and the only obstacle in the way of providing means for the efficient training of such an agency is the limited accommodation at their present institution. The aid which the pioneers of the Gospel and of civilisation derive from the knowledge of medicine has been emphatically stated in the writings and illustrated by the lifework of Dr. Livingstone; and the directors of the Edinburgh Medical Missionary Society feel that no more appropriate memorial to the late lamented missionary traveller (himself a corresponding member of the Society for eighteen years) could be devised than a substantial and commodious building, suitable for carrying on the Society's operations and worthy of the cause he nobly maintained. To enable them to do so, the sum of £10,000 will be required, and they now appeal to the friends of missions and to the admirers of the great missionary explorer everywhere to aid them in this undertaking. Contributions will be received by Dr. A. G. Miller, 15, Shandwick Place, and by the Rev. John Lowe, F.R.C.S., Superintendent Medical Mission, 56, George Square, Edinburgh.

SMALL-POX IN MADRID.

A CORRESPONDENT in Madrid writes: We have had for the last seven or eight months a most fatal epidemic of small-pox which still continues, and no wonder, as neither the Government nor people believe in contagion of any kind but in *phthisis!* They will flee from that; and if a patient die, and it be known that he died of consumption, the house in which he died will remain uninhabited for years. The present epidemic is of the hæmorrhagic and confluent type; and one of our countrymen, a well known gentleman and old resident here, although he had small-pox at seventeen years of age and was well pitted, took the disease and died on the fourth day. Not a single precaution has been taken by Government to prevent its spreading. I fear that we shall have it more severe when the hot weather sets in.

CONTAGIOUSNESS AND NON-CONTAGIOUSNESS OF DISEASE.

THE subjoined propositions are extracted from a paper by Dr. Austin Flint, in the *New York Medical Journal* for February, on the "Logical Proof of the Contagiousness and of the Non-Contagiousness of Disease". They are interesting in connection with the recent discussions in the Royal Medical and Chirurgical and Epidemiological Societies, of which abstracts were recently given in the JOURNAL. He says that the logical proof of either contagiousness or non-contagiousness in its application to different diseases must have reference to the manner in which diseases may be communicated. These are four: viz., 1. By immediate contact, as when syphilis and gonorrhœa are communicated; 2. By impalpable emanations which are diffused and retain their morbific power within a certain area called the infecting distance; 3. By fomites; 4. By a virus contained in the excreta, with which water used for drinking and culinary purposes may become polluted, or which, in a dried state, may contaminate the atmosphere at a greater or less distance from the source of the contagious material. His propositions are the following.

1. It is logical proof that a disease is not communicable by either the first or second of the four modes just enumerated, that is, neither by immediate contact nor by impalpable emanations from the body (an infectious miasm), when, on the one hand, of those who are brought into contact or close proximity to patients affected with the disease, a considerable portion do not have it, and when, on the other hand, of those who have the disease, a considerable proportion are known not to have been brought into contact or close proximity to patients affected with it.

2. It is logical proof of the non-contagiousness of a disease that, out of a large number of instances in which persons going from situations in which the disease prevails to situations more or less distant in which previously there were no cases of it, and being seized with the disease in the latter situation, no other cases therein occur.

3. It is logical proof of the diffusion of the disease not being due to contagion that the history of epidemics shows outbreaks simultaneously and in quick succession in localities widely separated, and between which there has been no connection by human intercourse.

4. It is logical proof of the continuance of epidemics not being dependent on contagion that their duration is determined by self-limitation.

5. It is a logical proof against contagiousness that an epidemic shows a progressive increase in the severity of the disease up to a certain maximum of intensity, and then a progressive decrease in the severity until the epidemic ceases.

6. It is logical proof of an epidemic disease not being contagious, that the diffusion over a large area takes place with great rapidity, and that the disappearance of the disease is rapid and complete.

7. It is logical proof of the non-contagiousness of a disease that it prevails exclusively, or as a rule, at certain seasons of the year; that its prevalence is restricted within certain geographical boundaries, and that, having undoubtedly a special or specific cause, this cause requires for its efficiency auxiliary causes or certain "localising conditions".

These propositions are supported with the well known ability of the author; whose opinion is that, while typhus, small-pox, and other eruptive fevers are contagious, intermittent, remittent, and yellow fevers are not so. He thus recapitulates the points bearing on the question of the contagion of cholera.

1. It is not communicable by immediate contact, nor by impalpable emanations from the body, because, of those who are brought into contact with, or close proximity to, patients affected with the disease, a considerable portion do not have it; whereas, of those who have the disease, a considerable proportion are known not to have been brought into contact with, or close proximity to, patients affected with it.

2. Out of a large number of instances in which persons going from situations in which previously there had been cases of it, and being seized with the disease in the latter situations, no cases subsequently therein occur.

3. The history of cholera-epidemics shows outbreaks simultaneously or in quick succession in different localities widely separated, and between which there had been no communication by human intercourse, and when the transportation of a contagium by means of food or drink was impossible.

4. Cholera-epidemics are self-limited as regards duration.

5. Cholera-epidemics show a progressive increase, followed by a progressive decrease, in the severity of the disease.

6. The epidemic diffusion of the disease over a large area takes place often with great rapidity, and its disappearance is rapid and speedily complete.

7. Cholera-epidemics generally occur during the warm seasons of the year; they rarely occur in sparsely settled, salubrious situations, and the special course seems to require, for its efficacy, auxiliary causes or localised conditions.

THE DISCUSSION ON CANCER IN THE PATHOLOGICAL SOCIETY.

THE interesting discussion on cancer in the Pathological Society, opened a few weeks ago by Mr. De Morgan, was brought to a conclusion on Tuesday evening. The speakers were Dr. Greenhow, Dr. Creighton, Mr. Rivington, Dr. Broadbent, the President, and Mr. De Morgan. Pressure on our space obliges us to defer the insertion of the report until next week.

ASSOCIATION FOR THE ORAL INSTRUCTION OF THE DEAF AND DUMB.

THE annual general meeting of the above Association was held in the Schoolroom, 12, Fitzroy Square, on the 22nd instant; Earl Granville presiding. The school maintained by this Society at the above address was established in July 1872, for the purpose of teaching deaf-mutes the arts of articulate speech and of "lip-reading", that is, of understanding what is said to them by watching the lips of the person speaking. By means of the system of finger signs, now in general use, deaf-mutes are, indeed, enabled to communicate with each other, but are still almost completely isolated from the community at large, and their power of getting their own living is accordingly greatly restricted. The oral system enables members of this afflicted class to mix in society with much greater facility. The merits of this system were brought before some of the medical societies about two years ago, by Mr. Dalby, of St. George's Hospital, and many members of the profession had an opportunity of conversing with a Dutch gentleman, who, though born deaf and dumb, had learnt to speak both Dutch and German, and who, during his stay in this country, even acquired some knowledge of English. Doubts were then expressed as to whether this was not an exceptional case, and as to whether the majority of the class would be found to possess the necessary patience and mental capacity. It is as yet too soon to answer this question quite positively, but the success of the experiment so far, as shown by the public examination on Wednesday, is very satisfactory, and an additional proof of this is afforded by the rate at which the numbers under instruction have increased; the school began in July 1872, with four pupils; by July 1873, there were 19; there are now 36. We may add that the resident-director, Mr. Van Praagh, will be very pleased to explain the details of the system to any member of the profession who may be interested in it, on Wednesday afternoons between 2 and 4 P.M.

THE COMING OF AGE OF THE ROYAL MEDICAL BENEVOLENT COLLEGE.

THE twenty-first annual festival of the Royal Medical Benevolent College was celebrated with becoming spirit and distinguished success on Wednesday evening last. His Royal Highness the Prince of Wales graciously consented to take the chair. He was supported by Earl Granville, the distinguished President of the College, and by a large company, including a majority of the most distinguished members of the profession in the metropolis and many from the country. The subscription-list was, we believe, the largest which has been announced at any of the annual dinners, amounting to nearly two thousand pounds. The Prince of Wales acquitted himself of his duties as chairman with vigour, earnestness, and tact. He referred to the fact that, at the laying of the foundation-stone, he stood as a boy by the side of his lamented father, ever foremost in the discriminating support of useful national works. He paid a graceful tribute, in proposing the toast to the Public Services, to the medical officers of the Army and Navy, and referred specially to the eminent services of the medical officers who had taken part in the Ashantee expedition, and the devotion with which they performed their duties under fire, as well as in the hospital wards. The Prince pleaded the cause of the charity clearly, effectively, and with much force. By an excellent arrangement, in consonance with the wishes of the illustrious Chairman, and worthy of being firmly established as a precedent, the toasts were limited to four, and the proceedings were brought to a close at about ten o'clock. Passing reference was made by the Chairman to the munificent benefaction of Mr. Erasmus Wilson, who was subsequently presented to the Prince at his request, and received personally the expression of his acknowledgment of the generous aid which he has rendered to this great charity. The Royal Medical Benevolent College is one of the noblest monuments erected in this country in the cause of enlightened benevolence; and we trust that the public prominence given to the claims of the great medical charity by the gracious aid of the Prince of Wales will have the effect of rekindling the enthusiasm of its old supporters, of recruiting to the ranks of its life and annual governors a large contingent of new subscribers, and of attracting the attention of the wealthy and charitable.

IRELAND.

THE Guardians of the Skibbereen Union, at a late meeting, resolved that the salaries of their medical officers should be increased each to £120 *per annum*.

ON Monday last, an address, beautifully illuminated, was presented to the Duke of Abercorn by the Chancellor, Doctors, and Masters of the University of Dublin, congratulating him on being appointed Her Majesty's Representative in Ireland.

MR. WILLIAM HOGAN, late of Dublin, has bequeathed the following sums to charitable institutions in that city: Mater Misericordiæ Hospital, £100; Jervis Street Hospital, £50; Fever Hospital, Cork Street, £100; Hospital for Incurables, £50; St. Vincent's Hospital, £50; Simpson's Hospital, £100; and Rotunda Lying-in Hospital, £50.

THE DUBLIN MEDICAL TEACHERS AND THE ENGLISH CONJOINT EXAMINATION SCHEMES.

A MEETING of the lecturers in the Dublin Medical Schools was summoned (or we should rather say got together, for some of the lecturers have complained of not having been invited to take part in the proceedings) on Friday, the 17th instant, to consider the report of the English committee of reference. The main cause of the meeting seemed to be that, owing to the small number of courses of lectures (or rather certificates of attendance on courses of lectures) required under the proposed English curriculum, an idea has got abroad that the "craft is in danger" to a certain extent, and that in some cases the reduction of fees for lectures might make a serious hole in the incomes of certain Dublin teachers. The general sense of the Dublin lecturers is against raising such an objection to the English curriculum, and the meeting of the lecturers seems to have taken this view of the question, as the meeting only passed a resolution determining to take counsel with the London Medical Teachers' Association, and to postpone further action in the matter. Nevertheless, there is a strong feeling among the profession in Dublin against several of the proposals in the English curriculum.

THE IRISH CONJOINT EXAMINATION SCHEME.

THE Council of the Royal College of Surgeons have determined to go on with the scheme, in spite of the resolution passed at the meeting of the fellows, to which we recently referred. The report of the committee of reference is still under discussion at the College of Physicians, and must undergo considerable modifications before it can be adopted by that body. We understand that there is a very general opinion among the physicians that the curriculum is overweighted in the matter of courses of lectures. We have not thought it advisable to publish a copy of the report of the Irish committee of reference, as that document up to the present is in an unfinished condition, and will remain so until the committee have considered the modifications proposed by the co-operating authorities.

QUARTERLY RETURN OF BIRTHS AND DEATHS FOR DUBLIN.

THE births registered numbered 2,218, equal to an annual rate of twenty-eight per 1,000 of the population. The deaths registered numbered 2,112, equivalent to an annual rate of twenty-seven per 1,000. The average corresponding number of the past ten years was 2,495. Scarlatina caused 170 deaths; fever, 105 (typhus, 31, enteric, 53, simple (?) 17, cerebro-spinal, 4); diphtheria, 11; whooping-cough, 22; measles, 33; croup, 32. The great mortality from scarlatina still continues. The cases of mortality from enteric fever and that from typhus, in the first quarter of the year, shows that the prevalence of enteric fever, which has lately become remarkable in Dublin, still continues. The mortality from this form of fever, has, we believe, never before been so high in the first quarter of any year.

ARMAGH BRANCH OF THE IRISH POOR-LAW MEDICAL ASSOCIATION.

A MEETING of the medical profession of this county was held on the 14th instant, at which it was unanimously agreed that it was desirable that a clause should be inserted into the proposed Sanitary Act, empowering Government to pay the entire salaries of medical officers of unions and dispensaries, instead of only half, as at present; that to compel dispensary doctors to examine dangerous lunatics and certify for same without fee, was an act of injustice to the general medical practitioner, which should be amended; that the local officers of health should be the dispensary medical officers, each for his own district, and that the authorities should be compelled to employ the dispensary medical officer, and no other, for that sanitary post.

FOOD ADULTERATION, ETC., IN DUBLIN.

THE twelfth annual report of Dr. Cameron, the city analyst, shows that in the past year 386 analyses of food and drink were made by him, and that 108 specimens were found adulterated, 16 pure but of inferior quality, and 262 pure. Milk was found adulterated with water, the admixture varying from 12 to 120 per cent.; bread with alum, and in some cases with sand; flour also with alum; several specimens of tea were composed of exhausted and decayed leaves; coffee was adulterated with chicory and burnt sugar. As regards spirits, the rum analysed was found not to be rum at all, but to be prepared from new whiskey twenty-five per cent. under proof, and sweetened with treacle. Butter, in four cases, was rancid, and unfit for use. Oatmeal contained fungoid growths. Water was examined in twenty-three instances, and in sixteen of these was full of organic impurities; green wall-paper was analysed in four cases, and, in all, contained arsenical compounds. The following is a list of the articles of unsound food condemned during the twelve months: Beef, 147,815 lbs.; veal, 2,100 lbs.; mutton, 6,640 lbs.; pork, 19,356 lbs.; bacon, 7,139 lbs.; fish, 34,220 lbs.; bread, 6,000 lbs.; flour, 560 lbs.; tea, 200 lbs.; making a total of 224,552 lbs. The fines inflicted amounted to £250 11s., which were paid by forty-three persons, whilst ten were imprisoned; three for three months, three for two months, two for six weeks, and two for fourteen days each.

NORTH STAFFORDSHIRE MEDICAL SOCIETY: THE PROPOSED STAFFORDSHIRE BRANCH.

A SPECIAL MEETING of the North Staffordshire Medical Society was held on Thursday, April 9th, 1874, at 4.30 P.M., at the North Stafford Hotel, Stoke-on-Trent. Present:—Dr. Weaver, President; Dr. Day and Mr. Weston, Stafford; Mr. Vincent Jackson, Wolverhampton; Messrs. Folker (Hanley), Garner (Stoke), Acton (Newcastle), Goodall (Silverdale), Cotterill (Newcastle), Orton (Newcastle), and J. M. Taylor (Burslem), Honorary Secretary.

The business had reference to the formation of a Staffordshire Branch of the British Medical Association, and to the arrangements necessary for the admission of members from other parts of the county, as Stafford, Wolverhampton, etc.

After some discussion, the following resolution was proposed by Mr. VINCENT JACKSON: "That we found a Branch of the British Medical Association, under the title of the Staffordshire Branch". This was seconded by Mr. ACTON, and carried unanimously.

Mr. C. ORTON proposed: "That a committee be formed by six members, with power to add to their number, for the purpose of drawing up a code of rules for the government of the Society, and to prepare a plan of proceedings to be adopted by the Society; such rules, etc., to be submitted to a general meeting of the members for their approval." The committee to consist of Dr. Weaver, Mr. Folker, Mr. Acton, Dr. Day, Mr. Weston, and Mr. V. Jackson. The proposal was seconded by Mr. COTTERILL, and carried unanimously.

Mr. FOLKER moved: "That a meeting of the medical profession of Staffordshire be convened at the London and North Western Hotel, Stafford, on Thursday, April 30, 1874, at 3 P.M., to receive the report of the committee, and for the organisation of the Staffordshire Branch of the British Medical Association, when it is hoped that all interested in the question will attend". Dr. WEAVER seconded the motion, which was carried.

On the proposal of Mr. JACKSON, it was resolved that a report of the proceedings be inserted in the BRITISH MEDICAL JOURNAL, the *Lancet*, *Staffordshire Advertiser*, and *Wolverhampton Chronicle*.

After some other business, the meeting was adjourned.

CISTERNS v. CONSTANT WATER-SUPPLY.

A MR. J. GROOM writes to the *Times* that on Thursday morning last week the 30-inch main of the New River Company's works, supplying the Islington district, burst, and that yesterday morning the inhabitants had a water-supply for the first time since the accident. If the system of continuous water-supply had been adopted, and there had been no cisterns, our correspondent remarks that the Islington district would have been without water for four days.

We believe that at the present time some of, if not all, the Water Companies are giving to many of their customers in various districts of London a continuous water-supply, and are prepared to give to all who require it a similar boon, on condition that the regulations of the Water Companies Act of 1872 are complied with. In the face, however, of the paragraph above quoted, it appears to us that the whole question as to the advantages and disadvantages of the two systems, viz., the intermittent and constant supply, admits of being even more fully and dispassionately discussed than it has been. We know that sanitary officials and other persons cognisant of sanitary subjects are generally favourable to the constant supply, but it behoves us in the interests of the vast population around us to be assured by incontrovertible facts, and proofs easily demonstrable, that this latter system is the better of the two, better alike for our health and domestic convenience.

Let us briefly consider what may fairly be urged for and against each system.

The intermittent supply renders it compulsory on every householder to make provision for water-storeage on his premises in the shape of a butt or cistern. Such provision secures him against the inconvenience to which an accident similar to the one above referred to would have subjected him, had the supply been continuous and water storeage abolished; again, assuming a sufficient capacity of water-receptacle, there is always enough water at hand for the daily copious flushing of the house drains and closets; and further, as by the intermittent supply the water-pipes are only charged during the short period that the Companies' mains are turned on, the risk of flooding on the basement or areas from the bursting of pipes is reduced to a minimum. Now, as to the objections to the intermittent system, cisterns and butts are allowed to become foul, and thus the water in them becomes deteriorated. When the overflow or waste-pipe of a cistern which passes directly into the house-drains becomes untrapped from any cause—and it may and does often occur—the noxious effluvia from the drains pass up the pipe into the cistern to become absorbed by the water, which water thus contaminated is unfit for drinking purposes. It should, however, here be stated that by the Board of Trade Regulations of 1872, it is provided—"No overflow or waste-pipe other than a warning-pipe shall be attached to any cistern supplied with water by the Company, and every such pipe existing at the time when these regulations come into operation shall be removed, etc." Here, then, we have a regulation ostensibly made to prevent a waste of water, but in reality effecting a far more important object, for, by cutting off the waste-pipe from the sewer, the contamination of the water in the cistern by sewer-gases is effectually prevented.

Another objection to water-receptacles—necessary adjuncts to the intermittent supply—is the capacity, condition, and situation of those which are found in tenements occupied by many of the poor and indigent classes; these are, for the most part, very small, dirty, and dilapidated, and placed in dangerous proximity to the closet or dust-bin. The smallness of them, however, under such circumstances is rather an advantage than otherwise, for, inasmuch as they are invariably emptied every day, the water does not remain in them long enough to become seriously contaminated; indeed, the analysis of water taken from some of the filthiest butts and cisterns has shown but a trifling excess of impurity over that contained in the water as it is drawn from the Company's mains. In these small butts and cisterns, the ball cock is generally out of order, and the consequence is, the water runs to waste during the whole time that the mains are turned on, thus effecting a thorough flushing of the drains of these wretched tenements at least once in every twenty-four hours; we believe that the Water Companies are fully aware of this waste of water, but to their credit, it may be stated, that so long as the supply is intermittent, they are content to permit it because of the good it effects, but which would not be allowed under a constant supply. To this cause also, some of our health-officers attribute the remarkable immunity enjoyed by many of the worst districts in London from fever and other epidemic outbreaks.

The advantages of a constant supply are, first of all, the certainty of our getting water as pure and bright as it is delivered from the Companies' mains, and next—which is all important—its freedom from all risk of impregnation with those poisonous germs which are supposed to propagate cholera and fever, and which we know, to our cost, not unfrequently find their way into our water receptacles. The disadvantages are these; a constant water-supply entails upon every householder considerable trouble and expense in providing new taps, pipes, and other fittings, sufficiently strong to resist the continuous pressure; and further he becomes liable to frequent, and, possibly inquisitorial, visits from the Water Company's officials, whose duty it is to see that no water runs to waste. The quantity of water supplied to the metropolis daily by the different Water Companies, from the Thames and other sources, amounts on the average to about a hundred and nine millions of gallons, and this is provided for a population of over three millions and a half; equally distributed, this would give to each person a daily supply of thirty-one gallons, enough we should think, if properly utilised, to provide for all domestic and healthful requirements, and we are inclined to think as much as, or even more than, we should obtain under the constant supply.

QUALIFICATION IN STATE MEDICINE.

THE following recommendations have been agreed on by the committee on qualification in State Medicine, appointed at the annual meeting of the British Medical Association in August last.

I. That it is desirable to establish, throughout or in each division of the United Kingdom, an uniform qualification in State Medicine, to be held in future, beside the license to practise, by all persons (except those who shall have obtained a diploma in State Medicine granted by any university, as hereinafter provided) before they are elected to hold any public medical office, the salary of which is paid out of rates or taxes, and which is mentioned in the schedule appended to Clause XI.

II. That this qualification should include an adequate knowledge both of Legal Medicine or Medical Jurisprudence, and of Preventive Medicine or Public Hygiene, comprehending Medical Police, and the management of medical institutions supported by national or local taxation.

III. That this qualification be granted only to those who have previously obtained a qualification entitling them to be on the *Medical Register*.

IV. That every one holding this qualification be entitled to register it as an "additional qualification". (See Medical Act, 1858.)

V. That no one be permitted to register the proposed qualification until he attains the age of twenty-three years; so as to give opportunity for two years' additional study, preparation, and experience, after attaining the minimum age at present required for admission to the *Register*.

VI. That the General Medical Council be empowered and required to prepare a scheme for an examination in State Medicine. The scheme to specify, (*a*) the number, qualifications, duration in office, duties and remuneration of the examiners; (*b*) the subjects of the examination; (*c*) the nature and methods of examination; (*d*) the forms of diploma or certificate to be granted by the examiners; (*e*) the fees, if any, to be paid by candidates for examination;* (*f*) the application of moneys received, if any, for the purpose of defraying all costs connected with the examination; (*g*) the places and times of holding the examination.

VII. That a committee of the several licensing bodies in each division of the United Kingdom be empowered to appoint examiners in those departments of State Medicine which are essentially connected with the science and practice of curative medicine; and that the General Medical Council be empowered to appoint a due proportion of examiners on subjects which do not form a part of ordinary medical studies and duties. That these several appointments be made within six months after the scheme has become law; and that, in default of the licensing bodies appointing their committee, or of the committee nominating such examiners, or any of them, the General Medical Council be required to fill in such vacancies; and that, in default of the General Medical Council appointing any of the examiners before-mentioned, the Lord President of Her Majesty's Privy Council be empowered to appoint all, or any (as the case may be), of the examiners named in the scheme.

VIII. That this Board of Examiners be empowered to grant the certificate to qualified medical men of a certain standing, and to medical officers of the army and navy, after a practical *viva voce* examination.

IX. That the above scheme be subject to revision by the Privy Council, and be laid before Parliament.

X. That graduates in medicine of any university in the United Kingdom, holding also a diploma in State Medicine from such university, shall be entitled to register it as a qualification for the higher offices of State Medicine; and that every person, holding the uniform qualification mentioned in Clause I, shall be entitled to be examined for such university diploma, according to the regulations, as to age, of the university to which he may apply, and to register such diploma if he obtain it.

XI. That no one shall be appointed to any of the offices specified in the schedule annexed, unless he be registered as possesing a qualification in State Medicine, or unless he shall have held such office on or before January 1st 1880.

Schedule.

EITHER	OR
(*a.*) Union Medical Officer. (*b.*) Medical Officer of Health.	(*a.*) Medical Officer of Health, or Deputy Medical Officer of Health, or Union Medical Officer, acting in either of those capacities, under the Public Health Act, 1872.

(*b* or *c.*) Medical officer of any institution maintained out of funds raised by national or local taxation, as a prison, reformatory, house of correction, industrial school, police force, etc.

(*c* or *d.*) Medical Superintendent or visiting physician of any hospital for the insane, or lunatic asylum.

(*d* or *e.*) Medical inspector of seamen.

(*e* or *f.*) Surgeon or medical inspector of any hospital under the Contagious Diseases Acts.

(*f* or *g.*) Medical inspector under the Local Government Board, etc.

(Signed) J. W. TRIPE, M.D., Hon. Sec.

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* It has been suggested that, the examinations being for the service and security of the State, the examiners should be paid by the State.

ASSOCIATION INTELLIGENCE.

MIDLAND BRANCH.

THE spring meeting of this Branch will be held at the President's house, 74, High Street, Leicester, on Tuesday, April 28th, at 7 P.M.

Members intending to bring forward cases, or to read papers, are invited to communicate with the Secretary without delay.

THOMAS BLUNT, M.D., *Honorary Secretary.*

Leicester, April 14th, 1874.

NORTHERN BRANCH.

THE spring meeting of the Northern Branch will be held at Bishop Cosin's Library, Durham, on Thursday, April 30th, at 2.45 P.M.

The President, Dr. Heath, will deliver an address, entitled "Reminiscences of a Visit to Vienna and Zurich."

The following papers have been promised.

1. On a Rare Form of Dislocation of the Hip-Joint. By Dr. Heath.
2. Notes of a Case of Injury to the Knee-Joint. By W. L. Emmerson, Esq.
3. Report of a Case of Paracentesis Thoracis. By Dr. Philipson.

Gentlemen who are desirous of reading papers or exhibiting specimens are requested to communicate with the Secretary at their earliest convenience.

G. H. PHILIPSON, M.D., *Hon. Sec.*

Newcastle-upon-Tyne, March 30th, 1874.

STAFFORDSHIRE BRANCH.

THE North Staffordshire Medical Society having resolved to become a Branch of the British Medical Association, the medical practitioners of the county of Stafford are earnestly requested to attend a meeting at the London and North-Western Hotel, Stafford, on Thursday, April 30th, 1874, at 3 P.M., when a scheme for the management of the Branch will be submitted for their approval.

J. WEAVER, *President*, J. M. TAYLOR, *Honorary Secretary,*
North Staffordshire Medical Society.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THERE will be only one meeting this spring, which will be held at Gravesend, on Friday, May 29th (D.V.); A. SHEWEN, M.B.Lond., in the Chair.

FREDERICK JAMES BROWN, M.D., *Hon. Sec.*

Rochester, March 30th, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

THE sixth general meeting of the session was held at the Midland Institute, Birmingham, on Thursday, March 12th, at 3.30 P.M. Present: FURNEAUX JORDAN, Esq., President, in the chair; and forty members and visitors.

Communications.—1. Mr. J. V. SOLOMON exhibited a large Cysticercus Cellulosæ which he had removed in a living and perfect state from the upper eyelid of a young gentleman, aged 18. The parasite was contained in or beneath a small abscess. This was only the second case which Mr. Solomon had met with.

2. Dr. CARTER showed a specimen of Miliary Tuberculosis affecting the lungs, liver, spleen, and kidneys of a child, aged 2½ years, who had been severely burnt, and who died eight hours after the receipt of the injury. The question arose as to whether the tubercular lesions were or were not directly dependent on the constitutional disturbance set up by the burn.

3. Mr. LAWSON TAIT showed a Multilocular Ovarian Tumour, recently removed, and of the type where ova are not found in the loculi.

4. Mr. TAIT also showed a modification of an Aspirator-needle, by which a director is added to the side of the needle, so that when pus has been discovered the track of the needle may be accurately followed by a bistoury, if such a plan be thought advisable. Mr. Tait had repeatedly used it with advantage in pelvic abscess.

5. Mr. W. THOMAS read a paper on the Occasional Separation of the Attachments of Tendons in consequence of Periostitis and Osteitis. Separation of the periosteum was one of the most frequent accompaniments of inflammation. If this occurred at the attachment of a tendon, it would produce separation which might become permanent, if sufficient rest were not given to allow proper recovery. He showed a specimen in which the hamstring tendons were completely separated from the tuberosity of the ischium. The bone beneath was bare, the surface tuberculated and much resembling an articular surface, the seat of chronic rheumatic arthritis. He gave the particulars of a case which came under his care, in which the history and symptoms pointed to separation of the hamstrings after inflammation. He also alluded to other cases where the sterno-mastoid, the hamstrings, and the ligamentum patellæ were affected. The most important point in the treatment of such cases was rest, but iodide of potassium and counter-irritation were also of service.

6. Dr. BALTHAZAR FOSTER narrated the particulars of a case of old standing Pleuritic Effusion in the right side, which had been admitted under his care at the General Hospital, and in consequence of the urgent dyspnœa had been tapped by means of the aspirator. One hundred and thirty ounces of fluid were drawn off, and the breathing was much relieved; but on the next day there were only six ounces of urine passed, and there was much pain in the back. On the following morning, the right leg was found to be cold and discoloured, and there was no pulsation in the right femoral and external iliac arteries. In thirty-six hours later, the left leg was similarly affected, and both became gangrenous from the cutting off of the blood-supply through the main arteries of the limbs. These conditions Dr. Foster referred to embolism, first of the renal arteries, and next of the right and left femoral arteries by means of clots detached from the pulmonary veins of the lung which had been compressed. The patient afterwards had pleurisy developed on the left side, and he died on the twelfth day after the tapping. The *post mortem* examination disclosed embolism of branches of both renal, of the right and left femoral arteries, and of branches of the splenic artery. From one of the pulmonary veins of the lung which had been relieved by tapping, an old firm branched clot was drawn out, and similar clots were found loose in the left ventricle. The pleurisy of the left side was tubercular, and there was also miliary tubercle of the peritoneum.

The West Haddon Case.—A letter was read from Mr. A. J. Waters, thanking the members for their sympathy.

YORKSHIRE BRANCH: SPRING MEETING.

THE spring meeting of this Branch was held at the Town Hall, Halifax, on Wednesday, April 11th.

Papers.—The following papers were read.

1. The Parasitic Origin of Cancer. By R. H. Meade, Esq.
2. Malignant Bronchial Catarrh. By T. Clifford Allbutt, M.D.
3. A Case illustrating the Functions of the Corpora Striata. By D. Goyder, M.D.

Several other papers were promised, but the readers were unavoidably absent.

Dinner.—After the meeting, about twenty members dined together at the Swan Hotel.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: GENERAL MEETING.

A GENERAL MEETING of this Branch was held at the King's Head Hotel, Newport, Monmouthshire, on Friday, April 10th. Present: W. T. EDWARDS, M.D., president-elect, in the chair; and nearly forty other gentlemen.

Consultation with Unqualified Practitioners.—The secretary read the report of the committee meeting, held at Neath, on March 27th, "to consider the question of qualified practitioners meeting unqualified practitioners, and sanctioning their proceedings", and at which meeting the case of Mr. J. D. Brown, F.R.C.S.Eng., of Haverfordwest, a member of the Association and this Branch, charged by Mr. J. H. Wathen of Fishguard, with supporting and countenancing a certain unqualified practitioner, was considered, and the following resolutions were carried unanimously:

1. That the report of the committee be adopted.
2. That the resolutions of the committee adopted by this meeting be published in the JOURNAL.
3. That a copy of these resolutions be forwarded to Mr. Brown by the secretary.

The following were the resolutions of the committee above referred to:

1. That, this committee having heard the charge brought by Mr. J. H. Wathen of Fishguard, against Mr. J. D. Brown of Haverfordwest, of meeting and generally countenancing an illegal medical practitioner, and having heard the replies sent by Mr. J. D. Brown to the secretary, Dr. Sheen, in which he refuses to submit his defence to the South Wales and Monmouthshire Branch of the Association, and intimates his determination to withdraw from membership, this Committee reports

that, in its opinion, Mr. Brown's conduct is deserving of the censure and reproach of the Society.

2. The committee have further to report, that they are of opinion that Mr. J. H. Wathen is fully justified in having brought the conduct of Mr. Brown before the Association.

(Signed) ALFRED SHEEN, M.D., Honorary Secretary.

New Members.—Twelve gentlemen were elected members of the Branch, ten of them having been previously elected members of the Association by the Council.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Case of Railway Injury.—Mr. R. Harrison and the Royal Infirmary School of Medicine.

THE case of Dolan *v.* the London and North-Western Railway Company, tried at the late assizes at Liverpool, is deserving the attention of all medical men, who are liable to be called upon to give evidence on such occasions. The plaintiff, a horse-dealer, while travelling in November last on the line with some horses, sustained a collision near Rugby, in which he was thrown forward and then backward in the compartment of the carriage in which he was seated, receiving, as he alleged, serious injury to his head, spine, and knee. He was removed to Rugby in another train, and remained there a fortnight, under the care of three doctors, one of whom attended at Dolan's own request, the other two on behalf of the Company. When he returned to Liverpool, he was attended by several other medical men, and was still under treatment. The serious symptoms, we understand, were those usually described by sufferers as "railway spine". A most remarkable effect of the injury, as described by the patient, was that, during the collision, a stick which he had in his hand was driven forcibly against his person, and one of his testicles thereby thrust up into the abdomen. On examination, only one testicle was found in the scrotum. He was also said to have passed blood *per anum*, and vomited it for a few days after the accident. It was, however, suggested, in the course of the trial, that blood had been procured for the purpose of application to the injured hocks of one of the plaintiff's horses.

When called, the plaintiff walked towards the witness-box with the assistance of a crutch and stick, and is described as presenting the appearance of a man suffering from great pain. On cross-examination, the following letters were produced, which plaintiff admitted to be in his own handwriting.

"Windmill Inn, November 16th, 1873.

"My dear D—,—I write a few lines to say we had a collision close to Rugby Station. I had a fortunate escape, but I think I will be able to get something handsome out of the Company. . . . I think I ought to get £500. . . . Yours truly, F. B. DOLAN."

"Windmill Inn, November 18th, 1873.

"Dear D——,—I have a damn good hold of the London and North-Western Company, and I want to make the best of it, as far as getting a big lump from them; so I want you to put a sketch of it in the paper—'The Rugby Railway Accident', if it did not already appear, to say there was nine injured, and the only one seriously injured was an Irish horse-dealer, a Mr. Dolan. I have two Rugby doctors attending me, and one from London was sent down to-day; so all agree that I am badly injured about the back and spine; so I won't say much more to you, but you may guess or judge the rest. I am writing this in bed. If I send you a telegram, don't be uneasy; put it in *Bell's Life*, or any paper you like." . . .

In a letter to his wife, dated November 10th, he said:

"I am going for £1000 for losses and damages, and will get it; so I have to be very quiet for a day or two. . . . The hed (*sic*) men of the Company are all in my favour. Don't you be uneasy, as I am all sound and well, I thank my God. . . . If I send you a letter to say I am ill, don't be uneasy. I have to make out a good case, so I may send a telegram. And be on your guard; I want the Company to see I am bad."

This correspondence appears to have fallen into the hands of the Company's solicitor through some disagreement between Mr. Dolan and his former friends. It brought the case to a speedy termination. As two medical witnesses—one from Rugby and one from London—gave their opinion that the man was suffering from injuries to the membranes of the spine, which caused the helplessness which the plaintiff manifested, and that they thought this helplessness was real, and not a sham, counsel admitted the existence of some slight injury, and in consideration also of the damage to one of his horses, agreed, on the part of the Company, to give the plaintiff £100, which his counsel prudently accepted.

At a recent meeting of the Council of the Royal Infirmary School of Medicine, Mr. Reginald Harrison having announced his desire to retire from the office of Registrar of the School, in consequence of the pressure of other professional work, the following resolution was passed unanimously.

"That this Council accepts with great regret the resignation of Mr. Harrison as Registrar of the School—an office which he has held for the past nine years. The members desire to express their sincere thanks to him for the able, zealous, and efficient manner in which he has performed his duties, and record their opinion that the School is largely indebted to him for the aid which he has rendered in promoting its interests and raising it to its present state of prosperity."

This expression of opinion from Mr. Harrison's colleagues is, we are well assured, nothing less than they individually and collectively feel to be his due, and certainly it is nothing more than his devotion to their cause fully entitles him to.

At the same meeting, Mr. W. M. Banks, Lecturer on Anatomy, and Assistant-Surgeon to the Royal Infirmary, was unanimously chosen to fill the vacant office of Registrar to the School.

MANCHESTER.

[FROM OUR OWN CORRESPONDENT.]

The Medical Charities and the Provident System.—Hydrophobia.—Syphilitic Cerebral Disease.—The Medical School.

ON Monday, April 13th, the representatives of the medical charities of Manchester and Salford held a conference in the Board-room of the Infirmary on the subject of establishment of provident dispensaries. Mr. Hugh Birley, M.P., presided. The general feeling of the meeting was decidedly against the scheme, the Royal Infirmary being the only institution that had accepted it without any modification. Neither the Salford nor the Clinical Hospitals could assent to the scheme, although the latter hospital sympathised with it. The Clinical Hospital objected to the fifth and sixth clauses, which forbad the medical charities of Manchester and Salford receiving any out or home patients from a district where a provident dispensary had been established, except on the recommendation of such a dispensary. The committee of the Hulme Dispensary were desirous of establishing a provident dispensary in connection with the present one, but objected to being absorbed in a central committee. The committee of the Ardwick and Ancoats Dispensary objected to the fifth clause. A resolution was finally proposed and carried, that four gentlemen (named) be appointed a deputation to wait upon the committees of the various medical charities of Manchester and Salford who have not already assented to the scheme, with a view of obtaining their adhesion to it, and to report to a future meeting of the committee. One speaker proposed that a provident dispensary should be started in some one district of Manchester, to see how it would work. This suggestion seems to be very feasible, and worthy of a trial.

Two cases of hydrophobia have lately been admitted into the Infirmary. They were from different districts; both proved fatal on the third day from the first appearance of hydrophobic symptoms. In the one, the time of the infliction of the bite could not be accurately ascertained, but, in the other, the symptoms set in forty-two days after the man had been bitten in the thigh by a dog which was shot a few minutes afterwards. In consequence of the occurrence of these cases, notices signed by the Mayor have been posted about the town, ordering the destruction of all stray dogs. Similar notices are generally posted about the same time every year. As hydrophobia has been proved to occur as frequently in winter as in summer, why is not this destruction enforced at all seasons of the year?

Dr. Morgan has three very interesting cases of cerebral tumour under his care at the Infirmary. In all, there is a history of syphilis. Two of the cases are rapidly becoming worse, and are likely to prove fatal at no distant date, although undergoing antiseptic treatment. There is a great similarity in the symptoms: persistent headache, confined more or less to one side of the head, and the sudden occurrence of hemiplegic symptoms.

The new building of the Medical School is fast approaching completion, and will be ready for use at the beginning of the next winter session. The city is still remarkably free from any epidemic.

CORRESPONDENCE.

INSTRUCTION OF MIDWIVES.

Sir,—Although I am quite content to leave it to the judgment of your readers to determine how far Dr. Aveling's criticism of my powers of reason and argument is just and fair, I feel it right to say that, in my last letter, the inverted commas were certainly too numerous and, in some instances, misplaced—clerical errors for which your printer and myself are, perhaps, jointly responsible. Impartial readers of the correspondence will, I think, admit that, although my quotations are not *au pied de la lettre*, they convey nothing contrary to the spirit of what Dr. Aveling has written on the subject. If it be otherwise, I shall be happy to withdraw any misrepresentation I may have inadvertently made.

With this personal explanation, I desire to withdraw from a discussion of which, in its present form, I fear your readers may be growing weary. I am, etc., A. B. Steele.

Liverpool, April 20th, 1874.

⁂ This correspondence should end here.

THE DISCUSSION ON CANCER.

Sir,—As I was prevented by the rules of the debate at the Pathological Society from replying to Dr. Broadbent, who misapprehended the nature of my remarks, perhaps you will allow me to correct the misapprehension. The line of thought which I introduced was this: cancer is *local* and *constitutional*; local, inasmuch as it is formed out of the tissue-elements of the part in which it occurs, or some neighbouring part; constitutional, in that it arises in connection with the all-pervading lymphatic glandular system. I did not say, as Dr. Broadbent supposed, that cancer was made out of lymphatic tissue, but that it was made out of the tissue-elements generally of the part in which it primarily occurred, or of some neighbouring part, on account of the functional failure of the lymphatic glandular system of the part to take up and reconvert into blood those elements which were of no use in the part, but still capable of growth and life. From the necessity for condensation, I may have seemed, as Dr. Broadbent thought, to have contradicted myself once or twice, but I did not really do so, although I may have expressed what I meant to say without sufficient precision.

I am, etc., Walter Rivington.

London, April 1874.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE "TIMES" ON THE PUBLIC HEALTH ACT.

Sir,—The able article which appeared in the *Times* of the 4th instant, contains two important errors.

The one is the assumption, put forth in the first paragraph, that, by the Act of 1872, "the conflict of sanitary authorities in England and Wales was terminated", and a *single authority* appointed in every district of the kingdom for sanitary purposes.

Your readers will not require from me any further proof that this is not the fact. There are now, *in every district*, two authorities still existing (without reckoning the county authority, which has to do with asylums, coroners' inquests, etc.); in the so-called urban districts, the Local Board or Town Council for Sanitary Act purposes, and the Board of Guardians for medical, statistical, and disease-preventing purposes; in the rural districts, the Board of Guardians for Sanitary Act and medical purposes, and the highway authorities for roads and their drainage. And these two authorities in each place are continually in conflict. The fact is worth noticing that, whenever a new Local Board district is made out of a rural district, the "sanitary" authority at once loses its powers of medical, statistical, and disease-preventing action. We ask that these conflicts and anomalies should be put an end to by the unification of district sanitary authorities.

The second error is, failure to show that, in the districts combined for the appointment of an independent officer of health, the sanitary authorities, proposed by an inspector of the Local Government Board to be included in such combination, have, in numerous instances, exercised their legal right under the Act to refuse to join in the appointment, and have thus created, in opposition to judicious advice, a multitude of *imperia in imperio*, rendering impossible any normal concerted administration. Dr. Bond's and Mr. Haviland's districts, I know, present several instances of these self-exclusions.

Metropolitan officials certainly do not comprehend the geographical perplexities and anomalies caused by the Act of 1872 in the provinces. It is too bad to charge Mr. Stanfeld's inspectors with the discredit of errors clearly due to the Act itself.

I am, etc., H. W. Rumsey, M.D.

April 18th, 1874.

WHAT IS SUFFICIENT AND PROPER?

Sir,—Will you be kind enough to inform me what is the meaning of the word "sufficient" in the 51st Section of the Public Health Act, 1848, which enacts that "if it appear to the Local Board of Health that any house is without a sufficient watercloset or privy and an ashpit", etc.? Does it refer only to the *number*, or does it also include the *quality* of these structures? Does this section apply to a house which has a badly constructed privy or closet, and does it give the Sanitary Authority power to order one of a more satisfactory character?

Again, the 76th Section of the same Act enacts that "if it appear to the Local Board of Health that a house is without a proper supply of water", etc. Does this merely mean a house without a proper *quantity* of water, or does it also include a house without a supply of proper, *i.e.* good, water? Thus, for example, if the water-supply of a house be derived solely from a well, the water of which is so impure as to be unfit to drink, is that house "without a proper supply of water"?

London, April 11th, 1874. I am, etc., E. L. Jacob.

⁂ Mr. W. H. Michael favours us with the following opinion.

1. "Sufficient" in the section means such "watercloset, privy, ashpit, etc.," as shall be deemed sufficient by the Local Board of Health upon the report of their officers; it would refer to whether the privy accommodation, etc., were sufficient if provided for more than one house, and also sufficient in the sense of preventing a nuisance, or being in its condition likely to be injurious to health.

2. A *proper* supply of water means proper both as to quantity and quality: thus, if the water supplied from a well, the only supply on the premises, be impure, this, however copious, is clearly not a proper supply; and the Local Board could, under the circumstances, compel such proper supply to be provided by themselves or by a water company, or by any other means by which a proper and adequate supply of pure water can be supplied.

CONDEMNATION OF UNWHOLESOME MEAT.

Sir,—Can you, or can any of the medical officers of health, give me any information as to what constitutes meat "unfit for human food" other than it having come from a diseased animal?

I was lately a witness in a case in which a butcher was summoned for exposing for sale a piece of meat which, when I saw it, was wet, flabby, mouldy, and the interstices of the muscles of a green colour. I certified that it was unfit for human food; but as, when in the witness-box, I was asked by defendant's attorney whether eating that meat would of necessity make the consumer ill, and as I really could not say so, seeing what putrid substances are eaten with apparent impunity, the case was dismissed.

I should be glad to know also whether I could have given any other answer than I did. I am, etc., M. O. H.

April 11th, 1874.

⁂ The Act of the 26 and 27 of Victoria, c. 117, provides, that all medical officers of health or inspectors of nuisances may, at reasonable times, seize all meat, etc., exposed for sale which appear to them "diseased, or unsound, or unwholesome, or unfit for the food of man", and take the same to be dealt with by a justice, and, if it shall appear to such justice to be unsound, etc., he shall order the same to be destroyed, and inflict a fine or imprisonment upon the vendor. This appears to get rid of the difficulty in which our correspondent was placed when he was asked by the defendant's attorney whether eating the meat in question would of necessity make the consumer of it ill.

It is generally admitted by all competent persons that there are two conditions in which meat may be which render it unfit for food. Either it is part of the carcase of a diseased animal, or it was wholesome and good when killed, but, by time, or from other causes, has become putrid. Diseased meat partakes of the characteristic appearances described by our correspondent; the nose will detect its unfitness from the other cause named. To attempt to say how the flesh of a diseased animal is unfit for food, opens up the whole question of the pathology of the diseases of animals, and the varied morbid changes which such diseases produce on the muscular and adipose tissues; and on that subject it would be too long to dwell.

OUT-DOOR MEDICAL RELIEF.

MR. HODGES (Brighton), in an able pamphlet on this subject, writes: Another phase of out-door relief, and one which is very much abused, is the granting too easily of medical assistance. In a report of the committee of the guardians of the Brixworth Union, appointed to consider the question of out-door relief, the matter is thus treated. "Perhaps no part of the system of out-door relief is more open to abuse than this of medical relief, or requires more care and supervision. A very large proportion of cases obtained relief in the first instance through medical certificates for some illness, either feigned or only of a temporary nature, and have now become reduced to a state of almost hopeless pauperism. The medical officer confessed that there is a strong tendency on the part of the poor to feign disease, but that it was not an unfrequent thing for his report on a case to be set aside or over-ruled by the applicant for relief procuring an out-patient's letter to the infirmary from some charitable person, on the strength of which he applies again and obtains out-door relief." Mr. H. Longley, Poor-law Inspector, in his report, also treats the question as follows: "When it is considered that a large proportion of pauperism notoriously originates in relief granted in sickness, the general increase of pauperism may be in a great measure attributed to laxity of administration in this respect." Mr. W. A. Peel, another Poor-law Inspector, reports on the same subject to the Local Government Board, and says: "No doubt that a liberal use of the privileges accorded to medical officers has the effect of making them popular with their pauper patients, and increasing their popularity in the neighbourhood, and sometimes, too, it may be exercised as a cloak to cover neglect. Still, in the face of some defects which undoubtedly exist in the administration of medical out-door relief, it must be admitted that the present system offers greater advantages to the paupers than the poorer class of ratepayers when sick can command."

PETITIONS TO PARLIAMENT.

THE following petitions have been prepared by the Council of the Poor-law Medical Officers' Association, in accordance with the suggestion of Mr. Brady, M.P., and Dr. Lush, M.P., for the guidance of Poor-law Medical Officers and others of the profession who may be desirous of supporting the objects mentioned therein. All that is required to be done is to copy the petitions on one side only of separate sheets of paper, sign and transmit them at once to Dr. Joseph Rogers, 33, Dean Street, Soho, London, W.

To the Honourable the Commons of Great Britain and Ireland in Parliament assembled.

The humble petition of the undersigned Poor-law Medical Officer or Officers sheweth—That whereas the greater portion of our annual outlay of £8,000,000 for poor-relief is expended on the maintenance of the sick and those dependent on them; and whereas the administration of such relief in the provincial towns and rural districts of England and Wales is, owing to the great extent of many of the districts, the limited stipends paid to, and the provision of all medicines by, the medical officers, most unsatisfactory, and wholly and palpably inadequate to meet the requirements of the poorer classes; and whereas the Local Government Board have, in a circular letter dated March 23rd, 1874, recommended the guardians to request that their medical officers should perform additional duties under the Public Health Act, 1872, but have omitted to make any provision for the payment of such extra services; your petitioners respectfully pray that your honourable House will see fit to reform such system of medical relief by establishing district dispensaries as recommended in the report of the Royal Sanitary Commission, as well as by those Poor-law inspectors who were deputed to institute inquiries into the question of out-door medical relief, which district dispensaries have been found to work beneficially in Ireland in diminishing sickness and mortality, and in curtailing poor-relief expenditure. Your petitioners also pray that no additional duties be imposed on district medical officers, unless provision be made to provide suitable remuneration for such increased services.

And your petitioners will ever pray, etc.

To the Honourable the Commons of Great Britain and Ireland in Parliament assembled.

The humble petition of the undersigned Poor-law Medical Officer or Officers sheweth—That whereas, by an Act passed in the session of Parliament, 1870, Boards of Guardians were authorised, with the sanction of the Local Government Board, to grant to Poor-law medical officers, who, by reason of infirmity, length of service, or advanced years, were incapacitated from efficiently performing their duty, superannuation allowance to such amount as might be deemed under the varied circumstances advisable; and whereas, in accordance with such permission, some medical officers have been superannuated, whilst in many other instances officers equally entitled have been distinctly refused superannuation, notwithstanding efforts made by the Local Government Board in their behalf.

Your petitioners respectfully pray that your honourable House will take this serious matter into consideration, and make such amendment of the law as will render it compulsory on Boards of Guardians to provide reasonable and suitable superannuation of medical officers.

And your petitioners, etc.

THE ADULTERATION ACT.

THE report presented to the quarter sessions meeting for the parts of Lindsey, in Lincolnshire, states that the amount of work done under the Adulteration of Food and Drink Act since last session has been inconsiderable, mainly in consequence of the length of time which elapses before the certificates of the analyst are received. The objects of the Act are defeated by the delay, as it is not considered advisable to proceed with cases after the lapse of two or three months from the time of obtaining the samples.

DEFAULT OF A LOCAL BOARD OF HEALTH.

MR. MORGAN, one of the inspectors attached to the Local Government Act Department of the Local Government Board, has recently held an inquiry as to an alleged default on the part of the Local Board of Health of Golcar, in the discharge of their duties under the Sanitary Acts. As the result of the inquiry, the Local Government Board have arrived at the conclusion that the allegations referred to have been proved, and they have directed that the costs of the memorialists should be paid by the Local Board of Health. The defaulting authority is further informed that the inspector has recommended the Local Government Board to merge the district into the rural sanitary district of the Huddersfield Union, unless immediate action is taken for the removal of nuisances, the execution of proper works of sewerage and water-supply, and the lighting of the district. A request is further made that the Local Government Board may be informed within a month as to what action has been determined on.

SMALL-POX AT DEWSBURY.

A SEVERE outbreak of small-pox has taken place in the Dewsbury Union, the disease being very prevalent both in the town of Dewsbury and in several of the outlying villages. The members of the several urban and rural sanitary authorities comprised within the Union held a conference last week as to the best mode of staying the spread of the epidemic, but no efficient action seems to have been taken, because there was a difference of opinion as to whether it was most advisable to erect one large small-pox hospital for the entire Union, or one small one in each of the affected townships. In the end, the meeting was adjourned to allow each of the several authorities to discuss the question—a result which is much to be regretted, as the waste of time must of necessity cause a delay in the provision of proper means of isolation. Without expressing any opinion as the advantages which, in this particular instance, may attach to the construction of a single hospital for the entire Union, we would point out to the promoters of this scheme that the powers which a sanitary authority possesses under section 26 of the Sanitary Act of 1866, for the compulsory isolation of persons suffering from infectious diseases, are entirely sacrificed unless the patients can be removed to a hospital situated within the district of the authority taking action under that section.

THE Poor-law Medical Officers having—rather unwisely, we think—applied to the Prime Minister to receive a deputation from them on the subject of the recent circular letter of the Local Government Board, to which we refer elsewhere, Mr. Disraeli has naturally referred them to the head of the department.

MILITARY AND NAVAL MEDICAL SERVICES.

RETIREMENT OF INDIAN MEDICAL OFFICERS.

NOW that the question of the enforced retirement of medical officers by age is coming under discussion, we note an instance in which this rule has been vigorously carried into effect. Surgeon-Major Trestrail, of the Indian service, joined in 1842, and in 1873 a warrant was issued compelling surgeons-major to take half-pay after fifty-five years of age. As he had entered the service prior to January 13th, 1860, he was allowed three years' grace; and, as this has now expired, on his attaining the age of fifty-eight, he is obliged to retire, although still in good health, and able and willing for work.

MOUNTED MEDICAL OFFICERS.

THERE is a comic as well as a tragic side to most things, and perhaps the ludicrous somewhat predominates in the little incident referred to by Mr. Henry Herbert the other night. To see a medical officer in charge of a battery of artillery, perched on a dog-cart, whilst his more adventurous comrades ride by his side, can hardly have failed to provoke public derision, and to lower his status and authority amongst the men who are openly obliged to show him respect. In this particular instance, the gentleman in question may have been temporarily incapacitated from horse exercise by illness or accident; but if his inability to take advantage of the charger furnished for his use by the commanding officer, arose from sheer incompetence, we are obliged to protest most vigorously against a system which rendered this possible. And yet we are by no means surprised to hear that such has been the case. Reports have reached us from some of our larger camps, to the effect, that the medical officers in responsible charge of batteries, are so frequently changed, or, more correctly speaking, that this special duty so often belongs to no one in particular, that it is really astonishing how some part of the work is ever efficiently done at all. For instance, it often happens that this or that battery may have to take the field for gun practice, and as it has no doctor permanently attached, the staff assistant-surgeon, who is looking after their sick, finds himself suddenly in orders to proceed on horseback to the scene of action. Even although he should have any equestrian experience, which is doubtful, it is very plain that he has no horse specially detailed for his own use, and must therefore either accompany the troops on foot, or take advantage of any vicious or impracticable animal which may be placed at his disposal for that occasion. Formerly, every battery had its own medical man, who had not only passed through a regular course of riding drill at Woolwich, but had a horse set aside for his particular use; but, in these days, one surgeon may not only have to do the duty of several regiments at the same time, but may be practically repudiated by all, and is usually quite unable to procure any animal fit to ride. After all, the question really narrows itself into this: that no medical officer should be considered fit to serve unless he has passed through a regular course of riding-horse drill. We know that, in the Prussian Army, this requirement is rigorously exacted, and, when the deputation from the British Medical Association met the late Secretary of State for War last summer, this point was very specially insisted on by Mr. Ernest Hart in his opening statement. The usefulness of a medical officer who cannot ride must be very seriously hampered in the field; and, now that the question of forage may be expected to come soon again under discussion, we are glad to supply one very potent argument in favour of the old system.

We have always strongly held that every medical officer in the enjoyment of field rank should be invariably granted the privilege of keeping a horse; and, although this might not prevent the scandal of such makeshifts as Mr. Herbert very properly brought under the notice of the House of Commons, it would at least encourage the possession of an accomplishment which no army medical officer ought to be without.

OBITUARY.

ALEXANDER H. BEGG, M.B., C.M.

THE late Dr. A. H. Begg was born at Glasgow on January 18th, 1842. Between 1860 and 1863, he attended the university there, and distinguished himself highly in classics. He commenced the study of medicine in 1866 at the University of Edinburgh, and took the degrees of M.B. and C.M. in 1869. Thereafter, he attended the hospitals in Paris; but, being possessed of private means, and his health not proving very good, he never engaged in actual practice. He travelled a great deal on the Continent, and made a tour round the world in 1871-2. He died, unmarried, at No. 5, Morningside Park, Edinburgh, on April 8th, 1874, after a lingering illness borne with much patient resignation.

SIDNEY HAYWARD, M.D. ST. ANDREW'S.

DR. SIDNEY HAYWARD died at Falmouth on the 1st instant, aged 33. He was born in London, and was the third son of Mr. Henry Hayward, the formerly well known dentist, and brother to the surgeon-dentist of St. Mary's Hospital. He received his education at the Middlesex Hospital, where he filled various resident offices. After a voyage to India in the steamship *Indiana*, he commenced general practice in Hobart Place, with the strong conviction, which he impressed on his patients, that their best interests were mutually served by a medical attendant not supplying drugs. For a few years, he was physician to the Pimlico Dispensary and Samaritan Free Hospital; but the great work of his life, in conjunction with Dr. Edward Ellis, was the establishment of the Victoria Hospital for Children in Chelsea, which he was spared to see become one of the most successful and valuable of such institutions. Finding the labour of his various public and private duties too heavy for him, he retired to a country practice at Overton in Hampshire, with the usual union and sanitary offices.

The earnest Christian devotion and uprightness of his character secured from all he attended the utmost esteem and respect, though his views, religious and political, were too liberal for the untravelled occupiers of an agricultural parish.

Dr. Hayward was twice married; firstly, to Miss E. Chaffey, of Mandlin, and leaves one son; secondly, on 17th February last, to Miss Jane Corps, of Overton. His death took place after a few hours' great suffering, just six weeks after his marriage. His body was interred at Overton on the 7th instant, many of the inhabitants attending, also several members of the medical profession of note in the neighbourhood.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—April 21st.

Registration of Births and Deaths.—Dr. LYON PLAYFAIR asked the President of the Local Government Board whether he intended to introduce this year a Bill for the compulsory registration of births, and for the better verification of the causes of deaths.—Mr. SCLATER-BOOTH (President of the Local Government Board) said he hoped on Thursday next to introduce such a Bill.

Sanitary Legislation for Ireland.—In answer to Mr. Power, the CHANCELLOR OF THE EXCHEQUER said that the advances made for sanitary purposes in this country were made at a lower rate of interest than usual, but the law which governed such advances was confined to England. It was not, therefore, in the power of the government to make advances under similar conditions to Ireland. It was, however, the intention of the government to introduce a Bill upon the subject and make it applicable to Ireland in the present session, and he hoped that such measure would meet the approval of hon. members.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 16th, 1874.

Butter, George Bleeck, Warminster
Dalton, Charles Bernard, Whitehaven
Dyson, William, Thuysland, near Sheffield
Harrison, Charles Edward, Upper Norwood
Taylor, Joseph, Harthersage, near Sheffield

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At examination meetings of the College, held on Tuesday, Wednesday, and Thursday, April 14th, 15th, and 16th, the following candidates obtained the license to practise Medicine

Hayward, William Thornborough
Jones, Charles John
Marmon, James
Morgan, Evan Abraham
Morton, Thomas Henry
Norman, Hugh
O'Connor, Frederick
Rawson, Louis William
Stone, William Pierre Patterson
Williams, Austin Edward

The following candidates obtained the Midwifery License.

Hayward, William Thornborough
Rawson, Louis William
Williams, Austin Edward

At a special examination meeting, held on Wednesday, April 8th, the license to practise Medicine was granted to:

Burke, Dominick, M.R.C.S.Eng.

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK INFIRMARY—House Surgeon: £120 per annum, furnished apartments, etc., and the privilege of taking an apprentice. Applications, 2nd May to W. T. Hindmarsh, Honorary Secretary.

ARDEE UNION, co. Louth—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Dunleer Dispensary District: £120 per annum, and fees. Applications, 2nd May, to Patrick Carroll, Honorary Secretary.

CAMBRIDGE POLICE FORCE—Medical Officer: £35 per annum. Applications, 25th instant, to Edmond Foster, Town Clerk.

CHELTENHAM GENERAL HOSPITAL and DISPENSARY—Honorary Medical Officer to the Branch Dispensary. Applications, 1st May, to David Hartley, Secretary.

GENERAL HOSPITAL, Birmingham—Resident Medical Officer: £100 per annum, board, and residence. Applications, 27th instant, to W. T. Grant, House Governor and Secretary.

GENERAL INFIRMARY, Leeds—House-Physician; House-Surgeon: each £100 per annum, board, residence, etc. Applications, 30th instant, to Dr. Heaton.

GLASGOW ROYAL LUNATIC ASYLUM—Resident Physician-Superintendent: £600 per annum, house partly furnished, coal, gas, and water.

GREAT CROSBY URBAN SANITARY DISTRICT—Medical Officer of Health: £20 per annum.

HULL GENERAL INFIRMARY—Honorary Physician. Applications to the Chairman.

KILBURN DISPENSARY—Assistant Resident Medical Officers: £80 per annum, with apartments, coals, and gas.

KILCHRENAN and DALAVICH, Argyllshire—Parochial Medical Officer. Applications, 1st May, to Rev. N. Mackenzie, Kilchrenan.

LEICESTERSHIRE and RUTLANDSHIRE LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, board, and lodging. Applications, 9th May, to W. Napier Reeve, Clerk to Visitors, Leicester.

LINCOLN COUNTY HOSPITAL—House-Surgeon and Apothecary: £100 per annum, board, and lodging. Applications, 4th May, to J. W. Danby, Secretary.

LINCOLN GENERAL DISPENSARY—House-Surgeon and Apothecary: £150 per annum, furnished apartments, fire, and gas. Applications, 27th instant, to James Ward, Secretary.

LIVERPOOL DISPENSARIES—Three Honorary Medical Officers to the North Dispensary. Applications, 29th instant, to W. Lister, Secretary.

LONDON HOSPITAL—Assistant Physician. Applications, 27th instant, to the House Committee.

MIDDLESEX HOSPITAL—Assistant Dental Surgeon.—Resident Physician's Assistant.

NENAGH UNION, co. Tipperary—Medical Officer for the Workhouse: £100 per annum. Applications, 30th instant, to J. H. Sheehan, Clerk.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Silvermines Dispensary District: £100 per annum, and fees. Applications, 2nd May, to W. H. Carroll, Honorary Secretary.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury—Medical Registrar: £50 per annum. Applications, 7th May, to B. B. Rawlings, Secretary.

NEWPORT (Monmouthshire) INFIRMARY and DISPENSARY—Resident Medical Officer: £85 per annum, furnished lodgings, board, etc. Applications, 6th May, to E. W. Willey, Secretary.

NEW ROSS UNION—Medical Officer for the Templeudigan Dispensary District: £50 per annum. Applications, 7th May, to Edward Kavanagh, Honorary Secretary, Ballygalvert, Ballywilliam.

NOTTINGHAM COUNTY and BOROUGH LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, board, lodging, etc. Applications, 29th instant, to Kemp Sanby, Clerk to Committee of Visitors.

OXFORDSHIRE—Public Analyst.

QUEEN'S HOSPITAL, Birmingham—Pathologist. Applications, 16th May, to W. Young, Secretary.

RICHMOND DISTRICT LUNATIC ASYLUM, Dublin—Assistant to the Medical Superintendent: £150 per annum, apartments, etc. Applications, 27th instant, to Joshua Nunn, Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields—Curator.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

ST. THOMAS'S HOSPITAL—Resident Physician's Assistant: £100 per annum, furnished rooms, and commons.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

STRATHKINNESS, Fifeshire—Parochial Medical Officer: £10 per annum, and fees, and £110 per annum from a Club. Applications to Mr. M. Thom.

THINGOE UNION—Medical Officers for Nos. 4 and 5 Districts: £50 and £42 per annum.

WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 4th May, to the Secretary.

UNIVERSITY OF OTAGO, New Zealand—Professor of Anatomy and Physiology: £600 per annum and class fees, and allowance for passage money and outfit. Applications, 25th instant, to John Auld, Esq., W. S., Edinburgh.

WESTERN INFIRMARY, Glasgow—Superintendent: £250 per annum, with board and lodging.

WINDSOR ROYAL INFIRMARY and DISPENSARY—House-Surgeon: £100 per annum, residence, etc. Applications, 29th instant, to George Cartland, Sec.

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, furnished apartments, etc. Applications, 27th instant, to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Benham, William T., M.D., Assistant Medical Officer of the City and County County Lunatic Asylum, Bristol, appointed Pathologist and Assistant Medical Officer to the West Riding Asylum, Wakefield.

Hannah, Nathan, L.R.C.P.E., appointed Medical Officer of Health for the Township of Ashton-in-Makerfield (Rural).—Salary, £30 per annum.

Steele, Henry Francis A., M.R.C.S., Assistant House-Surgeon to the Liverpool Eastern Dispensary, appointed Resident Medical Officer to the Bloomsbury Dispensary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

Lynes.—On April 19th, at 9, Priory Row, Coventry, the wife of *Edward Lynes, M.D., of a son.

DEATHS.

*__Allcock__, Christopher, L.R.C.P.Ed., at Waterloo, Liverpool, aged 34, on April 11.

Bayfield, S. J., M.R.C.S., late of St. Thomas's Street, Southwark, at 10, Maryland Road, aged 69, on April 7th.

Sutton.—On April 18th, aged 6 months, Francis Edward, infant son of Frederick Sutton, M.R.C.S., Resident Medical Superintendent of the Norwich Borough Asylum.

OPERATION DAYS AT THE HOSPITALS.

MONDAY	Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.
WEDNESDAY ..	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY.........	Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY	St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Dr. J. K. Spender (of Bath) will read an abstract of his successful Fothergillian Essay, on "Therapeutic Means for the Relief of Pain"; Dr. Routh, "On certain new preparations of Phosphorus, and their action on the Economy"; Mr. Ashburton Thompson, "On the Medicinal Use of Free Phosphorus"; Mr. Wm. Adams, "On a Case of Strangulated Femoral Hernia reduced by a large Injection of Oil".

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. Dobell, "On the Natural History of Pulmonary Consumption"; Mr. Barwell, "On Septic Disease in and out of Hospitals".

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

Authors desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

Communications respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

Dr. J. K. Spender (Bath).—The Hastings Prize Essays are published in the JOURNAL. The manuscript of the last has just been received for press; and its publication will be commenced forthwith.

Nil Desperandum.—The information furnished shall be used effectively.

CREMATION.

SIR,—It is said that this is the age of progress; but it appears to me that we are drifting back into the dark ages, when Sir Henry Thompson and others are advocating the cremation of the dead, which is only practised by savage nations. There is something very horrible and revolting in the idea of burning to ashes the dead bodies of our nearest and dearest friends and relations; but I think that the feelings of Englishmen will revolt at such a desecration of the dead. Respect for the dead is one of the most beautiful traits of our character.

Newcastle-upon-Tyne, April 1874. I am, etc., J. LIDDELL.

Any gentlemen who have not signed the address lately presented to Dr. Murchison, but who still wish to do so, can have the opportunity by calling at 79, Wimpole Street.

Dr. Jackson (Leamington).—Mr. Richard Jones was unquestionably in the wrong in the matter, but the act seems to have been one of simple inadvertence.

We concur with a gentleman, who writes in the name of some London surgeons, in the opinion that the thanks of the Poor-law medical officers are due to Dr. Lush, M.P., and Dr. Brady, M.P., for the unfailing kindness which they show in supporting the cause of the Poor-law medical officers.

Sanitary Management at Newbiggin.—The unaccountable carelessness in regard to sanitary matters, so often observed at our so-called health resorts, is, according to the *Blyth and Bedlington Star*, especially prominent at Newbiggin, the great fashionable watering-place of the North. This place ought to be looked after by the joint vigilance of its inspector of nuisances and its policemen; but, notwithstanding these presumed safeguards against sanitary shortcomings, the same authority states that the beautiful sands and extensive beach of Newbiggin are in a much worse condition than they were before the introduction of these officials.

Correspondents are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke. General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

Medical Etiquette.

Sir,—As you have published the correspondence carried on in reference to some communication between Mr. Elwin and myself, I wish you to make it known that I have replied to his letter by explaining clearly that there was no intentional breach of etiquette whatever on my part, and what I appeared to have done wrongly was due to ignorance of facts. I am, etc.,

Edward Jepson, House Surgeon, St. Bartholomew's Hospital.

Jackman Fund.—The receipt of £1 1s. from Mr. Edwin Truman is thankfully acknowledged. It is proposed to place the sum already collected for the benefit of Mr. Jackman in the names of two trustees, and to pay it to that gentleman in weekly instalments of £1.

Dr. Hyslop (Stretton).—The circumstance that the London firm undertook the publication at request, does not, so far as we can see, improve the paper or printing, or excuse them in impressing the name on a book of such defective mechanical execution.

New Medical and Chemical Terms.

Sir,—In answer to Alpha Omega's reply to my observations upon the above subject, others as well as myself, I am sure, are indebted to him for his kind and explanatory remarks. I would, however, with all respect, correct some little errors which that gentleman has, no doubt, unintentionally committed—viz., where he makes me say "because there is not a dictionary to explain the meaning of words", etc. On reference to my remarks, he will find me simply asking a question—viz., "Whether there is, or is soon likely to be, any little work which will include those words I cannot find in my present dictionaries, including Fowler's medical one (1860)?" A. Ω., then, "thinks he has said enough to show that a dictionary of modest dimensions would be inadequate to explain comprehensibly all the terms used in our science". In reply to this, I scarcely know what "our science" implies; and in asking for "a little work which will explain new medical and chemical (not surgical or botanical) names that I cannot find in my present dictionaries, etc.", up to 1860, I think it is not an unreasonable question, especially when finding that the framers of our *British Pharmacopœia* of 1867 publish an addendum to it in 1874, because, to quote the words in the advertisement, "The General Medical Council have thought it desirable to supply the requisite information concerning several new medicines and new preparations which have been introduced or established in use since 1867".

A. Ω. next says, "When a new word is introduced to medical or scientific literature, it is undoubtedly to supply a want, and is also fully explained by its introducer". Did the legally qualified medical patentee of chlorodyne introduce this word for the express purpose of supplying a want, and of fully explaining its meaning or secret composition, which I contend ought to be known, inasmuch as I know that the government which grants this patent, likewise orders it to be placed in the medicine-chests of her Majesty's navy, etc., without even informing the medical officers therein of the secret and burning nature of its composition? Would not browneodyne or brownadyne be quite as expressive as greene-odyne or chloro- or even chloradyne?

I now come to the word "aspiration", than which my friend A. Ω. says "he does not think a softer or more musical word could have been chosen". I do not profess to possess a very musical ear, therefore must appeal to more refined ones to decide whether this word is "the softest or most musical of words". My dictionary defines "aspiration as the pronunciation of a letter with a rough breathing"; and to prove that there is a softer letter than "s" in the vexed word "aspiration", I unhesitatingly declare that of all consonants in the French language the euphonistic Parisians have a greater horror of encountering this harsh, hissing, rough consonant than any other one in their Italian-aping language. They dodge about in order to get rid of it whenever they can; as in *bête* for beast, *fête* for *feast*, *pâte* for paste, *pâté* for pasty; *étranger* for stranger, *étudie* for study, *école* for school, *étre* for estare, etc.; *tempête* for tempest, *apôtre* for apostle, *côte* for coast, etc.; and even when printed, it is, as a rule, not pronounced at the end of words. Thus we see that this word in question means not only, in English, "a rough breathing", but has a harsh and anything but soft and musical sound even when Frenchified and pronounced by a lightly tripping Parisian. My instructive friend A. Ω. also informs us that "aspiration in English" is synonymous with a longing and yearning; so, also, sir, is this French word aspiration synonymous with the French word *inspiration;* and when a baby is yearning for the bottle or breast, the act of inspiration must be first instinctively accomplished before a vacuum can be created in the little stranger's mouth, that such longing may be gratified. With all due deference to the first employer of this word in reference to his valuable little instrument, I would modestly express my opinion, as an Englishman, by intimating that I think the term "suction trocar" would be quite as expressive as aspiration. I will leave myself in the hands of my medical brethren to make their choice of the two terms in question.

I now come to the word "aldehyde" which A. Ω. says "he agrees with me has neither sense nor meaning". On referring to my remarks, he will, however, find I have not thus expressed myself, but have simply stated "that the new chemical terms of the last twenty or thirty years, even to middle-aged practitioners, have neither sense nor meaning". I however by this expression do not by any means wish to infer that the above word, *aldehyde,* has neither sense nor meaning; for, on the contrary, after A. Ω.'s very kind definition of it, I think it quite as expressive as the derivation of church from οἴκος κύριου. *Chloraldehyde* also is regarded by me as equally expressive, now I know its derivation. Am I, then, I repeat, asking too much in suggesting an addendum to explain the *British Pharmacopœia* and other medical and chemical words, as amylhydride, amylic alcohol, ozone, fousel oil, etc.? Shaw and Co., in 1871, brought out a 5s. dictionary appendix, with seven thousand words not found in ordinary dictionaries; and the *Bankers' Gazette* testifies that "it supplies a desideratum long felt".

Apologising for thus trespassing upon your valuable columns, and sincerely thanking A. Ω. for his able ventilation of this subject, as well as hoping that some old parish and club doctors like myself will express their opinions upon this interesting question, I am, etc., Alpha Beta.

Spalding, April 1874.

Notices of Births, Marriages, Deaths, and Appointments, intended for insertion in the British Medical Journal, should arrive at the Office not later than 10 A.M. on Thursday.

New Medical and Chemical Terms.

Sir,—A. B., whose letter on this subject appeared in the Journal of March 28th, is not the only reader of medical and chemical literature who feels the want of a new dictionary of scientific terms. Many years ago, I found Hoblyn's *Dictionary of Medical Terms* very useful. It did not give the pronunciation of words, which I considered a defect. A new edition, with this defect remedied, would be acceptable. Country practitioners have not the opportunity of hearing new words uttered, and are, therefore, often uncertain about their pronunciation. A new dictionary should meet this want. So far, then, I support A. B.'s proposition; but I wish to make a suggestion which, if carried out, would go very far in supplying this want of a modern lexicon. My suggestion is, that every author should supply at the end of his work a glossary, both pronouncing and etymological, of the scientific words used in the book. Some authors have done so; I may mention Erichsen, Wharton Jones, and the editors of Quain's *Anatomy* and of Hooper's *Vade Mecum.* If this plan were generally adopted, students and busy practitioners would read new works with more ease and advantage.

April 1874. I am, etc., R. B.

Cheap Midwifery.

Sir,—For many years past, I have had a fair share of midwifery practice in a mining district, and I cannot say that my experience of its effects at all agrees with that of your correspondent Dr. Aveling, in the Journal of March 28th. Even if the case were as strong as Dr. Aveling describes it, I doubt whether we are justified in refusing to attend "women of the humbler class", unless the midwife to whom he would "hand them over" is of a superior class to any I have met with. But my view of the case is different from Dr. Aveling's; and, if he will allow me, I should like to show him how he may easily avoid the "deteriorating effects" which he has classed under four heads; viz., "mental", "moral", "physical", and "pecuniary".

First. Never go to a labour without the last number of the Journal in your pocket.

Second. Never drink anything stronger than tea. I am not a teetotaler, nor ever likely to be one; but I know no stimulant so refreshing as tea, especially in the night.

Third. Take every opportunity of getting a nap in your chair, or on a sofa, if only for half an hour at a time, and you will be all the better for it the next day.

Fourth. Never charge less than a sovereign; or, in special cases, fifteen shillings. The miners can well afford it with the high wages they get now; and, as a rule, if you let them see that their wives get good attendance, they will seldom grudge the money. I am, etc., George Terry.

Mells, Somerset, March 31st, 1874.

Iodide of Sodium in Tertiary Syphilis.

Sir,—Allow me to call the attention of your correspondent, "A Liverpool Associate", to the bromo-iodine water of this spa, which may be useful in the case of "lupoid disease" of which he speaks. Whether the beneficial results should be attributed to its various salts intimately combined by Nature, or simply to its iodides and bromides, with sodium as a base, it is difficult to determine. In many cases where mercury is unsuitable, the iodides of sodium is very useful; it acts differently from the salts of potassium; it is tolerated when the latter salt nauseates. Mr. Berkeley Hill says the salts of sodium contain less alkali, and, therefore, are less deteriorating to the blood than those of potassium. Some French writers are of opinion that when sodium is combined as a base, it is more potent and less debilitating. Be this as it may, I can with truth say that most cases of tertiary syphilis are benefited when the treatment is persevered with. "A Liverpool Associate" should refer to Mr. T. Nunn's case of lupus, read before the Clinical Society, October 18th, 1871 (see British Medical Journal, vol. ii, 1871, p. 484); also Dr. Skaife's case, May 18th, 1873. I am, etc,, Robert Cuffe, M.R.C.S.Eng.

Woodhall Spa Villa, April 7th, 1874.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, April 17th; The Ayr Advertiser, April 16th; The West County Lantern, April 11th; The Scotsman, April 16th; The Brighton Examiner, April 14th; The Leicester Advertiser, April 18th; The Blackburn Standard, April 22nd; The Hull Evening News, April 17th; The Sunderland Times, April 17th; The Auckland Chronicle, April 10th; The Blyth and Bedlington Star, April 18th; The Northern Daily Express, April 14th; The Sussex Advertiser, April 15th; The Newcastle Daily Journal, April 15th; The Bridgwater Mercury, April 8th; The Richmond and Twickenham Times, April 11th and 18th.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. S. Wilks, London; Dr. J. W. Moore, Dublin; Dr. Murchison, London; An Associate; Dr. Gore, Ballinglass; Dr. Edis, London; Mr. Teevan, London; Mr. Callender, London; Mr. Warrington Haward, London; Dr. J. Crichton Browne, Wakefield; Mr. T. H. Bartleet, Birmingham; Dr. T. Blunt, Leicester; Mr. Eastes, London; Mr. Stickings, Wye; Dr. D. T. T. Maunsell, Dublin; A Correspondent; Dr. Rumsey, Cheltenham; Nil Desperandum; Mr. W. Fairlie Clarke, London; Mr. Eassie, London; Dr. R. J. Lee, London; Dr. John Brunton, London; E. S.; Dr. J. K. Spender, Bath; Dr. Farquharson, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Joseph Rogers, London; The Secretary of the Clinical Society; Mr. F. Sutton, Norwich; Mr. W. Rivington, London; Our Paris Correspondent: Dr. Sawyer, Birmingham; Mr. Bradley, Manchester; The Secretary of the Royal Medical and Chirurgical Society; Mr. Southam, Manchester; Mr. H. Sewill, London; Mr. Walford, Reading; Dr. Molony, Chesterton: Dr. Finlayson, Glasgow; Mr. Stansfeld, Bristol; Dr. E. Whittle, Liverpool; Mr. T. Bower, Stafford; Mr. Jalland, York; Mr. J. Bell, Edinburgh; Mr. Jackman, Swimbridge: Mr. Hyslop, Church Stretton; Mr. J. M. Gibbes, Napier, New Zealand; Mr. Woodman, Ramsgate; Mr. Garraway, Faversham; Dr. Cuffe, London; Mr. Campbell De Morgan, London; Mr. G. P. Bacon, London; Dr. E. D. de Vitré, Lancaster; Mr. W. Jones Morris, Portmadoc; Dr. Mickle, Bow; Mr. J. W. Barnes, London; Mr E. Jepson, London; Dr. Mackenzie, London; Mr. E. J. Lloyd, London; Rev. W. Hatchard, Hastings; Mr. J. Brown, Haverfordwest; Our Manchester Correspondent; Dr. Schliep, Berlin; Dr. Steele, Liverpool; Our Dublin Correspondent; A. B.; R. S. S.; etc.

THE CROONIAN LECTURES ON FUNCTIONAL DERANGEMENTS OF THE LIVER.

Delivered at the Royal College of Physicians.

By CHARLES MURCHISON, M.D., LL.D., F.R.S.,
Physician and Lecturer on Medicine, St. Thomas's Hospital.

LECTURE III.—*Concluded.*

VI. *Derangements of the Organs of Circulation.* 1. *Palpitations and Flutterings of the Heart;* 2. *Exaggerated Pulsation of the Large Arteries;* 3. *Irregularities and Intermissions of the Pulse;* 4. *Feeble Circulation;* 5. *Anæmia;* 6. *Angina Pectoris.*—VII. *Derangements of Organs of Respiration.* 1. *Chronic Catarrh of Fauces;* 2. *Bronchitis;* 3. *Spasmodic Asthma.*—VIII. *Derangements of the Urinary Organs.* 1. *Deposits of Lithic Acid and Lithates in Urine;* 2. *Renal Calculi;* 3. *Diseases of Kidneys;* 4. *Cystitis.*—IX. *Abnormal Conditions of Skin.* 1. *Eczema, Lepra, Psoriasis, and Lichen;* 2. *Urticaria;* 3. *Boils and Carbuncles;* 4. *Pigment-Spots;* 5. *Xanthelasma;* 6. *Pruritus.*—C. CAUSES OF FUNCTIONAL DERANGEMENTS OF THE LIVER.—I. SECONDARY. 1. *Structural Diseases of the Liver;* 2. *Disorders of Stomach and Bowels;* 3. *Diseases of the Heart and Lungs;* 4. *Pyrexia.*—II. PRIMARY. 1. *Errors in Diet;* 2. *Deficient Supply of Oxygen;* 3. *High Temperature;* 4. *Nervous Influences;* 5. *Constitutional Peculiarities;* 6. *Poisons.*—D. TREATMENT OF FUNCTIONAL DERANGEMENTS OF THE LIVER. 1. *Diet;* 2. *Free Supply of Oxygen;* 3. *Aperients—Cholagogues;* 4. *Alkalies;* 5. *Chlorine, Iodine, Bromine, and their Salts;* 6. *Mineral Acids;* 7. *Tonics;* 8. *Opium. Concluding Remarks.*

2. *A Deficient Supply of Oxygen.*—Insufficient muscular exercise in the open air may derange the functions of the liver. It is well known that sedentary habits and confinement in badly ventilated rooms tend to induce derangements of the liver. It is also a common observation that persons who have eaten and drunk too freely have not suffered from their livers so long as they have led an active life in the open air; but that, as soon as from change of occupation, or other causes, they take to sedentary habits, without any corresponding change in diet, derangement of the liver ensues. Again, every sportsman who has suffered from hepatic derangement knows the effect of a single day's hunting or shooting in clearing his complexion and relieving his symptoms. A want of regular exercise in the open air leads to derangement of the liver in two ways; viz., *a*, by causing a deficient supply of oxygen to the system, as the result of which the oxydising processes which go on in the liver and elsewhere are imperfectly performed, and there is a tendency to the accumulation in the system of fat and of the imperfectly oxydised products of disintegrated albumen. Oxygen is, so to speak, the antidote necessary for the destruction of a *materies morbi* (lithic acid, etc.), produced by imperfectly oxydised albumen. *b.* By retarding the circulation of blood through the liver. Since the time of Haller,[*] physiologists have recognised the influence of the respiratory movements in promoting the circulation of blood through the liver; but, upwards of thirty years ago, Mr. Alexander Shaw, in a paper which has attracted too little notice,[†] showed more clearly than ever before, that the circulation of blood through the liver was greatly influenced by the alternate expansion and contraction of the thorax during respiration. Mr. Shaw called attention to the fact that the portal vein, without any provision for increasing its power, or any assistance beyond that *vis a tergo* which belongs to the veins generally, and being even destitute of valves to protect it from regurgitation of blood like the veins in other parts of the body, has to perform the duty usually fulfilled by an artery, which, besides receiving an impulse from the heart, is aided in distributing its blood by the contractility and elasticity of its coats. He suggested that this weak power by which the portal vein propelled its blood was compensated for by a suction-force communicated to the current of blood by the actions of respiration; the deeper the inspiration, the greater the force with which the blood rushed by the large veins to the right auricle. These reasonings have been confirmed by certain experiments of M. Bernard, who found that, when an incision is made into a lobe of the liver in a living animal, the blood may be seen to jet from the mouths of the hepatic veins during the movements of expiration, but to return sucking in air with it at each deep inspiration, so that the animal soon dies from the passage of air into the heart.[*] In persons, then, who lead a sedentary life, this auxiliary force for promoting the circulation of blood through the liver is diminished, blood stagnates in the gland, and the functions of the organ are deranged, these results being all the more likely to arise if the liver be at the same time overstimulated by errors in diet.

3. *A High Temperature* favours certain functional derangements of the liver, and particularly those relating to sanguification and disintegration of albumen. Functional derangements, as well as congestion and inflammation of the liver, are more apt to occur in tropical than in temperate climates, and in our own country the liver more often becomes disordered in summer and autumn than in winter. The diet which is suitable in a cold or temperate climate in the tropics produces hepatic derangement. These results of a heated atmosphere are, no doubt, due in part to the rarefaction of the air and a corresponding diminution in the supply of oxygen to the system. The hotter the air, the less will be the amount of oxygen in a given volume inhaled by the lungs. But this is, perhaps, not the sole, if the chief, explanation. Experiment has shown that one of the effects of a high temperature upon the lower animals is to produce a degeneration of the parenchyma of the liver, its secreting cells becoming filled with minute granules and presenting appearances similar to those found after death from febrile diseases.[†] It is possible, then, that some of the functional derangements of the liver from which persons suffer in tropical climates may be owing to similar degenerations, not necessarily permanent, of the secreting cells.

4. *Nervous Influences.*—Many facts show the great influence of the nervous system upon the secreting organs. Sudden fear, or other severe mental emotion, has been known to arrest the secretion of milk and saliva, and we have already seen how injuries and diseases of nerve-tissue may produce diabetes by deranging the glycogenous function of the liver. But many other ailments of the liver besides diabetes have a nervous origin. Prolonged mental anxiety, worry, and incessant mental exertion not only interfere with the proper secretion of bile, but too often derange the processes of sanguification and blood-change, in which the liver is deeply concerned, and induce lithæmia, with many of the symptoms already described. These results are all the more likely to ensue if the diet have been such as favours hepatic derangement—if, for example, to drown grief, the patient have indulged in stimulants—and the habits have been sedentary. There is also good evidence that nervous agencies may not only cause functional derangement, but even structural disease, of the liver. Acute atrophy, in which the secreting cells are rapidly disintegrated and the functions of the organ arrested, appears in many instances to have a purely nervous origin; very often the first symptoms of the disease have occurred immediately after a severe fright, or an outburst of passion, in a person previously healthy. An impression made upon the brain appears to be reflected to the liver and to derange its nutrition. Many observations have satisfied me that the extrusion of gall-stones from the gall-bladder, as well as their formation, may be traced to nervous agency. Dr. Budd has also observed that mental anxiety or trouble has "great influence in the production of gall-stones";[‡] and I have repeatedly known attacks of biliary colic from gall-stones excited by some sudden emotion. Lastly, even cancer of the liver appears sometimes to result from the functional derangement induced in the first instance by mental trouble. I have been surprised at the frequency with which patients suffering from primary cancer of the liver have traced the commencement of their ill-health to indigestion following protracted grief or anxiety. The cases have been far too numerous to be accounted for on the supposition that the mental distress and the cancer have been mere coincidences. A similar observation has, I believe, been made by Sir Robert Christison and by other eminent authorities.

5. *Constitutional Peculiarities.*—In considering the causes of functional derangement of the liver, it must not be forgotten that there are constitutional peculiarities—inherited or acquired—in virtue of which the liver is deranged from causes which under ordinary circumstances would be harmless. Most persons, as Dr. Budd observes, have more liver, just as they have more lung, than is absolutely necessary.[§] A portion of their liver may be destroyed by disease, or become less active, without any derangement of the general health. In others, the liver seems only just capable of performing its functions under the most favourable conditions, and it at once breaks down under adverse circumstances of diet, habits, or climate. This innate weakness of the liver is often inherited. The person is born with a tendency to biliary derangements. Gout and diabetes, which we have found to originate in

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[*] "Vires quæ sanguinis per hepar motum accelerant."—Haller's *Physiologia*, 1764, tome vi, p. 601.

[†] *Medical Gazette*, July 15th and September 30th, 1842.

[*] *London Medical Record*, October 15th, 1873, p. 647.

[†] See *Pathological Transactions*, 1873, vol. xxiv, p. 266.

[‡] *Diseases of the Liver*, third edition, 1857, p. 369.

[§] *Op. cit.*, p. 55.

hepatic derangement, are hereditary diseases; and the liver is always very readily disordered in persons who inherit a tendency to gout. This constitutional tendency to hepatic derangement is too often lost sight of by patients, and perhaps sometimes by their medical advisers. The habitual use of alcohol is often recommended for various ailments by the medical attendant, without due regard to the tendency of the individual to hepatic derangement, and thus serious consequences may ultimately arise from alcohol taken with a medicinal object. Again, a patient often argues that his liver-troubles cannot be due to what he eats or drinks, because he is most careful as compared with friends who indulge largely and suffer nothing, forgetting the adage: "One man's food is another man's poison." One man, for instance, may drink a bottle of wine and be none the worse, whereas another has his liver deranged by a single glass.

6. *Poisons* of various sorts may derange the liver, the persistence of the derangement depending upon the length of exposure to the cause. One of the first effects of the poisons of the various specific fevers is upon the liver. Again, from protracted exposure to malaria, the liver often becomes deranged, anæmia and lithæmia being the results. While some cases of acute atrophy of the liver have a nervous origin, there is good evidence that others are caused by a poison taken into the body from without, or sometimes, as suggested by Dr. Budd, "engendered in the body by faulty digestion and assimilation". Phosphorus also, in sufficient doses, is known to derange the functions of the liver; and one result of phosphorus-poisoning is the production of symptoms and structural changes in the liver closely resembling those of acute atrophy.* Various substances also taken as food, or by mistake along with food, may induce functional disturbance of the liver, the poisonous effect being often determined by some constitutional peculiarity of the individual.

These causes of functional derangement of the liver will, of course, act more injuriously if the functions of the liver be already disordered by structural disease, by disease of the heart or lungs, or by derangements of the stomach and bowels.

D.—TREATMENT OF FUNCTIONAL DERANGEMENTS OF THE LIVER.

The time at my disposal only permits me to give a brief sketch of the general principles on which functional derangements of the liver ought to be treated; and my remarks will be for the most part restricted to the derangements resulting from abnormal disintegration and abnormal elimination.

1. *Diet.*—In functional derangements of the liver, much more permanent benefit is to be expected from careful regulation of the ingesta than from physic. It must not be forgotten that what may ultimately destroy the body too often enters by the same portal as that which is intended to nourish and maintain it. It is also well to remember that the hepatic derangement resulting in lithæmia may exist for years without any other symptom than the frequent deposit of lithates or lithic acid in the urine, and is then curable by attention to diet alone; but that, if neglected, it may ultimately develope gout, structural disease of the liver or kidneys, or some other serious result. Habitual lithæmia ought, therefore, to be always counteracted, and, from what has been already stated, it seems clear that the foods mainly to be avoided are saccharine and oleaginous articles, and especially cooked dishes containing both of these substances. Patients with lithæmia ought always to avoid made-up or highly seasoned dishes. In severe cases, potatoes, rice, sago, and fruits may have to be given up, and even bread must be taken in moderation. It will also always be well to ascertain if the lithæmia be due to any of those idiosyncrasies in virtue of which particular articles of diet are apt to derange the liver. In most cases of lithæmia, a diet consisting chiefly of stale bread, plainly cooked mutton, white fish, poultry, game, eggs, a moderate amount of vegetables, and weak tea or coffee, answers best. The quantity, as well as the quality, of the food must be attended to. Habitual lithæmia often results from the patient taking more food than can be converted into tissue or disintegrated in the liver. As Dr. Bence Jones has observed with regard to gout, so in habitual lithæmia, "a minimum of albuminous food should be taken, in order to produce the least uric acid; and a minimum of carbonaceous food, in order to allow the uric acid to be oxydised as much as possible".† In obstinate cases, the patient may be advised to take his principal meal in the morning, when the digestive powers are strongest. The free use of diluents, such as soda and seltzer waters, is also useful, as they help to eliminate from the system the morbid products of disintegration.

Still greater caution is necessary in all forms of lithæmia, as to alcoholic stimulants. Malt liquors, port wine, champagne, and many other wines, ought to be strictly prohibited. Claret, or a small quantity of spirit largely diluted, as a rule, answers best; but even these should be taken sparingly, and many patients do best with no stimulants at all. This is not the occasion to discuss whether alcohol is necessary for the nutrition of the body in persons subjected to much mental or bodily toil, or whether, taking the masses in all walks of life, the standard of health would be better maintained by teetotal habits or by a moderate use of alcohol. What I desire now to insist upon is, that alcoholic drinks in quantities usually regarded as compatible with, if not conducive to, health, and far short of what are necessary to affect the brain, in many persons undermine the foundations of health by deranging the liver; and that, to some individuals, even very small quantities are injurious. In persons who have been indulging largely, the risk of a sudden withdrawal of stimulants is less, I believe, than is commonly imagined. Unless there be evidence of a very weak heart, which itself may be the result of alcohol, the only unpleasant effects of sudden and complete abstinence, in my experience, have been sensations of sinking at the epigastrium and craving for alcohol, which a repetition of the stimulus has only temporarily relieved and has rendered more persistent.

2. *A Free Supply of Oxygen.*—Next to careful regulation of diet, this is the most important object to be aimed at in the treatment of functional derangement of the liver, and especially in that which induces imperfect disintegration of albumen. An excess of fresh air, indeed, will often counteract the bad effects of too large a quantity of food. Although recent observations, more especially those of Parkes, have shown that the common impression that muscular exercise materially increases the elimination of nitrogen from the body, is erroneous, there can be no doubt that exercise in the open air quickens the circulation of blood through the liver, in the manner already explained, and promotes oxydation, and that, by thus preventing the accumulation in the system of the imperfectly oxydised products of albumen, it operates beneficially in the treatment of functional derangement of the liver attended by lithæmia. The observations of Bencke and other authorities have shown that *sea-air* is an oxydising agent of great power, and that nitrogenous and sulphur-holding tissues more rapidly disintegrate under its influence.* Accordingly, we find that many patients with hepatic derangement and lithæmia derive immense benefit from residence at the sea-side and sea-bathing, although unfortunately the good effects of sea-air are sometimes more than counterbalanced by unhealthy lodgings or improper and badly cooked food.

3. *Aperients; Cholagogues.*—In a large number of cases of functional derangement of the liver, great advantage is derived from the frequent use of aperient medicines, whether there be a tendency to constipation or not. Aperients bring away not merely bile, but the products of disintegration contained in the fluid circulating between the liver and bowel prior to their further elaboration and elimination by the lungs and kidneys. Saline aperients, from the promptness of their action and the large quantity of watery exhalation from the bowel which they bring away, are among the best for the purpose now mentioned. Recourse is usually had to the sulphate of magnesia (Epsom salt), the sulphate of soda (Glauber salt), or the tartrate of potash and soda (Rochelle salt), or to various combinations of these salts with chloride of sodium, carbonate of soda, and other alkaline salts, such as are found in the mineral waters of Carlsbad, Friederichshall, Püllna, Harrogate, or Cheltenham, or in the recently discovered Hungarian spring Hunjadi János. Daily experience shows the great benefit derived by patients with lithæmia from a course of one or other of these mineral springs, or from some artificial imitation of them, all of which are best taken with warm water, and in the morning fasting. All of these salts have little or no affinity for animal textures, so that they excite few changes in them; they cause very little irritation of the mucous membrane of the bowel, and do not excite peristalsis, so that they purge without producing griping or pain. They act apparently by preventing the reabsorption of the fluid which is constantly being exhaled from the blood-vessels into the bowel.

There are certain other aperients which have long enjoyed a great reputation for promoting the secretion and discharge of bile, and otherwise acting beneficially in derangements of the liver, and which have accordingly been designated *Cholagogues.* Among these remedies, *mercury* and its preparations hold a pre-eminent place. At the present day, mercury has lost much of its former reputation as a cholagogue and alterative, and there is much difference of opinion as to its power over the liver. The practical physician gives a dose of calomel, finds the quantity of bile in the motions greatly increased, and his patient's state much improved; and he argues that the liver has been stimulated by the mercury to an increased secretion of bile, and that to this cause his patient's improvement must be ascribed. The physiologist, on the other hand, ties the common bile-duct in one of the lower animals, produces a fistulous opening into the gall-bladder, and then finds that calomel has no effect on, if it do not diminish, the amount of bile that drains away through the fistula. It may interest some who are present, if I refer briefly to the principal of these experiments.

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* Lead is known to cause an accumulation of lithic acid in the system, but apparently by impeding its excretion by the kidneys, rather than by increasing its formation in the liver. (See Garrod, *op. cit.*, p. 292.) Bence Jones, on the other hand, maintains that the accumulation of lithates in the system produced by lead is to be ascribed to diminished oxydation. (*Lecture on Pathology and Therapeutics*, p. 289.)

† *Op. cit.*, p. 142.

* Parkes *On Urine*, 1860, pp. 115, 129.

Kölliker and Müller, in 1855, tried the effects of calomel upon the secretion of bile in a dog with a biliary fistula. The results were somewhat contradictory. Once the bile seemed to be increased, and twice it seemed to be diminished, by the administration of calomel.[*]

Of four experiments made in 1858 on a dog with a biliary fistula, Dr. George Scott found that in all the administration of large doses of calomel was followed by a diminution of fluid bile and of bile-solids.[†]

In the same year (1858), Dr. Mosler made similar experiments upon two dogs with biliary fistulæ. The administration of calomel was not followed by any increase of bile, nor could mercury be detected in the biliary secretion.[‡]

Ten years later (1868), a committee of the British Medical Association, with Professor Hughes Bennett of Edinburgh as chairman, made a number of similar experiments on dogs, and came to the conclusion that "mercury did not increase the flow of bile, but rather diminished it".[§]

The most recent experiments are those of Dr. Röhrig of Kreuznach, made in the Pathological Institute of Vienna. He found that, although large doses of calomel did seem to increase somewhat the secretion of bile, its power to do so was inferior to that of croton oil, colocynth, jalap, aloes, rhubarb, senna, and sulphate of magnesia, the cholagogue power of these drugs diminishing very much in the order in which they have now been enumerated, and calomel standing at the bottom of the scale.[‖]

These results of experiments upon the lower animals have added greatly to the discredit previously thrown upon mercury by its failure, when brought to the test of accurate clinical observation, to absorb plastic lymph in most forms of inflammation; and some eminent physicians are even of opinion that mercury and its preparations ought to be erased from our Pharmacopœia.[¶] On the other hand, it has been fairly objected that the results of experiments with mercury upon dogs do not warrant conclusions as to its effects upon man; and, even granting that in man mercury does not increase the quantity of bile secreted by the liver in health, it does not follow that in disease there may not be some condition adverse to the formation of bile, which mercury may have the power of removing. Much, however, of the difference of opinion between the physiologist and the practical physician may be reconciled by keeping in mind the osmotic circulation, to which I referred in my first lecture, as constantly going on between the intestinal contents and the blood. A large part of the bile secreted by the liver and thrown into the bowel is constantly being reabsorbed, to reach the liver again; and accordingly when the common bile-duct is tied and a fistulous opening into the gall-bladder established, the quantity of bile which escapes from the fistulous opening immediately after the operation is much greater than at any time subsequently (Schiff). Mercury and allied purgatives produce bilious stools, by irritating the upper part of the bowel and sweeping on the bile before there is time for its reabsorption. The fact of mercury standing at the bottom of the scale of cholagogues in Röhrig's experiments is accounted for by its surpassing other cholagogues in this property; for, of course, the larger the quantity of bile that is swept down the bowel, the less is reabsorbed and the less escapes from a biliary fistula. That mercury does act especially upon the duodenum, is proved not merely by the large flow of bile which follows its action, but by the fact discovered by Radziejewski, that leucin and tyrosin, which are products of pancreatic digestion, under ordinary circumstances decomposed in the bowel, appear in the fæces after the administration of mercurials. It would appear, then, that mercury, by increasing the elimination of bile, and lessening the amount of bile and of other products of disintegrated albumen circulating with it in the portal blood, is after all a true cholagogue, relieving a loaded liver far more effectually than if it acted merely by stimulating the liver to increased secretion, as was formerly believed, and as some authorities still maintain; for in this case it might be expected to increase, instead of diminish, hepatic congestion. It is not impossible, also, that the irritation of the duodenum by calomel and other purgatives may be reflected to the gall-bladder, and cause it to contract and discharge its contents, and thus account in part for the increased quantity of bile in the stools.

There are also, I think, grounds for believing that, apart from its increasing the discharge of bile from the bowel, mercury exerts a beneficial action in many functional derangements of the liver, in whatever way this is to be explained. Patients of the greatest intelligence suffering from hepatic disorders constantly declare that they derive benefit from occasional or repeated doses of mercurials, which no other medicine or treatment of any sort confers; and the scepticism of the most doubting physician would, I believe, be removed, should he unfortunately find it necessary to test the truth of their statements in his own person. It is not impossible that the good effects of mercury on the liver, and in some forms of inflammation, may be due to its property of promoting disintegration. Mercury appears to have the power of rendering effused fibrin less cohesive, and so more easily removed by absorption, than it otherwise would be.[*] Modern physicians of high standing, and little likely to be accused of credulity as to the beneficial action of drugs, have thought that mercury is useful in croup, by causing a degradation and disintegration of the plastic membrane. If this be so, it seems not improbable that mercury, which from experiments[†] we know to reach the liver, may under certain circumstances act beneficially by promoting, or in some way influencing, the disintegration of albumen. The remarkable effect of mercury on constitutional syphilis probably admits of a similar explanation. But in whatever way it is to be explained, the clinical proofs of the efficacy of mercury in certain derangements of the liver are to my mind overwhelming. I say so the more advisedly, because I was taught to regard mercury as a remedy worse than useless, not only in hepatic diseases, but in syphilis; it cannot, therefore, be said that the convictions forced upon me by experience are the result of preconceived opinions.

Podophyllin is a remedy which seems to act in a very similar manner to mercury. Dr. Anstie's experiments with it on dogs and cats show that it has a special affinity for the small intestines, and especially for the duodenum. So far as my experience goes, it is less certain in its action, and even in moderate doses more likely to cause griping and mucous stools, than the preparations of mercury. It is a good substitute, however, for mercury, when from any cause this is contraindicated.

Colocynth, Aloes, Rhubarb, Senna, and *Jalap*, are also useful aperients in functional derangements of the liver resulting in lithæmia, constipation, or deficient excretion of bile. The experiments of Röhrig seem to show that they actually increase the amount of bile secreted by the liver. *Colchicum* also is an useful adjunct to other aperients in cases of liver derangement with lithæmia. According to Dr. Garrod, it "may often be given with advantage to gouty subjects as a cholagogue in lieu of the preparations of mercury",[‡] which, I may add, are often contraindicated in chronic gout with renal disease.

With these remedies we may include *Taraxacum*, which has long been thought to exercise a specific action upon the liver, but which probably acts mainly as a mild aperient. When there is a tendency to constipation, it may be advantageously combined with either alkalies or mineral acids.

4. *Alkalies.*—Next to aperients, alkalies are the most useful drugs in the treatment of functional derangements of the liver. In lithæmia and in many of the symptoms which spring from this morbid state, the greatest benefit is often derived from a course of alkalies—such as the alkaline salts of potash, soda, or lithia, or some of the alkaline mineral waters, such as those of Vals, Vichy, or Ems. The comparative worth of the different alkalies for neutralising acids varies considerably. One grain of carbonate of lithia or of carbonate of ammonia is nearly equal to a grain and a half of carbonate of soda or two grains of carbonate of potash. The beneficial effects of alkalies in derangements of the liver are not due to their neutralising acidity, or to any direct action upon lithic acid. It is, in fact, in the form of lithate of soda that lithic acid is met with in gouty persons. Alkalies seem to do good by combating the pathological state, on which the formation of lithic acid depends. They are believed to promote oxydation, and thus increase the disintegration of albumen. Dr. Bence Jones tells us that in the body as well as out of it alkalies furnish the most marked evidence of assisting in oxydising actions.[§] The experiments of Parkes with liquor potassæ seemed to show that it had the power of increasing the disintegration of the sulphur-holding materials of the body. The effect of its administration was to increase the amount of sulphuric acid and also of urea in the urine; although, with characteristic caution, Parkes adds that the increase of urea as the result of the potash was rendered probable,

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[*] *Würzburg Verhandlungen*, Bd. v, 1855, s. 231.

[†] Beale's *Archives of Medicine*, 1858, vol. i, p. 209.

[‡] Virchow's *Archiv*, 1858, Bd. xiii, s. 29.

[§] BRITISH MEDICAL JOURNAL, 1868, vol. ii, pp. 78, 176, 191.

[‖] Stricker's *Jahrbuch*, 1873, part 2.

[¶] See Bennett, BRITISH MEDICAL JOURNAL, 1868, vol. ii, p. 176.

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[*] Bence Jones, *op. cit.*, p. 283.

[†] Autenrieth and Zeller found mercury in the bile of animals treated with mercurial frictions. (Budd, *op. cit.*, p. 57.)

[‡] *Op. cit.*, p. 410.

[§] *Op. cit.*, p. 280.

rather than proved, by his experiments.[*] From experiments on dogs with biliary fistulæ, Nasse was led to the conclusion that carbonate of soda taken with the food diminished greatly the secretion of bile;[†] and a similar result has been observed by Röhrig to follow the introduction of the same salt into the intestine or the veins. The diminution affected the solids as well as the water of the bile, and especially the biliary salts. Nasse also found that after taking two drachms of carbonate of soda the urine (human) was very rich in hippuric acid. The only inference at present to be drawn from these experiments is, that alkalies exert a powerful influence over the chemical changes going on in the liver. When alkalies are employed in lithæmia, it is well to suspend their use occasionally, as they are apt, when long continued, to derange the gastric digestion; but in cases where they are strongly indicated they are better tolerated than is usually thought. In the fifth volume of the *Medico-Chirurgical Transactions*, Dr. Bostock has recorded the case of a young lady who for months took carbonate of soda to the amount of two ounces and a half daily. The appetite and strength were much improved; and her blood, instead of being thin, coagulated firmly, the coagulum being strongly buffed and cupped.

5. *Chlorine, Iodine, and Bromine* are closely related in their chemical properties, and are believed to promote oxydation in the body by taking hydrogen from water and liberating oxygen. An aqueous solution of chlorine is of service in certain cases of lithæmia associated with general debility; and we know that the various salts of chlorine enter largely into the composition of the mineral waters which are most useful in hepatic derangements. Bromide of potassium will reduce certain enlargements of the liver and spleen, and may be given with advantage in cases of lithæmia associated with congestion of the liver and want of sleep. But among the remedies of this class the chloride of ammonium holds a pre-eminent place. It has obtained a great and well deserved reputation in India and other tropical countries for the treatment of hepatic congestion; and I have found it of great service in the functional derangement of the liver attended by lithæmia. Given in scruple doses three times a day, it acts as a diaphoretic and diuretic, and exercises a powerful influence in relieving the portal circulation. It is not oxydised, but passes out of the system unchanged in the urine. According to Böcker's experiments,[‡] it increases the nitrogenous solids of the urine; the mean daily increase of urea under its use he found to be not less than seventy-four grains—a quantity indicating a vast augmentation either of metamorphosis or of elimination, but from its beneficial effect on the liver, most probably of the former. Chloride of ammonium has this advantage, that it may be combined with either alkalies or mineral acids.

6. *Mineral Acids* are employed by many physicians in the treatment of functional derangements of the liver. Nitric acid especially has long been thought to have the power of augmenting the flow of bile; but there is no good evidence of this, either clinical or experimental. According to my experience, the action of mineral acids upon the liver is much less direct than that of alkalies. In all morbid states of the liver attended by congestion, and in most cases of lithæmia, I have found that they either did no good or they aggravated the symptoms. They may, however, be of service when there is debility and want of tone; but the chief good which they effect is probably that of improving the gastric digestion. In some cases, both acids and alkalies may be given advantageously—the alkalies before, and the acids after, a meal.

7. *Tonics.*—Clinical experience shows that, notwithstanding the existence of debility and anæmia, tonic remedies are apt to disagree in many cases of functional derangement of the liver. This remark applies especially to the functional derangement resulting in lithæmia. I have repeatedly known patients in this state improve at once on substituting for quinine, iron, the mineral acids, and stimulants, abstinence from alcohol, with aperients, blue pill, and alkalies, and careful regulation of diet; the strength, flesh, and colour returning under what at first sight might have appeared a lowering treatment. Different opinions have been expressed with regard to the utility of iron in chronic gout. According to Dr. Bence Jones, iron is one of the two potent remedies we possess for indirectly promoting oxydation in gout as well as in other maladies;[§] whereas, in Dr. Garrod's opinion, the preparations of iron are very likely, when indiscriminately given to gouty subjects, to excite a paroxysm of the disease, and for the most part are contraindicated.[‖] My experience coincides with that of Dr. Garrod; and in simple lithæmia I have constantly known iron to increase the tendency to deposits of lithates in the urine, constipate the bowels, and aggravate any symptoms from which the patient may have previously suffered. As a rule, also, I have found that patients with chronic gout or with lithæmia do not tolerate even small doses of quinine. From some careful experiments made by Dr. Ranke of Munich, quinine appears to have the power of diminishing the amount of lithic acid in the urine.[*] The experiments were made on three persons, and the results were uniform. The effect continued for about two days after a single dose of twenty grains; and there was no evidence of any increased excretion after the effect of the quinine had passed off, so that probably the quinine acted by lessening the formation of lithic acid in the liver, or by substituting some other substance for it. From these experiments it might be inferred that quinine and bark should be of essential service in chronic gout and in lithæmia, but this inference is opposed to clinical experience.[†]

When tonics are given in lithæmia, gentian, chiretta, cascarilla, and serpentaria are preferable to quinine and other preparations of bark. The best preparations of iron are the reduced iron, the citrate of iron, or the tartrate of iron and potash; these preparations are sometimes advantageously combined with alkalies and saline aperients. In cases of lithæmia attended by great nervous prostration, I have seen advantage follow the use of phosphorus in doses of one-thirtieth of a grain three times a day. The lithates have disappeared from the urine, and all the symptoms have improved. In some of these cases the circumstances seemed to leave no doubt that the improvement was due to the phosphorus.

8. *Opium* and its preparations are contraindicated in most functional derangements of the liver, and particularly when there is evidence of lithæmia. Opium impedes elimination both by the bowels and kidneys, and also appears to check the disintegrative processes which go on in the liver. It is generally believed to diminish the amount of bile secreted by the liver; and this view is favoured by the light-coloured stools which often follow its use. The result, however, of Röhrig's experiments on animals with biliary fistulæ was to show that opium increased the secretion of bile instead of diminishing it, so that probably the discharge of bile from the liver is only temporarily suspended by a similar influence on the coats of the bile-ducts to that which opium exerts on the coats of the bowel. Be this as it may, there can be no doubt that opium constipates the bowels, favours portal congestion, and checks the elimination, not only of bile, but of the products of disintegration which go on in the liver. The experiments of Böcker[‡] and clinical experience alike show that opium impedes the elimination of the nitrogenous solids of the urine, and that dangerous and even fatal consequences ensue from its employment in structural diseases of the kidneys. These considerations explain why, in hepatic derangement attended by lithæmia, opium is contraindicated for the relief of pain, sleeplessness, or other symptoms for which it is commonly prescribed.

On the other hand, in the functional derangement of the liver which exists in diabetes opium is tolerated in large doses, and is often of signal service in checking the formation of sugar.[§] Its good effect is probably in great measure due to some influence on the vaso-motor nerves of the hepatic vessels, a reflex paralysis of which we have found to be one of the causes of diabetes.

In bringing these lectures to a close, I beg to tender to you, Mr. President, and to the Censors' Board, my thanks for the honour you have done me in appointing me to deliver them. I am very sensible of their manifold imperfections, and in apology can only plead a multiplicity of other engagements during the brief period allotted to their preparation. I am well satisfied, however, as to the great importance of the subject which I have brought before your notice, and that it is one worthy of more attention from the Fellows and Members of this College, and from the profession generally, than it has yet received. The day, I believe, will come, when, with a more perfect knowledge than we now possess of the healthy functions and of the signs of functional derangement of the liver, we shall be enabled to prevent, or to arrest at their commencement, many of the most serious ailments to which mankind are liable, and thereby to add another chapter to the volume of Preventive Medicine.

ERRATA.—In Lecture II, BRITISH MEDICAL JOURNAL, April 11th, p. 471, last word of first paragraph, for "Elimination", read "Disintegration".—In Lecture III, p. 536, last paragraph of first column, for "Dr. William Butler", read "Dr. William Butter".

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[*] *On the Urine*, 1860, p. 151.

[†] *Archiv für Wissensch. Heilkunde*, 1864, Bd. vi, p. 508.

[‡] Parkes, *op. cit.*, p. 165.

[§] *Op. cit.*, pp. 143 and 279.

[‖] *Op. cit.*, p. 453.

[*] Parkes, *op. cit.*, p. 167.

[†] Ranke's experiments have been repeated by Dr. Garrod, who found that quinine did not materially influence the excretion of lithic acid.—Garrod, *op. cit.*, p. 451.

[‡] Parkes, *op. cit.*, p. 167.

[§] This is no new discovery. Sixty years ago, Sir Benjamin Brodie communicated to the Royal Medical and Chirurgical Society a case of diabetes treated with opium. Twenty-four grains of opium were taken in the day with the effect of reducing the urine from twenty-five to seven pints, but without any of the usual effects of opium.—*Medico-Chirurgical Transactions*, vol. v, p. 236.

LEAVES FROM MY DIARY DURING THE ASHANTEE WAR.

By ALBERT A. GORE, M.D., Surgeon-Major.
Late Surgeon 34th (Cumberland) Regiment.

IV.—En Route.

We bad adieu to the low alluvial shores of the Gambia on September 2nd, a sultry close morning, 80 and 82 deg. in the cabin, port open, at 7 A.M. A few mosquitoes had already made their appearance; and the deck was crowded with Sierra Leone women, returning to Freetown after having disposed of their baskets of Cola nuts to Mandingo traders, who pay a high price for this much coveted fruit, chewing it in their long journeys, a natural instinct leading them to its use. The purser and the "ladies of the period" were in angry dispute on the subject of the fare—the latter vowing that they could only afford a moiety of the amount, while the former stood upon his rights. Silence at last indicated that this grand palaver had been amicably settled. Shortly before, a number of African gentlemen had come on board to wish one of their friends adieu, and were scarcely less troublesome below, where Moselle corks were flying about in all directions. How pleasant they must have all felt next morning! We had had an addition to our number in the shape of an Aku lady from Sierra Leone, who appeared to regard us with sovereign contempt. Poor thing! she soon became very sea-sick, and did not again turn up until we anchored off her destination, the capital of the West African settlements. Not a breeze ruffled the still, calm, glassy river; a few cirri-cumuli dotted the otherwise bright sky, the hygrometer running up to 83 and 87 in the shade at 9 A.M.; shortly after which we began to move slowly past the church, barracks, Government House, military and colonial hospitals, and the dismal-looking cemetery crowded with graves. As we swept round to the westward, the sea-breeze was gently stealing up towards us, a few cat's paws indicating its presence in the distance. The sense of relief when it did arrive can scarcely be imagined by those who have not felt the oppressive damp heat of some of those tropical days, and the sense of exhaustion which accompanies it. The effect of the sea-breeze on this particular morning was the lowering of the mercury in the thermometer from 89 to 85—four degrees—and a perceptible feeling of already being in a cooler atmosphere. The sun set this evening at a quarter past 6 P.M.

Previously to leaving, I had heard on shore that, in the late epidemic of yellow fever, black vomit was entirely absent; and that, in the *Bonny*, the disease had made sad havoc in the hulks—one losing twenty-two out of twenty-four, and another twenty-two of thirty-six, Europeans on board. The steamer in which we were now had to throw the cargo for the hulk on the deck, there being no one to remove it. These Bights have always been hotbeds of yellow fever, the nidus from which it appears to spread upwards. In the evening, we had the usual lighting up of the eastern horizon with flashes of lightning.

The conditions which I have now been describing would shortly be succeeded by the Harmattan season, the winter of North-Western Africa. Commencing in May, the rains terminate in October, being ushered in and followed by tornadoes or thunder-storms; these last are succeeded by the Harmattan or north-easterly wind, which blows strongest during the months of December and January. On the northern coast, this wind is excessively dry and parching, and loaded with minute particles of sand, which cover everything during its continuance with a fine dust; furniture splits; books become curved and unshapely; and even glass cracks. Blowing continuously for three or four days at a time, it remits for periods more or less prolonged. The excessive dryness (on three occasions, I noted 17, 20, and 22 degrees between the wet and dry bulbs), leading to rapid evaporation, checks all cutaneous secretions, dries the skin, and, by thus throwing more work on internal organs, causes slight diarrhœa, and not unfrequently coryza. Pains in the hepatic region are also oftentimes felt. The chilling sensation of the surface approaches a feeling of actual cold. During its prevalence, pneumonia, bronchitis, lumbar and rheumatic pains, are then the diseases of the natives, who move about with their heads tied up in all sorts of fantastic manners. This peculiar wind, at its maximum force and dryness at the Gambia, becomes gradually less characteristic as it approaches the Bights, loses its dryness, and changes to a damp cold breeze, blowing, as on the Gold Coast, from the north or north-west. On the plateau some ninety miles inland, it approaches again more of its original nature, and in the early morning causes a decided sensation of chill, and a reduction in temperature as low as 65 to 62 degrees; when at the same moment on the coast-line it is loaded with moisture, and the bulbs of the hygrometer only show a difference of from 2 to 5 degrees—no doubt due in part to its having to pass over so large a tract of water in its transit along the seaboard and the many intervening swamps and lagoons between the ocean and the Sahara. At the Gambia, it is considered a healthy wind, and is much enjoyed by the European residents, chiefly from the feeling of cold coming with it. While it is blowing, a faint yellow haze spreads through the atmosphere, and renders distant objects indistinct in outline; water is intensely cold, almost too much so for a bath; while the sun and moon appear in the heavens as lurid red orbs surrounded by yellow halos. In passing over the morasses in which West Africa abounds, it absorbs, owing to its excessive dryness, much malarial poison. From this cause, crews of ships lying immediately to leeward of mud-reaches, and subject to its influence as it passes over the latter, have frequently been attacked with very severe and fatal forms of remittent fever, differing only in degree from the much dreaded *vomito*.

After leaving the mouth of the river Gambia, the steamer has to make a long detour to the westward, to avoid the Billayos, a number of islands situated beyond the alluvial estuaries of the Rio Grande and Rio Jeba, inhabited by the Bijouyas, a tall, robust, warlike people, who have driven out the more peaceful Riaffras, the original tenants. Bismo, one of the largest of these, is inhabited by the Papels, equally warlike as the Rifrayas in their habits, much to the annoyance of the Portuguese, who are continually in apprehension for the safety of their African capital, which is encircled by a mud wall, and in possession of a large circular iron-stone fort, formerly a slave-barracoon. This settlement is garrisoned by the Creoles of the Cape Verde Islands, who are supplied with very ancient muskets, the usual brown jacket, and peculiar but pretty little Portuguese *kepi*, but nether garments of all colours and descriptions. Fowls abound, being obtainable for a "paticruy" or twopence each. This little Portuguese settlement is scarcely known; and the fine river at whose *embouchure* it is situated is practically unexplored, owing in great measure to the jealousy of its custodians, who, claiming to be the original discoverers, guard its mouth with a jealous care. A long way up are some fine falls, marking the rise to the great central tableland of Africa. The Rifruyas who inhabit the neighbouring islands are a most peculiar people, perfect savages, in addition to being warlike and well formed. In the more distant of the group, they are said to be cannibals. They have no idea whatever of the value of money, their produce being only obtainable from them by means of barter; a fowl being held up by the half-naked savage, while the would-be purchaser displays certain brass nails, leaves of tobacco, or charges of powder, until a nod of the head signifies that Nature's human animal is satisfied. Only those who have witnessed such scenes can form any idea of their grotesqueness. These people travel long distances in their peculiar canoes; the slaves who drive them using oars instead of paddles, rising at each stroke, and again descending to their seat—a movement most singular to look at from a distance. During these long journeys, not a garment of any kind is worn; and immense distances are travelled apparently without injury, under exposure to the powerful rays of a tropical sun, reflected from their shaved and shining heads. The women only wear a grass girdle round their loins, and the men a deer-skin profusively decorated with cowries. In 1792, an attempt was made to establish an English colony upon one of these islands by Captain Phil Beaver; in a year, nine-tenths of the colonists had died from the effects of fever and impure water largely impregnated with the milky juices of some poisonous euphorbias. The settlement was in consequence abandoned. Rulama was afterwards occupied as a military station. The name is now only interesting as being the spot where, in 1868, the cholera epidemic, which travelled down to Rissao from the Gambia, exhausted itself. Between the three places, there had been constant and frequent intercourse, large numbers of Mandingoes arriving here to purchase Cola nuts imported from Sierra Leone.

Along the banks of the Rio Grande, and between it and the Rio Jeba, is the important kingdom of Foota Jollo, inhabited by Foulahs, whose marabouts are said to be of extensive learning. Some of the chiefs travelled a long way in 1865 to visit the English commandant at Rulama, bringing a present of some fine sheep and beautiful cloths for the manufacture of which the country is famed. They appeared to be fine, intelligent, well-formed men, and were most anxious to conclude a treaty of commerce with our people, in order to avoid the effects of the high tariff levied on imports by the Portuguese, the effect of which was largely to increase the price of European goods imported from the banks of the Jeba. From Timbo, the capital, large caravans go as far as Timbuctoo and Cassima; cotton cloths and very beautiful silver and leather work being exchanged or sold in the more interior towns. On the banks of the Jeba are extensive native mines of lead and iron, the latter being made into swords and daggers of curious workmanship. Below this is the Koorango country, inhabited by enterprising Mandingoes, who join the Timmanee country further to the south, the people of which are a depraved race, believing in witchcraft, wearing very coarse clothes, and holding large numbers of domestic slaves. Their system of agriculture is especially rude.

On the second morning after leaving Bathurst, we sighted the blue mountains of Sierra Leone, the highest of which, the Sugar Loaf, rises two thousand feet above the level of the sea, some three thousand miles distant from England. As we closed up, there was lying on the Carpenters the remains of one of the African steamers, wrecked in the previous July. Running by Cape Home and the light-tower, a convalescent station belonging to the Government, five miles from the mouth of the river, we dropped anchor opposite the capital of the West African settlements and seat of Government.

We had now arrived at one of the most beautiful of the West African stations, abounding in a tropical luxuriance, and with blue mountain summits rising in a succession of conical hills and ranges high above the sea, and extending along the coast to Cape Shilling in the south-east, a distance of twenty-one miles. The general appearance of this sierra, rising as it does into an irregular congeries of conical mountains tipped with forest-trees, gives it in the distance a beautiful, rich, and romantic aspect. We had arrived at Sierra Leone at the commencement of one of its most unpleasant months, when the days are, as a rule, close and oppressive, and refreshing breezes unfrequent. The mountains were a mass of luxuriant green, and covered with vapours until the rays of the all-powerful sun had dissipated them into "thin air"; then, and only then, did they shine forth in all their natural beauty. The day previous, shoals of porpoises were playing about us; a solitary swallow skimmed the sea in the wake of the steamer as she rolled unceasingly in the heavy swell from the south-west; the temperature rose from 81 at 7 A.M. to 92 deg. in the shade at 1.30 P.M., falling again at 3 P.M. to 89. We all felt more or less feverish, with headache, warm flushings of the feet, hands, and pains in the loins, with profuse perspiration at night—a series of unpleasantnesses, shortly dissipated by a few doses of quinine. A small tornado from the north-east about 3 P.M. had somewhat cooled the atmosphere. Scarcely had the gun fired signalling our arrival at 6.30 P.M., when we were surrounded with boatmen vociferating and struggling to gain the gangway, in their eagerness to be put on board. It was a marvel that some of them were not drowned. News had just arrived of the treacherous attack at Chamah on Commodore Commerell and the officers and crew of his barge, several of whom were wounded. It seemed that everywhere we were to be met with tales of disaster, disease, and death. An epidemic of yellow fever had recently visited the colony, carrying off nine of the eleven Europeans attacked. The Governor, Mr. Berkeley, had just returned in his pretty yacht, the *Thesbio*, from Cape Coast, bringing details of the outrage on the Prah, where one of our unfortunate seamen had his head hacked off on the beach by the savages, who were said to have been assisted by some Java pensioners. The wounds had been chiefly inflicted by brass and iron slugs cut off from long bars of the same material. All the towns had been bombarded by way of reprisal. The smallness of the present garrison was shown by the few lights twinkling high up in the barracks—so different from former days, when their number indicated a pleasant mess and social intercourse. We had brought with us from England a young African lady, who had been sent home two years previously for the purpose of being educated. The genuine affection shown in the meeting between the parent and child, untrammelled by the conventionalities of society, struck us all, and added an additional fervour to our adieus when we said good bye shortly afterwards. Her expressions of delight on arriving in her country were most amusing. Next morning, it was raining until 8 A.M., when the mists gradually drifted up the mountains, lying over only the grass-fields or rocky bottoms south-west of the town. We had already received invitations to breakfast, lunch, and dinner, with offers all round of beds and pafamas. Our stay was only to be for a day, so we could scarcely accept them all.

Before landing, we were treated to a second edition of last night's uproar, upon the arrival of a number of Kroomen, hired and sent on board by the agent on shore—men always picked up here, for the purpose of acting as stokers and working the ship in the warmer latitudes, and performing all menial duties during the steamer's six weeks' journey to the Camaroons and return to Sierra Leone; by which means much sickness is prevented. Although shipped from one of the worst ports in England for obtaining good seamen, the crews, who are of indifferent *physique*, remain fairly healthy during the three months' outward and homeward voyage, except when an occasional epidemic of fever occurs, usually contracted in the Bonny. The men are worked a good deal in stowing away and discharging cargo, live upon the usual ship's diet, pork, biscuit, and fresh vegetables and meat when obtainable; never take quinine except when ill; and have served out to them at noon daily a ration of rum, which is swallowed undiluted and with evident gusto. After a long discussion with our captain, who treated them with the greatest nonchalance, the Krooboys struck in a body for higher wages, squatting on the deck as if the whole ship belonged to them. Threatened with summary vengeance if they did not at once clear out, they soon came to their senses, and consented with a grimace all round to resume their work at the old rate of pay, one shilling and sixpence *per diem*. Some years before, they were quite satisfied with eightpence. Here, as elsewhere, the labourer's prospects were looking up, as those of his employers were descending in a corresponding degree. These curious people, rejoicing in such euphonious names as "Frying Pan", "Drum of Salt", and "Bottle of Beer", come originally from the country extending between Monrovia and Cape Palmas further to the southward; live chiefly upon rice, their rations on board ship being a pound and a half of this grain, with an occasional piece of pork, upon which food, with now and then a "tot" of rum, they can carry heavy loads and pull long distances, as much as forty miles at a stretch. A loin-cloth, coloured handkerchief, and very battered hat, constitute their not very elaborate toilet. Each gang is looked after by a head man, who obtains somewhat higher wages, and is responsible for the good behaviour of the others; a convenient rope's end adding much to his dignity and their appreciation of his authority. Muscular to a degree, they have a fault not very uncommon, a propensity to the theft of small articles lying about—a piece of useful knowledge to future travellers. They had initiated their arrival on board by the appropriation of one of the Portuguese groom's caps, who was naturally wrathful, especially when the new owner, who was jauntily strutting about the deck with the article in question, refused to surrender it until the head Krooman appealed to his feelings in a manner more disagreeable than persuasive. These gentlemen only remain at sea or in permanent employment until they have amassed sufficient to purchase two, three, or four wives—the *summum bonum* of their ambition, sunning themselves in whose smiles they remain until the little property becomes dissipated; the smiles disappear as a natural consequence, and another struggle for existence becomes necessary. These Coolies and Lascars of West Africa have been frequently employed in our bush-wars, during the continuance of which they have often done good service. Unfortunately, they never could be obtained in anything like sufficient numbers, owing in great measure to their dislike to having their bodies peppered by slugs and various other missiles of native warfare.

Two Sierra Leone policemen, dressed in blue serge suits with red facings and stripes, cleared the gangway from the motley crowd of Negroes who were rushing on deck as we descended into a boat. It is really wonderful how these native boatmen can withstand the tropical drenching to which they are subject. Often wet to the skin for hours, they do not seem to suffer at all while taking active exercise, and are only very occasionally attacked with pneumonia or bronchitis, the first of which affections, as well as phthisis, usually runs a rapid and fatal course among black soldiers and natives of Africa, especially when civilised and domiciled according to European customs. When attacked with any acute disease, they do not seem to have any rallying power whatever. This peculiar idiosyncrasy has been attributed to a variety of causes, among others, early sexual excesses, insufficiency of animal food, intemperance, and impoverishment of the blood and tissues from the constant breathing of the malarial poison. As far as it is possible to judge by experience, their only advantage over the European is their immunity from certain epidemic forms of African fever, and a capability of undergoing much exercise and exposure in the sun without danger to health. Neither do they suffer in the same degree from the effects of the malarial poison.

With us came the grooms, to look after fresh forage for the animals, one of which afterwards made the romantic journey from Accra to Obayoo, Duabin, Coomassie, and the Prah. Up to the present time, they had got on very well in their little wooden deck-houses. We landed at the new wharf and mole being constructed of iron-stone quarried from the immediate neighbourhood, much to the annoyance of passers by, as pieces of granite were flying about in all directions, and descending with a crash after each explosion. After paying our respects to the Governor-in-chief, Mr. Berkeley, and leaving Captain Glover to enjoy the atmosphere of the carefully closed rooms of Government House, we strolled through this metropolis of West Africa and one of the most beautiful of the settlements, whose mountain summits, rising 2,300 feet above the level of the sea, are covered in the rains with the ever varying tints of a blooming verdure. Sixty miles to the north, were looming in the distance the Isles de Los, three volcanic islets, tipping as it were the furthest extremity of the opposite Bullum shore; and further inland, to the north-east, the Sangaree mountains. Few spots can boast of so much grandeur and natural beauty. Yet the general want of wood, the absence of cultivation and animal life, are great drawbacks. The estuary or river, on which the little *Volta* was lying placidly, is ten miles in breadth between Leopard's Island and Cape Sierra Leone; extends inland about twenty miles, where it divides into several arms, one of which, the Robelle, is said to have its source twenty miles from Fallaba, and two hundred from Sierra Leone, the usual rapids or falls intercepting fifty or sixty miles from Freetown.

[*To be continued.*]

THE PATHOLOGY OF CANCER.

By SAMUEL WILKS, M.D., F.R.S.,
Physician and Lecturer on Medicine at Guy's Hospital.

As an old member of the Pathological Society, I had hoped to be present at its last meeting, to offer my opinion on the subject of Cancer; but unfortunately, the examination at the College of Surgeons prevented me. It may now be forgotten that I had always advocated at the Society the views advanced by Mr. De Morgan in favour of what is called the "local" theory, in distinction to the "constitutional", and I did so, because I believed that the study of morbid anatomy had done much to upset the long prevalent teaching concerning the nature of cancer derived alone from clinical medicine and surgery. The opinions I was in the habit of expressing are contained in a paper* which I now forward, and of which the following is a summary.

It was the teaching of the schools that certain morbid growths were apt to spring up in the body; if these were removed, they would burst forth again and spread; moreover, since some of the victims' ancestry were subject to the same form of disease, it was clear that a deep-seated inherited vice existed in the constitution for its production. Works on medicine and surgery supported this view, and at the present time the nomenclature of the College of Physicians would lead us to believe that the different organs and tissues of the body are not only liable to inflammation and its consequences, but subject to the formation of tubercle, cancer, and other growths.

Now, I would say, in the first place, that this doctrine is not true. All parts of the body are not liable to undergo spontaneously these morbid changes, but the latter are strictly limited; in all probability each tissue has its own pathological deviations in a determined special direction; and, without mentioning other matters, I would say that cancer affects more especially the cellular tissue in connection with the skin and mucous membrane, and that the viscera, with many other tissues, are not primarily attacked. Thus, cancer of the lung is a disease of which I have no knowledge, and yet this organ affords an excellent soil for it when transplanted therein. Some structures of the body are seldom found diseased in any way, whilst others are not subject to cancer, nor others to tubercle. Those who will not advance with me as far as this, will admit that cancer of the lung and other viscera is generally secondary, and that all parts of the body are not prone alike to the disease. If, with me, it be conceded that cancer never springs up primarily in the lung, it must follow that the seeds of it have been conveyed from another source.

It is a remarkable fact that surgeons, ever since their art has recognised the possibility of removing cancerous tumours by operation, have assumed and acted upon the doctrine before mentioned; that is, the local origin of the disease. For, although the operator feared a repetition of the growth or its appearance within the body, yet, at the time of its removal, he regarded it as local. He never believed he had before him a patient possessing such a cancerous constitution that he was full of malignant disease, and that his own skill was useless on that account. His experience had, on the other hand, told him that the cancer he was about to remove was quite local, as it generally was when seen on the outside of the body. If this had not been so, but the cancer due to a deep constitutional cause springing up indiscriminately here, there and everywhere, there had been no occasion for any discussion as to the local or constitutional nature of the disease.

Now, if it be true that cancer, having so common an element as cell-structure, is limited in its growth, much more is it true of other malignant tumours which have a special nature. These clearly arise under a local influence; thus I have seen a few cases of osteoid disease, and have read of others, that is, cases where bony tumours have been found in the abdomen, lungs, and other parts. Now, in all these cases, the prime disease originated in a part of the bony skeleton. It was this which determined their growth, and, therefore, there is no disease of the system which can be strictly styled osteoid disease. In the same manner, melanosis is seen to arise in a mole, on the choroid of the eye, and then rapidly propagate over the skin where pigment prevails. Epithelial growths have been met with in the lungs, liver, and suprarenal capsules; but no one has yet described primary epithelioma in these organs; it has been secondary to disease in the œsophagus. Other forms of cancer also vary with the structure in which they arise, as scirrhus in dense organs like the breast, and encephaloid in the softer parts. Here, then, we see various forms of disease springing up in the body; there may be some deep-seated cause transmitted by the ancestry, which sets the process in operation, or there may not; but, that their character is determined in part by local circumstances is clear, and in this way are produced the above-named osteoid, melanoid, epithelial, scirrhous, and encephaloid diseases. When, also, we find these growths presenting the same identical characters throughout the body, we recognise the local work.

It would follow that, if an osteoid tumour of an internal organ be not primary, but always follows the production of a local one on a bone, it must have been derived from the latter, and, therefore, there must have been a time in the history of the case when the primary growth was not sufficiently well developed to infect the system. Whether this time can be practically known to the surgeon, is another question. In epithelioma, where the seeds are sown as well as grow with more difficulty, a period in which eradication may be effected does exist. If a case be taken hypothetically, that a growth of cells has sprung up in a part of the body from a purely local cause, and that elementary particles of those cells are ever ready to pass into the lymphatic and venous circulation to be propagated in distant parts, the chances are immensely against any surgeon removing that growth in its entirety, at such a time when it has been first discovered, without leaving a cell behind. The whole theory of cancer, its terrible nature and malignancy, means that it propagates through the system. When the surgeon operates, he often knows that the adjacent parts are involved, or, if he do not, they may often be found (if the patient die after the operation) to be so by naked eye or microscopic inspection. In fact, it were about as impossible to remove a mass of cells, numbering millions in multitude, without leaving some behind, as it would be to endeavour to eradicate a mass of weeds from a garden so that not a single one should spring up again. With this almost supreme impossibility of a surgeon being able to remove a soft mass of cells without leaving some behind, I do not know why he should have recourse to a theory that the seeds of the disease are in the constitution; he does not say this when he fails to arrest the effects of a venomous bite by cauterisation, or the results of syphilis by excision of the chancre.

According to a prevailing view, there were different forms of cancer, possessing different degrees of malignancy, which, of course, imply different degrees of intensity of the cancerous diethesis; but it can be clearly shown that these varieties of malignancy are due to accidental causes alone. For let there be two persons, man and woman, exactly alike in every respect; let them be, in fact, twins, with the same predispositions, and let the one have a blow on the testis and the other a blow on the mamma; we know, from experience, that in the one case the cancer (if it occurred) would be scirrhous, and, in the other case, encephaloid, the differences being due to local causes, and yet the man might only survive the appearance of the disease six months, whereas the woman might live six years.

Then, again, the various degrees of malignancy, as described by some authors, are clearly due to the difficulties and facilities of removal; and, in consequence, malignant disease of the tongue is a worse form than malignant disease of the lip or scrotum.

Cancer may exist for years without any evidence of constitutional disturbance, as seen occasionally in the breast. It may also dry up, and be, in fact, cured, which is also sometimes seen in the breast, and occasionally in the internal organs.

A cancerous cachexia has been held by some as indicative of a prior constitutional cause operating in the system, but more careful observations show that the so-called malignant aspect attaches itself to internal cancers of vital organs and not to external tumours. With the latter, patients look fresh and fat, and with diseases other than cancerous affecting mortally the liver and stomach, the same cachectic aspect is apparent.

Hereditary tendency, as described by many authors, appears to be almost in proportion to the readiness with which disease is recognised. Thus it is said to be more easily traceable in insanity than any other disorder, but this may be owing to aberrations of intellect being more perceptible than aberrations of the functions of other organs, as the liver; and, so it is, that tubercle, cancer, etc., are picked out as evincing hereditary tendencies to develope themselves. At present I think we can say no more than that the question of diathesis is one of the utmost importance; that people are constituted differently, and have proclivities to particular morbid changes, but my own experience is that there is no more hereditary proclivity to cancer than any other morbid condition.

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* On the Value of the Study of Morbid Anatomy (*Guy's Hospital Reports*, 1865).

The difficulties of understanding the propagation of new growths through the blood are not greater than in the cases of pyæmia, syphilis, or inoculated variola, nor in the cases of the diffusion of lead, mercury, or silver through the system.

Malignant disease means a form of malady which infects the whole system from a local source. The character of the disease clearly depends in great measure on local influences. Some new formations cannot propogate themselves, and others can; this depends on their structure. Why is the body liable to a number of local affections which vary in this way? Here lies a difficulty; but, because it cannot be answered, it does not follow that it is due to some inherent vice in the system. Ten different persons may have ten different morbid actions arise on a defined spot on the body. One man may have a sebaceous tumour on his head, another a patch of lepra on his chest, another an ulcer on his leg, another a warty growth on his finger, another an enchondroma on his toe, another an epithelioma on his scrotum, another have a growth made up of nucleated cells on his neck, another have a tumour made up of bone on the thigh, another have a fatty tumour on his shoulder, and the tenth a black tumour growing up in a mole. Now, if we take these different morbid conditions, we call some innocent and others malignant, because the former remain localised and the others spread. Is this difference in their structure associated with their spreading, due to some constitutional difference in the subject, or are local causes only in operation? I should say, without disputing the question of tendencies in persons to different morbid actions, that the old doctrine, and that taught generally up to the present time, that constitutional causes are alone in operation, is refuted by the arguments before given. It is possible that, looking upon the constitutional and local causes as distinct, we may be only regarding the one side of the shield. If there be two sides, I should say that clinical surgery had, until late years, looked at the one side only, and that morbid anatomy had given us the other side of the picture.

Some of the more evident arguments, taken from the fact of cancer returning on the same spot from whence it was supposed to be removed, or in the adjacent glands, and similar facts, need not be repeated.

TEMPORARY AFFECTION OF SPEECH (APHASIA): "APHASIC" WRITING.

By J. HUGHLINGS JACKSON, M.D.,

Physician to the London Hospital and to the Hospital for Epilepsy and Paralysis.

This case is of interest, as showing temporary loss, or rather great defect, of speech, with inability to write and to read. There was, to use the accepted nomenclature, Aphasia. I report it because I can give a specimen of the writing, or, so to put it, of the inability to write —that is, to speak in writing. My friend Mr. Steggall was so kind as to draw my attention to the case, and to procure for me the specimen of writing mentioned.

The patient, an intelligent Scotchman, forty-two years of age, had had five attacks, in the last three of which there was loss of speech. It is necessary to give an account of all his attacks, for the sake of the pathology of the case. My belief is, that the several symptoms were the results of thrombosis of very small cerebral arteries; but, most unfortunately, I put off going into the clinical pathology of the case (state of arteries, heart, urine, etc.) until another occasion: I never saw the patient again. I have elsewhere described what may be called Epileptic Aphasia; but the temporary affections of speech in this case were not, I think, of that kind.

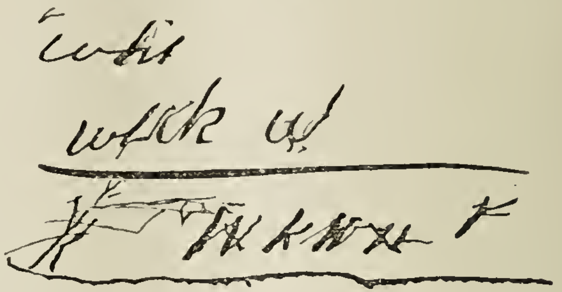
First Attack, October 1870.—After walking more than a mile to his shop, he opened his shop, and then went outside to brush dust off the window-frame. The left arm suddenly lost power, and the leg became weak. There was, however, a trifling power of movement in the arm, and, by the time that Mr. Steggall reached him, it was recovering. The same evening, he served in his shop, and also next day. The arm was still weak, but he could use it for measuring and unrolling ribbons, etc.; however, he did not absolutely recover. Eight days later, he had his second attack.

Second Attack.—He was out, and was again seized in the left arm and leg. He went home "drawing the left leg after him". In this attack, the leg suffered more than it did in the first, but still was not so much affected as the arm was in this second attack. In a week, he could do some work, but was under medical care a month, at the end of which time he was nearly well, but had had ever since numbness of the left finger-ends.

In both attacks, he seems to have had some defect of sensation in the paralysed parts. He thinks the face was not drawn in either attack, but it felt stiff. There was no trace of loss of consciousness in either, and no vestige of cramp or spasm.

Third Attack.—On Friday, January 20th, 1871, at 8 P.M., when in the shop, he suddenly felt that his speech had gone. He tried to speak aloud, and could only mumble. A customer came in for a pair of stockings; he could not speak to her, and went into the parlour, beckoning to his wife to go into the shop to take his place. He was better in two hours, and next morning was all right.

Fourth Attack.—On Tuesday morning, January 24th, 1871, he found his speech gone when he got up. He went down stairs, lit the fire, and boiled the kettle. He opened the shop, but could not speak to his customers. He had not, however, lost the power of uttering something, as he made mistakes—"said what was quite different". He can only call to mind one of his mistakes; viz., "penly" for "penny". So he gave up serving, and tried to tell his wife that he would go for a walk. He could not say it. At her suggestion, he tried to write it, and could not. The woodcut shows the result of his effort. As he says, since he could not "write" it, he tried to "print" it, as in the last line. I asked him why he could not write; he said he did not know, and added that he could not spell. There was nothing wrong with his arm. He tried to read the newspaper, but could not. I again asked why. He said he did not know; "seems as if sense was gone;" "could not make words out." His sight was not affected; he began at the top of an article. "I dare say I read a word, but I could not make any meaning out of it". He lay down and slept from midday to 8 or 9 in the evening. When he awoke, he could speak plainly, but not for long; "soon came back to the old mumble". He went to bed at 10, and next morning could speak quite well again.



Fifth Attack, Thursday next.—On awaking, he could not speak, and did not speak for an hour. Unfortunately, he did not try to write, except on the occasions referred to.

In none of these attacks did he find anything wrong with his face or tongue.

He seemed to be in good health; and the only thing complained of was pain in the *left* temporal region (a most important symptom), and numbness of the left side of the face, and numbness of the left fingers. As I have said, I have no details of the clinical pathology.

ON APHASIA.

By T. CLAYE SHAW, M.D.,

Medical Superintendent of the Metropolitan Asylum, Leavesden; Lecturer on Psychological Medicine at St. Bartholomew's Hospital.

In the present state of opinion regarding the connection of aphasia with the lesion of a defined portion of the brain, all cases bearing directly on the subject should be put on record. Subjoined are the history and *post mortem* examination of a man aged 74, a tailor by trade, who suffered from well marked amnesic aphasia. According to his wife's account, he was always temperate, and had never smoked. The first paralytic seizure occurred in March 1867, but sight and memory had somewhat failed eighteen months before. At this period (1867), the right extremities were paralysed; and the aphasic condition was present, for he gave to understand by signs that he wanted a slate and pencil to express himself with, not being able to say what he wished; and yet he could not write intelligibly when the materials were given to him. He called his wife "Joe" and "Jack", complained of the right side of his face and head feeling "too large", and answered questions incoherently. In September 1867, he became epileptic, and was under treatment at the Queen Square Hospital for some months. Afterwards he became violent, and hid knives and ropes with the avowed intention of using them against others. In June 1872, he was admitted into the Leavesden Asylum, in the following state. He was right-handed. The body was fairly nourished. There was right hemiplegia, with contraction of the extremities, and drawing of the face from palsy of the left facial muscles. He had epileptic fits about once a month, the right extremities being always much involved in the seizures. He had great difficulty in getting out the word he wanted to say; *e. g.*, he could not say the word "paralysis", but would point with a vexed and puzzled air, as if recognising his difficulty, to the right half of his body. When prompted with the word, he could, however, repeat it for a moment. His usual reply to questions addressed to him was, "Oh, dreadful;" but he never swore. Reading was very imperfectly performed, partly owing to defective eyesight, and partly to the aphasic condition; for he read out words different from those on the printed page, and thus made most incoherent nonsense. Writing was out of the question, from the contracted state of the right hand. The sight of the right eye was quite gone, and the left was much impaired; and Mr. Liebreich, who kindly examined him with the ophthalmoscope, diagnosed "decided atrophy on the right side, partial atrophy on the left." The sense of smell remained; but whether it was better on one side than on the other, was not made out. He was very deaf, but could be made to hear by loud talking. About a month before his death, which occurred from gradual exhaustion, the fits quite ceased, and bed-sores formed.

NECROPSY.—Beyond a few old pleuritic adhesions on the left side, the chest-viscera were healthy. The transverse colon was displaced to the hypogastric region; and the kidneys were lobulated, but healthy. The brain-arteries were normal; and there was no sign of dilatation nor of atheromatous change in any of them. The membranes, except over what remained of the left frontal lobes, were not thickened, and could be easily detached, without tearing the subjoined grey matter, after slight maceration in water. The left frontal lobe had suffered marked degeneration. On its external surface, the first frontal convolution was well marked and sound for the outer two-thirds of its length; thence it was degenerated or entirely destroyed, and its place supplied by thickened membrane. The second frontal convolution had much degenerated, being only entire in the part immediately in front of the sulcus præcentralis; most of its anterior prolongation, with the exception of a very small piece joining what was left of the third frontal convolution, being destroyed. The third frontal (or superior marginal) convolution was entirely destroyed, with the exception of that part at its origin which curved round the ascending ramus of the Sylvian fissure. The convolutions of the island of Reil, intimately connected with the corpus striatum and the third frontal convolution, were almost entirely destroyed by degeneration. On the inferior surface of the left frontal lobe, the sulcus olfactorius was deepened from atrophy of the grey matter bordering it, but the bulb seemed entire; the gyrus rectus was gone, and its place badly supplied by thickened membrane. Only a small remnant of the middle frontal convolution remained, and there was no trace whatever of the third. On the internal surface, the gyrus fornicatus was defective in the anterior part, at its beginning under the genu of the corpus callosum, with the exception of a very slight band of grey matter connecting it with the septum pellucidum and the olfactory bulb. The corpus striatum on the left side was certainly smaller than the right one, but contained neither clot nor cicatrix.

REMARKS.—It would seem that the degeneration began first in Broca's convolution, at the time that the word-memory began to fail, and before the paralytic seizure occurred in 1867, for this third frontal convolution was the most impaired of all; the lesion having attacked to a much less degree the second, and least of all the first. Though crossed right hemiplegia is, as a rule, noticed at some stage of the progress of aphasic disease, it is yet by no means necessary; and I should be inclined to place the lesion in the corpus striatum posterior in date to that of the third frontal convolution, but coincident with the first hemiplegic seizure. The two lesions (aphasic and hemiplegic) should always, if possible, be distinguished, for the connection is accidental; and, though the grey matter may be so diseased that the power of the will over word-groups is altered or destroyed, it by no means follows that therefore the power is lost over the extremities of the other side of the body, although such is usually the case as a result of disease extending to the corpus striatum. According to Ferrier, the "centres for the mouth and tongue in cats and dogs are localised in regions corresponding with the lower frontal convolutions and island of Reil in man", and stimulation of these centres will produce movements in the groups indicated; whilst the crossed action of the hemispheres "only extends to muscles and combined muscular movements which act independently of each other"—*e. g.*, to the arm and leg; and thus a disease of the convolutions may lead to hemiplegia, and to a palsy of those muscles which minister to the formation of words—*i, e.*, to those combinations which correctly reproduce sounds heard, and the organic centres of which are situated in the same convolutions as the centres which preside over the muscles concerned in articulation. If, then, language mean the correct reproduction of a sound once heard by that definite muscular action best adapted for it—viz., a certain position of lips and tongue, and tension of laryngeal muscles—it is in accordance with all physiological analogy, that a memory of that group shall be implanted upon some part of the brain-tissue, ready to show itself either at the call of the will, or else, independently of the will, as a reflex act, consequent on some irritation. If the power of the will over a certain speech-group be lost, then either no answer will be given to a question, or some other word will, in the anxiety to reply, be given. If, however, the speech-group be affected wholly or in part, the word is either blotted out entirely, or so changed as to be scarcely recognisable. It is, in my experience, rare to find articulation correct in these cases of loss of word-memory; indeed, a consideration of the mode of production of aphasia almost necessarily leads to the conclusion that it must be affected until the other or "non-driving" hemisphere has had time to take upon itself the function generally assumed to so much greater extent by the left half. Certainly, however, there is no necessary hemiplegia (using the word in its general sense, as applied to the extremities), notwithstanding the hesitation of speech brought about by vain attempts to reproduce a desired word. When hemiplegia from disease of the corpus striatum does occur, the intellect, in my experience, always suffers to some extent; for the downward current from the convolutions is interfered with, and secondary changes are brought about. Sight-memory is not necessarily impaired when word-memory is, for I have found persons who knew that they were using wrong words when reading, though evidently understanding what they read; but we are so accustomed to correct optic and auditory impressions by each other, that a lesion of one can scarcely but affect the other.

The cause of the cerebral disease in this case is not clear. The extreme dementia is explained by the large amount of destruction; and, though the implication of other convolutions than the third frontal renders it impossible to say positively that the aphasic state resulted from its destruction, yet the fact that only the frontal convolutions were affected, and that the disease was earliest to begin and most advanced in the third, renders the hypothesis very probable.

CASES ILLUSTRATING THE USE OF PERCHLORIDE OF IRON TO ARREST *POST PARTUM* HÆMORRHAGE.

By CONSTANTINE HOLMAN, M.D., Reigate.

CASE I.—Mrs. —— always had very large children. Her first was delivered by forceps, and delivery was followed by uterine inertia. It had always been found necessary to remove the placenta by hand, in spite of the use of ergot before and after the birth of the child. In her fifth labour, the loss was large, in spite of the introduction of the hand into the uterus, of pressure, and cold applied inside and outside. No ice could be obtained. Solution of perchloride of iron was injected. There was no further loss. The recovery was as good as usual. She was up on the fourteenth day.

CASE II.—The same patient as Case I. In her sixth labour, the child was very large. The os uteri was felt to be cracked, and there was a good quantity of bright blood with the usual flooding. I injected the uterus with a solution of perchloride of iron, and placed a sponge soaked with the solution in the os. There was no further loss, and she made a good recovery.

CASE III.—The patient, in labour with her first child, but of stout habit, led a luxurious life, and had generally flabby muscular fibre. The labour was slow, marked by inertia; the slight contractions painless. The child was large. A very profuse gush of blood came with the placenta; and, in spite of *skilled pressure*, the blood poured away. The hand was introduced, but the loss was still great. She became nearly pulseless, and in thirty minutes was blind. I injected perchloride. No loss followed. There were no lochia at all for forty-eight hours; then the discharge was offensive. Phlegmasia dolens in the left leg appeared. Her convalescence was slow, but her recovery was complete. A clot had evidently sealed up the os uteri, and this ought to have been broken up by the fingers.

CASE IV.—Mrs. ——, in labour with her third child, had always flooded. She had a very feeble heart. The uterus was greatly distended. After the removal of the placenta, a continuous profuse loss went on for half an hour, in spite of the hand in the uterus, pressure, cold, etc. I injected perchloride of iron. There was no further loss. She sank exhausted four hours after delivery. No special pain was complained of on the injection.

CASE V.—Mrs. ——, in labour with her first child, had passed a fibroid tumour by the anus. The pains were short and inefficient. The loss was great. Through the abdominal parietes, the uterus was felt large and boggy. The placenta was removed by hand, and the hand was kept in the uterus. The posterior wall did not seem to contract. The loss went on. The impression produced on the system was rapid.

I injected perchloride. No pain ensued. The uterus remained large. There was no further loss. She sank in three hours. At the *post mortem* examination, the uterus was large. The sinuses were filed with coagula. The uterine tissue was tinged of a dark colour. The posterior wall of the uterus was crammed with fibroids; in fact, there was almost entire fibroid degeneration of the posterior wall. There were two subperitoneal pedunculated fibroids behind.

CASE VI.—Mrs. —— had always flooded, and had been treated by ergot during labour; by pressure and ergot subsequently. Her ninth child was born after pains lasting three-quarters of an hour, and before my arrival. The uterus was distended, and loss was going on. The placenta was lying in the uterus. The uterus was now well cleared out, but the loss continued. The hand was therefore introduced again, and retained; and cold was applied externally. Still the loss went on, and there was rapid failure of power. I injected perchloride. The loss stopped. Stimulants were continued freely. She rallied in four hours. Vomiting came on, and moderate hæmorrhage returned. The pulse failing, I introduced the hand, cleared out the few hard clots from the uterus, and injected solution of perchloride of iron. This was quite successful. She made a good recovery.

I have also had a case of a primipara with smart arterial loss from the cervix, in which I inserted a sponge steeped in perchloride of iron successfully.

In all these cases, I conducted the labour on the principles long since taught me at Guy's Hospital; that is, supporting the uterus, in the last stage especially; making the uterus throw off the placenta, by manual external pressure if possible; giving ergot in the third stage, if flooding be anticipated; watching the uterus by the hand until contraction is firm and continuous. Brandy was given freely in all the cases.

THERAPEUTIC MEMORANDA.

THE EMPLOYMENT OF GELSEMINUM.

I DESIRE to draw attention to the value of gelseminum sempervirens in the treatment of some forms of odontalgia. Since reading Dr. Wickham Legg's paper, published in May last, advocating the employment of the drug in cases of odontalgia, I have frequently used the remedy for the relief of toothache and some allied affections among my outpatients. Gelseminum, commonly called the yellow jasmin, is not very generally known to English practitioners, although it has been largely used in medicine for some years in the United States. The drug seems to act mainly upon the nervous system, impairing the sensibility of the sensory nerves. American pharmacists prepare a liquid extract; the dose of the powdered root is from one to two grains; I have used a tincture, made from two ounces of coarsely powdered gelseminum root macerated in a pint of rectified spirit. In hospital outpatient practice, we meet with a large number of cases of neuralgic pains in the face and jaws, associated with carious teeth, but unconnected with any evident local inflammatory changes. The patients are frequently badly nourished women. In such cases, I have given the tincture of gelseminum, in doses of fifteen minims every six hours, in an ounce of dill-water. Out of about twenty cases, I do not think the use of the remedy has failed to be followed by decided and lasting relief in more than three or four instances. The pain did not usually disappear till after the third or fourth dose. I have seen enough of the employment of gelseminum, to feel sure that more extended experience and careful investigation of its action will establish the drug as a valuable addition to our materia medica.

JAMES SAWYER, M.D.Lond.,
Physician to the Queen's Hospital, Birmingham.

GELSEMINUM SEMPERVIRENS (YELLOW JESSAMINE) IN FACIAL NEURALGIA.

CASE I.—S. W., aged 30, confined eight months ago, not suckling, anæmic, for twelve months had been suffering with grinding, shooting pain in the teeth, jaws, and temples. The pain was generally worse from 9 to 10 A.M., sometimes at night. Eating brought it on. She had several stumps, but the dentist said that nothing was to be done. She had tried many medicines. She was ordered tincture of gelseminum, ten drops in water thrice daily. She was relieved by the first dose, and the improvement continued whilst she was under observation and taking the medicine—two to three weeks.

CASE II.—T. B., aged 39, complained of violent stabbing pain from the mastoid process, over the side and front of the head, coming on from 3 to 6 A.M. This had continued for three weeks. There was no known cause, except a fall on the part seven months ago. His general health was good. He was ordered five grains of quinine before the paroxysm, fifteen grains of ammonium chloride thrice daily, and liniment of chloroform. He got no definite relief, except from the last mentioned, and, at his next visit, was ordered three drops of tincture of aconite. From this he had much relief for a few days, when he relapsed. Pain was now felt more in the jaws and left side of the face. He was ordered ten drops of tincture of gelseminum, and got distinct and decided relief, which continued whilst under observation.

My note-book contains now many similar cases, which warrant me in adding my testimony to that of Dr. Legg, and to that of my friend and colleague Dr. Sawyer. I have ample evidence of the power of gelseminum to relieve pain, especially — I do not say only — in branches of the fifth nerve; and medicines that relieve pain are the most valuable we can have. In toothache from caries or irritated nerve, I do not know that we often think of any but local treatment, unless sometimes aconite or large doses of quinine; yet in very many cases, gelseminum will relieve markedly. Its use, as may be said of most neurotics, is not free from some danger; but I have only seen unpleasant symptoms once, and then from an American liquid extract in doses of five to ten drops (the dose marked on the label). These symptoms were dimness of vision and extreme prostration. They soon passed, but may serve to remind that the evidences of the physiological action of the drug are, loss of sight, double vision, headache, paralysis. Several cases of accidental poisoning have exhibited these; the few recorded fatal ones were all of children to whom extravagant doses had been given. The preparation I now use is a tincture made according to the usual pharmacopœial mode (*e.g.*, as tincture of aconite), but with two ounces of root to the pint of spirit. It was first prepared here by the hospital dispenser, Mr. Dewson, and is now kept by Messrs. Southall. The dose ordered was from five to twenty drops, and with this, among a large number of out-patients, I have had no cause for anxiety. As the "Therapeutic" corner of our JOURNAL is now, and usefully, occupied concerning tetanus, I will point out that gelseminum, from its paralysing power, ought, *à priori*, to be of use in that malady.

EDWARD MACKEY, M.B., Physician to the Queen's
Hospital, Birmingham.

THE THERAPEUTIC USES OF CODEIA.

IN a paper in the JOURNAL of April 11th, Dr. Myrtle asks whether codeia depends solely for its action on the presence of morphia, that having been the general opinion held by those who took part in the discussion of his paper. I can, I think, throw a little light on this subject.

How far back in the annals of history opium has been used as a drug, it is impossible to say; but it was not until recently that active principles were separated from it in such a manner that they could be used as independent remedies; and it is not the less surprising that, although there are at least eight separate bases coexistent in opium, yet few have been utilised at present.

Before we use an active principle, or one so called, it will be necessary to know that it is so, or most certainly notes affecting its behaviour will be useless. Now nothing can be more certain than that codeia is a separate and distinct chemical compound; for (*a*) it has a definite crystalline form—viz., bold rhombic octohedra, and this at once announces the individuality of the substance; (*b*) the result of ultimate analysis gives, as the formula of codeia, $C^{18}H^{21}NO^{3}$, the formula of morphia being $C^{17}H^{19}NO^{3}$. It is evident, then, that if codeia were sometimes mixed with morphia, we should have a varying crystalline form and an indefinite atomic weight. Besides these points of stability, we have those researches commenced by the late Dr. Matthiessen, and ably continued by Dr. Wright, in which they show that polymerides may be obtained from these two bases; and that from codeia, by the action of hydriodic acid, methyl-iodide and morphia may be obtained. A full account of these researches can be seen in the *Proceedings of the Royal Society*, 1871-72.

Experiments which have been made on the physiological action of codeia tend to show various results. These in some measure are due to the experiments having been conducted on animals of different species, genera, and classes. Some, and those most reliable, have been on man; and, as it is for human benefit that we prosecute these researches, it would be better if further secondary experiments were always so conducted.

Thus Anderson says the salts of codeia have a powerful narcotic influence when taken internally. In Dr. Myrtle's case, we have not even drowsiness, so that it is probable that Anderson did not use the pure salt.

Dr. Stocker injected some cats subcutaneously with hydrochlorate of codeia. In each instance, the pupils were dilated; cerebral congestion was present, as determined by ophthalmoscopic examination; there was much reflex excitability; in one case, epileptic convulsions; salivation and purging occurred in two cases; there was no vomiting. The dose used was about a grain and a half.

In the case quoted there are several points of disagreement with these results, which are probably due to the difference in the animals—one a man, the other a cat. Thus the cat's pupils were dilated, the man's contracted; and, while there was no increase of alvine or salivary secretions in the man, two of the cats were salivated and purged.

Too much praise cannot be bestowed on Dr. Myrtle for the bold manner in which he proceeded with his treatment after such alarming symptoms; and the result will, I am sure, urge others to test the powers of this drug.

S. W. MOORE, L.R.C.P.Ed., St. George's Hospital.

THE USE OF CALABAR BEAN IN TRAUMATIC TETANUS.

MR. JALLAND inquires whether the physiological effects of the Calabar bean were noted in the case of tetanus reported by me in the JOURNAL of April 4th. I have to reply that I purposely avoided pushing the drug so far as to produce those effects commonly called physiological. Fearing the onset of syncope and the attendant effects following on large doses of the bean, I ordered that the medicine should be given at regular intervals unless "symptoms of faintness should supervene". The only indications for the increase or diminution of the dose were the general state of the patient's strength, and the increase or diminution of the spasms in frequency and severity. The physiological effects of Calabar bean and of strychnia are opposite, and hence the theory of the one being an antidote to the other. If, then, we administer the bean as an antidote to strychnia, or as a cure for tetanus, the object that we would have in view would be that just so much would be taken as would render the strychnia inert, or ward off the spasms in tetanus. If we succeeded in doing so, we would have no physiological effects whatever produced. What purpose, then, would it serve to push the drug beyond its therapeutic stage, except as Mr. Jalland says, that we might judge of its use in any particular case? I submit that we could judge of its usefulness by its effect or non-effect on the tetanoid symptoms, and that for this purpose there is no necessity for giving so much of this dangerous drug as would produce "contraction of the pupil down to a pin's point".

I omitted to mention in the notes formerly given, that, whenever the medicine was intermitted, the symptoms became aggravated, and that the patient himself was conscious of this fact.

"Todd has observed contraction of the pupil to a pin's point during the paroxysms of tetanus, the contraction going off when the spasm ceased" (Flint's *Practice of Medicine*). How is this to be explained if it be true? and does it not form an important point in the diagnosis between tetanus and strychnia poisoning?

JOHN CUNNINGHAM, M.B.

SURGICAL MEMORANDA.

SPONTANEOUS PASSAGE OF A LARGE CALCULUS FROM THE BLADDER OF A FEMALE.

MRS. P., aged 42, married, with six children, began to suffer from irritation of the bladder about fifteen months since, but not to so troublesome an extent as to require medical treatment until the latter end of December 1873, when she consulted me. I then diagnosed stone in the bladder, and proposed an examination, to which she would not consent before she had undergone medical treatment. The medicine then prescribed for her acted so beneficially that, in a week or two, she was almost free from the irritation; and I left her, hearing nothing more of the case until Thursday, April 9th, when I was hastily summoned to her, and found her suffering intense pain in the back, with strong bearing-down pains. She then told me that she had been as well as usual up to the time of her going early to bed the night before, and that, after she had been asleep some hours, she was suddenly awakened by pains in her back, etc., almost as severe as any she ever suffered in child-birth, and that she felt a large stone passing away from her bladder. On making an examination with my finger, I found a large stone protruding about an inch through the mouth of the urethra. Seizing it between my finger and thumb, I gently drew the remainder of the stone from the urethra with but little extra pain and very slight discharge of blood. Since then, all irritation has ceased, and the bladder and urethra are acting normally. The stone, in its present state, measures two inches and a quarter in length, one inch and a quarter in width, being somewhat flattened, and three inches and seven-eighths in circumference. Soon after it came away, it weighed exactly nine drachms, but a considerable portion had been broken away by the patient, as she said, scraping it off with her finger-nail before I saw her; and I have no doubt that the stone in its original state weighed between eleven and twelve drachms. That such a stone should have passed through the urethra without any artificial dilatation appears to me to be marvellous; but my experience in such matters has been but very trifling, as fortunately Cornwall is so free from cases of stone in the bladder, that this is the only case I have met with during a somewhat extensive practice of nearly forty years.

STEPHEN CLOGG, M.R.C.S.Eng., Looe.

THE ELASTIC LIGATURE AND THE ELASTIC BANDAGE.

I LATELY had a case which illustrated very well the advantages derivable from the elastic ligature. A patient suffering from fistula *in ano*, complicated with stricture of the rectum about four inches from the anus, had the fistula divided in the usual way with the knife, when it was discovered that on one side the large abscess which had formed outside the bowel communicated by a long and sinuous track, with the bowel above the stricture. It would have been hazardous to lay open this track with the knife, as it entered the rectum at the point where the right fork of the superior hæmorrhoidal artery divaricates from the left. A ligature was, therefore, passed from the ischial opening of the abscess along the fistula, and brought out through the anus. In two days, this ligature had cut its way sufficiently to allow the wire-ecraseur to be applied, with which the operation was completed speedily and bloodlessly. While this case is a good example of the advantages, another which was under my care about the same time illustrates the disadvantages of this mode of treatment. A healthy boy of 14 presented himself among the out-patients of the Manchester Royal Infirmary, with a sessile fibrous tumour of the size of a large walnut, situated on the back of the metacarpal bone of the thumb. An elastic ligature was applied around the base, a small sulcus being first made with the knife, in which it was looped. Great pain was experienced for the first five or six hours, which, however, gradually subsided, and in seven days the ligature, tightened from time to time, had completed its work, and cut through the base of the tumour. Instead, however, of the advancing granulations, so pleasantly described by Professor Dittel as following the contracting ligature, an angry edge of acutely sensitive and inflamed tissue was left, whence erysipelas spread up the arm, and for a few days the boy was in decided peril. Two months passed before the cicatrix was complete. It seems probable that the same modified praise is to be given to Esmarch's elastic bandage; for, while nothing but good is likely to ensue from its application in such cases as the one which Esmarch so graphically described, viz., the removal of carious bone in an anæmic patient, it cannot but fall into desuetude if it be indiscriminately employed in all cases, particularly in those where some septic condition is present, or when amputation is practised on account of the presence of some diseased growth. In such cases, not only is it undesirable to squeeze back the germ-laden blood into the general circulation, but, the blood in the limb being already lost to the heart, it is unwise to burden a perhaps already weakened organ with propelling more blood than the system requires. The tourniquet saves to the system all that the system can benefit by, and to return more than this, except in rare cases where we contemplate transfusion, is unnecessary, if not actually harmful. Even at the hip, the abdominal tourniquet is sufficient to restrain undesirable hæmorrhage, and in fat subjects, when it cannot be easily applied, it is probable that a plan suggested to me by Mr. J. Beswick Perrin, of transfixing the limb just below Poupart's ligament with a long pin from fourteen to eighteen inches in length, and then compressing the femoral artery by means of a twisted cord between this pin and the integument, would answer the purpose better than the elastic ligature. It is certain that it is easy, in the dead subject, by this means to perfectly compress the vessel and yet leave room for the passage of the knife.

S. MESSENGER BRADLEY, F.R.C.S.Eng., Manchester.

PROSECUTION FOR SYPHILITIC VACCINATION.—At a recent sitting of the criminal tribunal of Hamburg, a public vaccinator, Dr. S., was found guilty of causing injury to the body by neglect, through vaccinating from a syphilitic child, and was sentenced to a month's imprisonment. The facts of the case were briefly these. On August 21st of last year, a male child a year and a half old was brought to the vaccination station of which the defendant had charge, and, under the directions of the defendant, whose duty it was to choose the children from whom vaccination should be performed, was vaccinated from a child a year old, who had syphilis, and itself became affected with the disease.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

Tuesday, April 21st, 1874.

Sir Wm. Jenner, Bart., M.D., F.R.S., President, in the Chair.

DISCUSSION ON CANCER.

The discussion on Mr. Campbell De Morgan's paper on Cancer was resumed, and concluded.

Dr. Greenhow: I should scarcely have presumed to take part in this debate if it had been a debate on the histology, or even upon the pure pathology, of cancer; but, in fact, it has been a debate upon the clinical history of cancer, and, therefore, as no one else rises, I will venture with some diffidence to make a few remarks on the subject which has been occupying the attention of the Society for the last three meetings. In saying that this has not been a debate upon the histology of cancer, I am not unmindful of the fact that several very pertinent references have been made to the subject; that Mr. De Morgan has laid great stress upon the great mobility of cancer-cells; that Mr. Arnott has stated his opinion that the malignancy of cancer is in proportion to this mobility of cancer-cells. I gather that Mr. De Morgan's view is that cancer is a local disease spreading mainly by this transference of cancer-cells from the primary seat of cancer to more distant localities. Whether this be so or not, I leave to be discussed between himself and Mr. Simon. I regret that Dr. Creighton, who was referred to by Mr. Simon, did not speak here; but Mr. Simon distinctly enunciated this view, that the infectivity of cancer was communicated not by the transference of a cell from the original seat of cancer, but by an infection which he compared to impregnation of the surrounding tissues which took on a cancerous growth—a very different thing from the transference of a germ which grows in the locality in which it finds its place and becomes a fresh nucleus for cancer. Dr. Moxon, at the last meeting, tried to bring back the Society to what he considered the essential objects of the debate. He stated that localism and generalism are incompatible, and he tried to bring us back to consider cancer as rather an altogether local or an altogether general disease. And certainly, *primâ facie*, there is great reason to suppose that cancer is a local disease. We find it begin in a particular locality, we find it spread from that locality by the lymphatics or by the vessels to more distant parts, and it does seem, therefore, to be a local disease. But this, I would maintain, is only one side of the shield; there is another side, and that is represented by Sir James Paget, who takes the view that cancer is due to a general condition. But, when we analyse this statement of Mr. De Morgan in the very admirable and carefully considered paper with which he inaugurated this discussion, I find that he uses terms implying that there is something more than a local disease in cancer or more than a local tissue-change. He cites the hereditariness of cancer in proof of this fact; he goes as far, I think, sir, as you would perhaps, certainly as far as I would, in saying that the cancerous tendency may pass a generation and reappear in the third; that a cancerous parent may have a progeny that does not exhibit signs of cancer, and that cancer may be developed in the next generation, missing a generation by reason of the cancer not being strong enough to develope itself in that generation. This view is a very material modification of what I have always thought to be Mr. De Morgan's view, viz., that cancer is purely a local disease beginning in the locality and spreading from that locality to the general constitution. He admits clearly that there is a constitutional condition as well. I cannot say that I see any great difference between this opinion of Mr. De Morgan and Sir James Paget's opinion, for Sir James Paget says that he looks for both a local and a constitutional origin of cancer. Between the views of these two gentlemen, who may be said to represent the two great schools of thought on the subject of cancer, and who have had, perhaps, the largest experience of the disease of any surgeons in London, I cannot help feeling there is not the wide divergence we at first supposed; that there really is a harmony between the two schools; that, as Dr. Moxon said, there is a "sweet agreement" between them which renders the difference one rather of words than of things. For my own part, I think it is impossible to study cancer—to study it even as I do as a physician—without seeing that there is something more than a local constitution; that, although it may begin in the locality, there is a something in the system beforehand—let us call it a predisposition or hereditary tendency. I know these are words which are difficult to define, and which convey very different meanings, according to the men who use them, and according to the circumstances under which they are used. For instance, I do not think that the hereditary tendency to a cancerous disposition is identically the same as that hereditariness which leads to the development of a deformity. We see sometimes this sort of deformity occurring. We see children of cousins (I refer to cases that I have myself witnessed) having club-feet or supernumerary fingers. It is not that form of hereditariness or predisposition which we see in cancer. Neither is it that form of predisposition which leads to the development of a non-malignant local disease, as in the case of hydrocele. Sir Henry Holland describes a case of hydrocele occurring hereditarily in a family, missing one member only, and that member a female. It has come under my own observation that brothers sometimes have hydrocele. I remember many years ago seeing a gentleman 55 or 56 years of age, who had hydrocele. Two brothers had it before him at about the same age. Here was undoubtedly a hereditary tendency to hydrocele, and that seemed to be a tendency to a local disease. I do not think that cancer has exactly that sort of hereditary tendency. Neither has it a tendency like that of gout. I think it much more nearly resembles tubercle, if I might name one kind of hereditary disease which comes nearest to cancer. Phthisis, of course, is hereditary, as cancer is hereditary. Notwithstanding all that has been done of late years to throw light upon phthisis as arising from various causes, from catarrh, from pneumonia, and what not, we shall all agree that it is occasionally and frequently an hereditary disease; and, like cancer, phthisis sometimes descends to one side of a family only. I remember a family, some of whom were patients of mine, in which there were five daughters who died of phthisis between 20 and 30 years of age; there were only two sons (schoolfellows of mine) who are living now, and are both older than myself. I remember another family that suffered from phthisis, and four sons died of it, while three daughters are, or were a few years ago, living. This occurs in cancer also. We find that cancer sometimes descends, especially in the female sex, perhaps because the female organs, the uterus and the breast, are especially liable to it; still in this respect it somewhat resembles phthisis. When I look at these facts, I cannot help thinking that cancer is a general disease. How else can we explain such a fact as this which occurred to me in my own practice? Three sisters and two brothers in a family died of cancer. Four out of those five cases were in different organs. One had cancer of the œsophagus; another had cancer of the mamma; another had cancer of the uterus; and another had cancer of the rectum; I do not remember the site of the fifth. Here is a case in which cancer was obviously a hereditary disease, showing very strong grounds for believing that the disease was in some way or other constitutional. Of course, there are many such cases on record. Sir James Paget has published numerous cases of the sort. I merely quote this as a striking one which came under my observation. Nor can we again hesitate to believe that cancer is a constitutional disease in some way or other when this occurs. I saw a patient a year or two ago who had cancer of the mamma. Her mother had died of cancer of the rectum; she had been seen by Sir James Paget. Here, then, is a case of a mother and daughter, both of whom died of cancer, the seat being different in the two persons. I say that cancer resembles tubercle in many respects. It would lead me very far to go into the subject fully, and I am aware that there are several gentlemen who wish to speak this evening, and that Mr. De Morgan has to reply to the various speakers. I would say, however, that cancer resembles tubercle in many respects much more closely than any other of the diseases that have been referred to. I can quite understand why cancer occurring in a locality may remain dormant for a long time after its first development, as tubercle sometimes does. We sometimes have tubercle occurring, and the patient recovers after a time, the tubercle has gone, it aborts, it becomes latent, and by and bye, at a distant period perhaps, sooner or later, the tubercle lights up afresh, and the patient has tubercular disease of the lungs. Now and then, tuberculous cancer infects the whole. Cancer thus resembles tubercle in its local history somewhat, and in its constitutional history generally. My own view is that there is a strong hereditary predisposition to cancer in a great many cases. Sir James Paget, whose experience is very large, told us at the last meeting but one, that in his experience about one case in three was hereditary. I do not see how, after that, we can hesitate to admit, as Mr. De Morgan admits, that there is a constitutional condition as well as a local origin of cancer. Why cancer, thus being a hereditary disease, should manifest itself locally is not obvious. Why a person who has inherited from his father or mother, or some other ancestor, a tendency to cancer, should get cancer in the breast, or in the tongue, or in the rectum, is not obvious. We know that sometimes this development is due to an accident. I remember to have seen a gentleman who fell from a pony and received a blow upon the abdomen, which produced a swelling. I did not see him for some time, but in six or seven weeks after the blow a tumour had been opened by a surgeon, and it was found to be a case of colloid cancer, which had spread and invaded the organs of the abdomen, and the patient died. There was no antecedent history of cancer, and undoubtedly the appearance of the cancer was produced by the blow. Again, why is it that cancer sometimes will attack an organ in an imperfect state of development? Why is it that a mamma, for instance, that has never been available for its proper use shall by-and-bye, in middle life, become a seat of cancer? I am acquainted with a case in which this took place. There were two generations in the same family. In one of them, the mother had a mamma which had never developed during lactation. She died at an advanced age with a tumour in her right mamma about the size of a pigeon's egg, but she never had cancer. The daughter had a tumour of the same sort in the left mamma. The first history in her case, as in the case of the mother, was that the breast did not develope during lactation; whilst milk came in the right breast, none, or a small quantity, came in the left, and by-and-bye this imperfectly developed mamma became the seat of cancer. This illustrates what Sir James Paget said, that cancer is apt to attack the mamma and uterus because those organs became prematurely old. He thinks that cancer is a disease of old people. I say, why cancer, being a constitutional disease, should so often become a local disease is not obvious. That is a question yet to be worked out. I think that this great debate, which has been of such advantage to the Society and to science, results practically in this, that there is no such great divergence between the local and the general school as some of us have supposed. And very much the same thing may be said with regard to treatment, if I may venture to use that word in this Society. Mr. De Morgan tells us in his admirable address that cancer almost always returns after removal; on the other hand, Sir James Paget says that now and then in a small number of cases cures take place after removal. The practical inference I would draw from what has been said by these gentlemen, and from the general course of the debate, is that cancer, if it have to be dealt with locally at all, ought to be removed at as early a period as possible. That, I think, seems to be practically the upshot of the debate. I have confined myself in the remarks I have ventured to make, which I feel to be very crude, to the subject of surgical cancer; but I think if we had taken into consideration the subject of medical cancer, we should have found still stronger grounds for regarding cancer as a constitutional disease. I forbear to enter into that subject, since the debate has been confined so strictly to external cancer.

Dr. Creighton: Reference has been made by Dr. Greenhow to certain investigations of mine which also formed an illustration for Mr. Simon's argument on the first night of the debate. More than a year ago, I made investigations on the pathology of cancerous tumours, and, after feeling my way for a little time, it appeared that secondary tumours in the liver, whether they might be called cancerous or sarcomatous, or whether they belonged to any other variety, were more likely to throw light upon the pathology of cancer than any investigations into tumours occurring in primary situations. It so happened that at the same time material came in my way favourable to this investigation. The tumours occurring in the liver which I first examined were similar in external character, but the primary tumours were of considerable variety. One very remarkable case occurred in the ascending colon, which had the structure of the tubercular gland; another was a case of spindle-cell sarcoma under the care of Mr. Croft of St. Thomas's Hospital; it existed in various parts of the body in the subcutaneous tissue; one was in the rectum; another was a myxomatous tumour of the femur; they presented a considerable variety, and embraced a wide range of epithelial and connective tissue structures. In these cases, I found that the point of departure in the liver was the liver-cell itself, and that not in the way of proliferation and multiplication of nuclei, but in the way of endogenous cell-formation—that is, vacuolation of the protoplasm of the liver-cell and the differentiation, so to speak, of the products that survived the vacuolation. This endogenous cell-formation in the nine or ten cases that I examined was pretty well exemplified in all these varieties, so that if one were to attempt to write the natural history of endogenous cell-formation it might be done from those cases. The conclusion that I arrived at was that from liver-cells there might develope not only epithelial cells, but also connective tissue cells, including spindle cells as well as myxomatous cells, cylindrical epithelium, and other kinds of epithelium. In all these cases, the secondary tumour had a remarkable resemblance to the primary tumour. For example, with regard to the tubercular gland-structure which occurred in the ascending colon, the structure of primary tumour was reproduced exactly in every respect in the liver, although not at all points equally developed. Again, with regard to spindle-celled sarcoma, the spindle-cells were exactly the same as in the primary tumour, and even the melanosis in primary tumour was, to a certain extent, continued in the secondary. In a case of giant-cell sarcoma, a sort of epulis growing from the upper jaw, there was in the primary tumour a remarkable arrangement of the stroma which was reproduced in the secondary. Indeed, the similarity between the primary and the secondary tumours was irresistible. When these facts are looked at, it appears that the relation between primary and secondary tumours is comparable to no other relation in nature than that of parents and offspring, and when the exact histological process is looked at more closely—namely vacuolation—there is an additional argument in favour of supposing that the influence from the primary tumour which results in the formation of the secondary, may be compared to what Mr. Simon called the spermatic influence. It may be a little fanciful, but certainly there is some ground for supposing that the changes that take place in the ovum after impregnation might very well be compared to some changes in the liver-cell when it begins to assume the character of tumour-cell. Thus, both from histology and from general consideration, one is led to suppose that the secondary tumour is produced by an influence emanating from the primary tumour, and that that influence may be compared to spermatic influence. So far, that is a constitutional element in cancer, because these secondary tumours occurred not only in the liver, but in the lungs, in the lymphatic glands, and in various other internal organs. But, while that is the case as regards tumours in the liver, I doubt very much if the same spermatic influence, or any influence of a similar kind, is to be postulated in accounting for primary tumours. I think it is incumbent on us to look for an explanation in the particular regions in which the primary tumours occur, for example, in the mammary gland. The case mentioned by Dr. Greenhow is, I think, somewhat illustrative of that point—the case, namely, where the particular mamma which was not employed in lactation became the seat of tumour. From an examination of a considerable number of mammary tumours, I have been led to form a pretty strong opinion, which, however, I do not like to express definitely as yet, that the process of involution and evolution of the mammary gland will be found to account not so much for the existence of tumour, but for the particular combination of connective tissue and epithelial tissue which so puzzles histologists in investigating those parts. Again, the os uteri and the stomach, which I think, according to the investigations of Dr. d'Espine of Geneva, have been proved to be the most frequent seats of primary cancer, are at the same time distinguished for their remarkable liability to catarrh. It no doubt seems a great leap from catarrh to cancer. Whether there is anything in that idea or not, I cannot say; still, I believe that it is to such ordinary conditions as catarrh or the involution of the mammary gland that we have to look for explanations of tumour occurring in those regions. Whatever is constitutional is developed from the primary tumour after it has attained a certain maturity, and the constitutional element is represented in the recurrence of secondary tumours. It is superfluous, as far as I can see, to refer the whole cause of cancer to a mysterious constitutional element so long as there are so many vicissitudes of the body, vicissitudes of cellular life which may be the point of departure of cellular growths. As regards the mamma, those vicissitudes are remarkable. The process of involution and evolution is very extraordinary in itself. Unfortunately there is very little information to be had about the exact nature of the changes. I am confident that, if we knew more of the exact causes of the cellular changes, we should find many analogies to the different forms of cancer occurring in that gland. Sometimes it is almost purely cellular or medullary, at other times purely fibrillar or connective tissue. In the stomach and os uteri the difficulties are still greater; but when we consider, apart from tumours of the connective tissue series, that most cancers are developed in organs of a secreting character, it is incumbent on us to take into account the fact of secretion. The secretion itself is performed by the agency of cells, and probably by the destruction of cells, and in many cases there may be, besides the vesicular product, a cellular product. That is the line in which my investigations are leading me at present, but my opinions are too immature to be expressed here; I content myself with pointing out the circumstance that there is a considerable body of evidence for the constitutional element of cancer, after it has attained its primary development, and that there is in the body after a certain time an influence which may be justly called the spermatic influence, and which is the cause of tumours in distant parts.

Mr. Rivington: The question of the relation of cancer to the organism may advantageously be narrowed to these two issues. First, is cancer of local or of constitutional origin? Secondly, if it be local, or if it be constitutional, or a mixture of the two, what are the elements out of which it arises? Questions concerning the nature of malignity, causes of degrees of malignity, and geographical distribution, phenomena of cancer in the quadrumana and lower mammalia, and other points which have been touched upon by preceding speakers in a highly interesting and instructive manner, are all secondary and subordinate to these main issues. The whole burden and gist of the present discussion rests on the primary manifestation of the cancerous growth. For, given a mass of the structure of a cancer containing elements rapidly growing, cells and nuclei with locomotive properties, and given the mode of formation of that mass, and all the secondary phenomena, the local multiplications and invasions of tissue, the passage into the blood and into the lymph, the appearance in other and distant parts of the body, the recurrences after removal, the infection of the system, the cancerous cachexia and ultimate death. would appear to admit of ready and intelligible explanation. But that which is the great mystery is how does such a mass come into being? Is it a local or a constitutional manifestation? Before endeavouring to reply to this question, as I must do very briefly, let me again draw the attention of the Society to the extreme importance not only of defining terms, but of all speakers adhering to one common acceptation of those terms. It is also proverbial that confusion of thought and unprofitable argument have arisen in controversies from time immemorial, in consequence of disputants not employing in the same sense the terms expressive of the subjects of controversy. In the debate on tubercle, in the discussion on pyæmia, in another place, much of the advantage of the speeches was lost because the words were used sometimes in a limited, and sometimes in a comprehensive sense; and, as Dr. Payne has already pointed out that the preceding speakers have not employed the terms local and constitutional with the same meaning, I deem it advisable to state the interpretation of those terms to which I will adhere as deducible from the addresses of Mr. De Morgan and Sir James Paget. By local origin of cancer, I understand origin in a part or organ out of the elements of the tissues of the part or some neighbouring part, with the blood of normal constitution, or certainly free from any foreign morbid material. By constitutional origin of cancer, I understand origin in a part not out of (for that might give rise to misapprehension) but in connection with some pervading element, whether that element be of tissue or of blood. Dr. Moxon objected to the use of the term constitutional altogether, because of its ambiguity. Nothing, he said, was so constitutional as that which is local; there is nothing so constitutional as the great toe. No doubt, there is some justice in these remarks, but if we define the sense in which we are going to use the term constitutional, and adhere to that sense, no ambiguity can arise. First, there is cancer of local origin. In reply, let me say that I am a localist and I am not a localist. I am not a localist in the sense in which Dr. Moxon is a localist. Dr. Moxon's formula for the production of cancer was this. There is a healthy body; a cancerous tumour arises in some one part, and from that parent tumour all the secondary cancers appearing in the body are produced. I am not a localist in this sense, because I believe that there are some secondary cancerous tumours which are only secondary in point of time, but not secondary in point of relation to the primary tumour. They would have arisen, even if the primary tumour had not appeared. But I am a localist in this sense, and I presume that most, if not all, of us are localists in this sense, that cancer is a modification of the tissue-elements of the part in which it occurs, or of some neighbouring part. I say of some neighbouring part, to cover such cases as that of an osteoid cancer arising, not in a bone, but in a neighbouring intermuscular space. There is nothing peculiar in the cancer structure. The cells—what are they?—either conceivable or actual modifications of the cells of the part, epithelial cells, connective tissue corpuscles, or white blood-cells, and it may be, in some kinds of cancer, all three of these together. In the stroma, there is nothing peculiar. And so much is this the case, that where we have an epithelioma in a mucous membrane covered by squamous epithelium, the type of the cells is squamous; where the epithelium is columnar, the type of the cancer-cells is columnar. Dr. Moxon told us that rectum-cancer was rectum-tissue, and he has made the interesting observation that the liver-cell developes into a cancer-cell—an observation just confirmed by the preceding speaker. Even Sir James Paget admits in his lectures that there is in cancer no new type of structure—no new law of nutrition. All the heterology consists in the multiformity of elements—the disorderly crowding of elements—the abnormal growth of natural elements. The question then arises—How does this disorderly crowding and this abnormal growth of natural elements occur? I turn for a solution of this question first to the localists, and this is exactly where the localists seem to me to fail. I might illustrate this by one or two passages from Mr. De Morgan's address; but, for the sake of brevity at this period of the discussion, I will refer to only one. In illustrating the growth of cancer from malignant enchondroma, Mr. De Morgan says: "Once admit that the cartilage cell-holding tissue can throw off the laws which regulate natural growth, and I do not see where or why it becomes necessary to invoke any other aid." Of course not. If we admit that the cells have the power of throwing off natural laws, there is no need for further discussion. But cells cannot of themselves throw off natural laws; so long as they are placed in normal conditions, they will obey the normal laws of growth and development, and it is only when they are placed in abnormal conditions that they will develope abnormally. But the whole question under discussion, is what are the abnormal conditions which cause the cells to grow and develope abnormally? Cancer was called by Mr. Hutchinson a rebellion of cells, and no doubt it may be so—but what is it that causes the cells to rebel? He compared cancer to the Celts, whose disposition it was to throw off the shackles of orderly government and to aggrandise themselves; but even the poor Celts would continue peaceable citizens and exhibit the virtues of self-restraint, if it were not that they were constantly supplied with unwholesome moral pabulum from some *fons et origo mali.* What, then, have the localists to offer us in explanation of the rebellion of cells? Nothing but local irritation. Our minds contain a saturated solution of cases of cancer arising from local irritations. We are all familiar with the epitheliomata of lips and tongues arising from the irritation of pipes and teeth, chimney sweeps' cancer from the constant contact of soot, cancer arising from the worry of old ulcers and the fretted scars of old burns, and we might almost extend the list indefinitely. We might explain cancer usually occurring at the beginning and end of the alimentary canal, and missing, as Sir William Gull observed, twenty feet of small intestine, by the facts of the more irritating nature of the secretions of the parts, the longer continuance of their contents in contact with them, and the greater obstruction to their passage at the orifices of the stomach. But, even if we could refer all cases of cancer to some source of local irritation, we should only be one step nearer an explanation; we should still require to know how it was that local irritation could cause an abnormal development of natural elements, since we know that this is not the ordinary effect of injury or irritation. In this failure, therefore, of the localists, I turn to the constitutionalists; and the constitutionalists certainly bring forward some most powerful and impressive arguments to prove the presence and importance of constitutional elements in cancer. Sir James Paget's argument from the peculiar manner of inheritance of cancer, that it is transmuted in transmission, the cancer of the breast in the progenitor becoming the cancer of the stomach in the offspring, or the cancer of axillary glands, or cancer of the eye, or, indeed, of any other part liable to the growth of primary cancer—his argument from the effects of injury in the production of cancer, just as the abnormal results of injury in cases where there is a gouty, scrofulous, tubercular, or syphilitic taint prove the presence of a constitutional taint—his argument from the peculiar manner and frequency of recurrence of cancerous tumours, the secondary cancer not attacking so often the same part as some distant part—all these arguments, involving the facts of multiplicity and indifference of primary seat, did to my mind prove that which I should have thought no one could possibly have denied, namely, that there is underlying all cases of primary cancer some one common element in connection with which cancer arises, whether the element be one belonging to tissue or one belonging to blood. But they do not in the least degree prove what that element is; and, therefore, Sir James Paget had to select his element, and the objects from which he had to select were some specific morbid material, either in the blood or in the tissues, or some morbid condition either of the blood-vessels or the all-pervading nervous system, or the connective tissue—in other words, the lymphatic system. I pass over the blood-vessels, as they are nothing without the blood, and confine my attention entirely to these three objects, a morbid material in the blood or in the tissues, and a morbid condition of nervous system or of the lymphatic system. Sir James Paget said that he could conceive that there might be some morbid material in the connective tissue, but he thought it safer and farther removed from the unknowable to place it in the blood. With all due deference to so great an authority, I should have thought that, if it were necessary to assume the presence of some morbid material, it would have been safer and nearer to the knowable to locate it in the tissues; for the reason, that what we inherit from our progenitors is mainly type of tissue. We may, of course, inherit peculiar blood-corpuscles and peculiar qualitative differences of albumen or fibrin; but what we are chiefly distinguished by is peculiar type of tissue. Moreover, the blood is constantly changing and constantly being purified by the excreting organs, so that any foreign morbid material which had entered the blood would soon be removed from it, either by excretion through the natural organs or into the tissues. On the side of tissue, we have the analogy of hydrophobia, if the fact be correct that a specific morbid material or morbid condition may continue in a part for a lengthened period. But that which is to my mind inconceivable is, that any morbid material whatever could float about in the blood for an indefinite time without giving rise to a manifestation of some kind, that it should remain in the blood waiting for an appropriate nidus, and, perhaps, never manifest itself in the progenitor by appearing at an earlier period in the offspring. The analogy of all morbid conditions of blood is against such a hypothesis. The analogy of hereditary syphilis is against it. Hereditary syphilis is the only constitutional disease out of those referred to by Sir James Paget which we should be prepared to admit to be a hereditary blood-disease. It may, of course, be at first a disease of tissue, but the blood, at all events, is affected soon after birth. And what does hereditary syphilis teach? It teaches us that where the blood is affected at, or soon after birth, a manifestation will take place at an early period, within three weeks or a month, as soon as the altered conditions of nutrition have time to come into play, and this is exactly the teaching of all morbid conditions of blood, a manifestation occurs in a very definite period after the infection. But in cancer the local manifestation may occur in the first decennial period, the second, the third, the fourth, the fifth, the sixth, the seventh, or it may not occur at all, but pass on and show itself, as I said, in the offspring. Another great objection to the view of Sir James Paget of a hereditary morbid blood-material is, that it does not account for the non-hereditary cases of the disease. With all Sir James Paget's great ingenuity and vast experience and opportunities for observation, he cannot bring his proportion of hereditary cases higher than one in three. I should be quite willing to accede to him two out of three, or still more, if he would leave me a margin of non-hereditary cases, and then I would ask him, does cancer originate in non-hereditary cases? It cannot be due to a primary morbid material in the blood. If any material be formed at all, it is either formed by the assimilative organs out of the food, which no one would admit, or it is formed in the tissues; and if it can be formed by the action of the tissues, why assume the transmission of any blood-material at all? But I do not believe in the existence of any foreign specific morbid blood-material either in the blood or in the tissues, hereditary or non-hereditary; and therefore omitting, for the sake of condensation, much that I should have liked to have stated, in reply to Sir James Paget's arguments, and especially in reference to the analogies of gout, scrofula, and tubercle, I will pass on to the nervous system. And, with reference to that, I will only say that, while I entertain the most profound sense of the importance and influence of the nervous system in nutrition, as shown by facts familiar to all which I need not recapitulate, we have not sufficient evidence to prove that the action of the nervous system alone could give rise to a cancer. And now all that there is left is the lymphatic system, which includes all the connective tissues and all the serous and synovial membranes in the body and all the interstices of organs. The lymphatic system has been well described as one great unravelled gland spread throughout the body. I think that we can all understand that a part of this gland might fail, or the whole of it, and fail either temporarily or permanently. The office of this gland is, to my mind, to collect and reconvert into blood those materials in the tissues which can be no longer of functional service in the part, but are still capable of life, growth, and development. Now, supposing that the lymphatic system should fail in its office, that those elements of tissue which ought to be taken up and renewed cannot be taken up but are left in the part, would not a tumour result? I do not pretend to bring before the Society a fully developed hypothesis, and I put the matter tentatively, for I come here rather as a learner than as imparting information, and I should like to hear something about this from Mr. De Morgan when he comes to reply. The considerations which direct my attention to the lymphatic system are briefly these. The constant appearance of cancer in the connective tissue of a part and in the interstices of organs, that is, in the primary part of the lymphatic system, as, for instance, in the testicle and in the breast and in the intermuscular spaces. The proper glandular structure is at first distinct, and perhaps spread out around the tumour. The not very infrequent origin of cancer in the lymphatic glands, and not only in one part, but in different parts of the body; and not only that, but there are instances referred to by Sir James Paget in which the whole lymphatic system has quickly become cancerous. How are you to explain such cases? Either cancer must be a blood-disease, or a failure of the lymphatic system. To this, I might add the frequent recurrence of cancer in the lymphatic glands at a considerable interval of time, perhaps some years afterwards. Again, cancer is a disease of parts, where there have been great activity and constant tissue-changes—alternate increase and retrogression, development and decay, evolution and involution. In such changes, an immense stress of work must be laid upon the lymphatics. Cancer is also a disease of imperfect parts, and very liable to arise where there are frequent and profound tissue changes in consequence of local irritations. An old ulcer that is constantly healing up and breaking out again is very liable to cancer. We may suppose that the lymphatic system becomes worn out. If Sir James Paget would abandon the blood-hypothesis, I believe he would embrace a lymphatic hypothesis. For he said that he could conceive that cancer might be due to a morbid state of the connective tissue, and a failure of the lymphatic system would really account for many phenomena that now puzzle us. It would explain the temporary freedom from and ultimate recurrence of cancerous growth, the subsidence of enlargements of lymphatic glands on the removal of the growths, the apparent cessation of the cancerous constitution, the occurrence of tubercular disease of the lung in a patient who had already suffered and was suffering from a cancer of the breast. It would explain the transmutations in the transmission of cancer; for the appearance of cancer in the stomach or other organ in the offspring where the progenitor had suffered from a cancer of the breast would really be analogous to the inheritance of a fatty tumour, not in the same part, but in some other part of the same tissue. It would also explain the occurrence of cancer late in life when the lymphatic system was worn out, the reappearance of cancer after removal, not in the same part but elsewhere, and the skipping of one generation and passing on to the next. It would explain also the occasional occurrence of the cancerous cachexia before the appearance of the primary tumour, for the lymphatic blood-forming system may have been working badly long before the occurrence of a tumour. And now, before sitting down, I should like to read to the Society a remarkable case quoted from Bruet in Sir James Paget's lectures. It appears to show how repeated irritations of the lymphatic system may ultimately end in a cancer. "A woman had a child at eighteen years of age. The child died when it was a month old, and her breasts were left to the disturbance which usually ensues in prematurely arrested lactation. At the age of thirty-four, she received a blow on the right breast. This was followed by no manifest change of structure, but for some days by severe pains, and then for a much longer time by feelings of swelling and tension at the menstrual periods; at thirty-nine, she received another blow on the same breast, which was followed by an increase of pain. Soon afterwards she was exposed to cold, and then there ensued erysipelatous inflammation of the breast, followed by induration of the mammary gland. This, however, continued without change for four years, but then, after menorrhagia, a tumour appeared in the breast. When this was removed, or partially removed, it was found to be not a cancer, but a cystic tumour with growths from the interior of the cysts. She remained well after this, the wound having perfectly healed, for twelve years more, and in the interval she ceased to menstruate; but now, when she was fifty-five years old, after having a whitlow and inflamed lymphatics of the right arm, another tumour formed in the breast, which had every appearance of being cancerous. It was removed, but it recurred, and ended fatally." In this case, the coming cancer seemed to cast its shadow before. Such a case is, to my mind, an indication that there are many kinds and degrees of failure of the lymphatic system, and that, while innocent tumours may arise from a similar cause, the imports into the tissues being greater than the exports, the cancer may possibly prove to be the highest form of expression of lymphatic incapacity.

Dr. BROADBENT: I came here, sir, with certain ideas which I thought were clear. I thought I had derived from the discussion certain definite notions. The first speaker this evening, Dr. Greenhow, did something towards disarranging those ideas by speaking of hereditary, constitutional, and general, as if these were synonymous terms, as though a constitutional disease were necessarily a general disease. The last speaker has completed my confusion. I believe, however, if one had time and opportunity to analyse his long speech, it would be found that his conclusions are very nearly identical with those expressed by previous speakers; I think he contradicted himself two or three times. He began by saying that, given a disease having certain characters which we recognise in cancer, all the subsequent effects are explicable on the ground of structure. He went on afterwards to say that, notwithstanding the evidences of extension from the original locality as shown by Dr. Moxon at the previous meeting, some few facts of simultaneous evolution are to be set against all these evidences. I think it may be of some little service, before I mention one or two things that I really came to say, to refer back to a few simple deductions from the course of the debate. It has been apparently forgotten by the speakers to whom I have referred, that cancer is not a species but a genus, and that we cannot by a few remarkable cases settle the pathology of the disease. With regard to the term constitutional, I think a very excellent definition of it was given by Dr. Payne, who said that constitutional diseases are those in which internal causes are recognisable as distinguished from external causes. If we examine cancer by this light, we find every phase of constitutional condition. In some cases, the constitutional condition is everything; in some, the local condition, we may say, is everything. Sir James Paget was remarking, the other evening, that chimney-sweep's cancer had almost disappeared, and that it was apparently traceable to the soot derived from a particular kind of coal. Here, at any rate, we may say that the local causation is tolerably clear. A constitutional condition or constitutional disease may be hereditary or it may be acquired; but then, supposing a disease to be constitutional in this sense, that it has its origin in some internal tendency, that does not imply that the internal tendency is a general one; and when Mr. Rivington places the origin of tumours in the tissues, I think it would not be difficult to show that he grants the whole case of the localists, that there is a single spot of tissue which, from some cause or other, begins this process, and it is the character of the changes which are initiated, the retention by the cells of their embryonic characters that constitutes the malignancy, so that malignancy has a local origin, although the tumour may have its source in a general predisposition. One need not go over the ground that Dr. Moxon so well covered in regard to the distinction that exists between a local and a general origin of the disease. We do not find, I believe, that cancer has its origin in a general carcinosis, the cachexia results from the effects of local manifestations. There is one point to which I wish to refer in reference to the transmutation of the form of the disease. As an instance of its being a general disease in the sense of a blood-disease or carcinosis of all diseases which are transmitted hereditarily, there are no more striking instances than those of the nervous system, but we do not find in any diseases of the nervous system which are clearly diseases of tissue, not of blood, that the form is transmitted. In looking back for neurorisis in a family, we should have, as evidence of the neurotic tendency, epilepsy, migraine, neuralgia, insanity, and a variety of other disorders. Sir James Paget, able as his argument was, has made one lapse. In referring to the frequency with which the mamma and the uterus are attacked in the female, and accounting in this way for a greater frequency of the disease in the female than in the male, he said that cancer is a disease of old tissue, and the breast and uterus are old, inasmuch as their function is over long before that of the rest of the tissue. This is clearly making it a tissue-disease, which, if I may say so, is the point at which the localists are aiming, not a general disease. It is not the blood that is old, it is the tissue. It seems to me that that alone destroys the whole of Sir James Paget's argument for the blood-origin of the disease. With regard to the arguments and speculations about the lymphatic tissue, if I were to go into the point, I think I should be at issue with reference to almost every fact that was stated. I do not see why the lymphatic tissue should spontaneously go into disorder or riot any more than any other tissue; besides, the lymphatic tissue will as much require a local cause as any other tissue.

Mr. Rivington: I did not mean to say the lymphatic tissue, but the lymphatic system.

The President: I congratulate you upon the course which the debate has taken, and upon the admirable mode in which the views of the various speakers have been brought before the Society. I think, however, that three of the addresses have stood out "beyond compare"; they were addresses such as any society in Europe might have been proud to listen to. I refer to the address with which Mr. De Morgan opened the discussion; that of Sir James Paget, when he replied to it; and the address of Mr. Simon. In listening to those addresses, whatever might be our individual opinions, we might feel proud that we, too, were members of this Society—that we were English pathologists. We feel proud for the science that has produced three such men. I should not have addressed the Society at all upon this subject, for I have spoken but little, as you know, since I have held this office, because I felt that, as a histologist, I was rather a learner than a teacher, desiring to learn from those actually engaged in the practical working out of this subject; for I, in common with all those who have been long in practice, have ceased, of course, to pursue that special mode of investigation; and I felt that, if one took it up for a moment, one was quite as likely to rush into error as to drop into truth. I have, therefore, sat here quietly listening, often not agreeing, often thinking that those who spoke were wrong, and I may say that I have had the wisdom of my silence impressed upon me by some of the remarks that have fallen from some of the speakers in this debate. I have heard certain statements; I own I am not prepared to deny their truth; that the speakers believe them to be true, I have not the least doubt, but that they are accurate observations, I confess I have a sort of lingering doubt. For example, Dr. Moxon, for whose remarks I have a most profound respect, and who, I am sure, is always listened to in this Society as he deserves to be, stated that he had found the crypts of Lieberkühn in the liver. Now, the crypts of Lieberkühn are not mere cells. I can understand the germs of those cells being there, but that there should be identically the same arrangement—that there should be the basement-membrane there—that there should be a complicated structure with its vessels (and without that it would not be the crypts of Lieberkühn at all), I cannot quite understand. I do not say that he is not correct, but I feel that I should not be a judge if I saw it myself. I should think that I had it subjectively in my own mind, and that I probably projected it on to the field of the microscope, and that I saw it objectively, so that if I saw it myself, I should mistrust my own observations. There are two other points to which I should like to refer. Mr. Hutchinson stated, as an argument in favour of the local origin of cancer, that if surgeons did not believe it, they would cause the death of a great many patients. You are not to believe it because it is true, but because it is necessary that you should believe it in order to operate. Now, I think that is a very bad argument. It is true or false. If it be true that cancer is local, it would still be a question how far it could be removed by operation. That is a question of numbers—a thing to be settled, not by argument, but by fact. The next point was that referred to by Sir William Gull, namely, that the blood is an indifferent substance, and that it does not very much matter what our blood is. Now, against this doctrine I would protest with all my might. I would appeal to any of you who have ever examined the blood in a truly malignant disease—I do not mean cancer, but I mean, for instance, malignant small-pox, where you could not point to a single special lesion of tissue, and where the patient dies within a day or two. I have seen, in such cases, a solution of hæmatosine oozing from the eyes, nose, mouth, chin, and every organ and outlet of the body, and the patient has died without a single spot on the surface. Is that blood unchanged? Is that condition of blood a matter of indifference? Surely every tissue in the body must be dependent for its nourishment on that blood, and if it is in such a condition, it must surely interfere with the patient's life. What do you see, if you put a drop of such blood under the microscope? When I was engaged in this work, I saw repeatedly that the structure of the corpuscles was changed, and not only their structure, but their relation to each other. They ceased to form themselves into rouleaux, and they aggregated themselves into bundles, simple heaps. The liquor sanguinis was dyed with a solution of hæmatosine. Then take the cases of spontaneously coagulable blood—the blood coagulated again and again, until, at last, it coagulates in some part, a channel through which is essential to life, such as the lung, the pulmonary artery, and the brain, and the patient dies. Here there is no change of tissue in the vein, until it is subsequently inflamed from over-distension. I cannot regard the blood as an indifferent fluid. I regard it as a fluid of the highest importance—not merely the corpuscles, but the clot itself. It is not merely the solid particles that are coagulable, but the liquor sanguinis. Take, also, those cases of malignant disease—small-pox, erysipelas, and malignant typhus, where the fibrin scarcely coagulates, where the clots are of the loosest description. I think these facts are sufficient to put aside altogether the statement that the blood is an indifferent fluid. Again, Sir William Gull said he had always taught that, if a man were all blood, he could not have typhoid fever. Now, in the first place, I cannot conceive of so sanguineous a mass; but, if I could, I am not sure that, if the poison of typhoid fever could commingle with that mass, there would not be a change take place in it which would be the first step of typhoid fever. But this I may say, if I could conceive of a man who had no blood, who was all solid, I am quite sure he could not have typhoid fever. If he could not have typhoid fever if he were all blood, and if he could not have typhoid fever if he had no blood, then, as we are made up of blood and solids, we ought not to have typhoid fever at all, and, therefore (as some one said to me), "the worse for typhoid fever". There was another point referred to by Sir William Gull. He said (and I have long said the same thing) that diseases could not originate in the blood, because they originated in the ovum, being communicated by the parent to the ovum, when there was no blood present. There was no blood in the germ, and, therefore, as the germ was impregnated, so to say, with cancer, it could not be a disease of the blood. Well, primarily not. Of course, there is something preceding. But an adipose tumour is a disease of adipose tissue. Now, it is clear that the father has given adipose tumour to the child before it has adipose tissue, and that is all that would be meant, that, in the process of differentiation, the blood became especially the seat. Let me now say a word as to the question of constitutional and local. I think, with many speakers, that a clear understanding of the meaning of these words is all important in the consideration of the question before us. I do think that some of those who have spoken have been a little lax in this matter. I will endeavour to express what I mean. The father, in impregnating the ovum, gives to that ovum a power of development, a power of differentiation (which I cannot admit to be a bad word); and, in differentiating into the various structures of the body, it will be seen that every structure partakes more or less of the qualities of the structures of the parent that impregnated the ovum. When a person has an adipose tumour, you say that the adipose tumour was inherited, but it was only a part of the general inheritance. He inherited the colour of his eyes, the shape of his nose, the height of his body; he inherited the power of growing more or less into the shape of his father, and not only so, but each tissue possessed the power of growing on and on in the same direction in which the parent grew. The father impresses on the child, not merely what is there at the moment of impregnation, at the moment when each tissue is differentiated into that special tissue, but he gives to that special tissue—that is, to that aggregation of tissues—the power of growing on that he himself possessed, and the peculiarities that he possessed. He also conveys to the ovum, or to the child as it subsequently becomes, the date at which it shall die, and not merely so, but the date in which each of the several tissues shall die; that is to say, the order or the date of degeneration, and, what is more, the mode of degeneration. In looking round this room, I see, much, perhaps, to the sorrow of many of us, many bald heads. In how many families do we find persons getting bald about the same time. Now, what is that but the death of the parts that produce hair-follicles? I say, that the mode of developing and dying is given by the parent at the instant of impregnation. There is also given the power of growing and developing in special ways. That is given to all the tissues. It is something common to all, and it is that which we emphatically term the constitution of the person. When, then, I speak of cancer being a constitutional disease, I mean that it is an outgrowth or a local development, possibly in every structure of the body, not merely, as Mr. Rivington would put it, in the lymphatic system, but, as Sir James Paget would put it, in every part of the system. That, I say, is conveyed at the moment. The parent himself may be unconscious that he has it. I may mention a case in illustration of this. An Italian gentleman came to me about twelve months ago. He was dying of cancer of the tongue. He was in the last stage of the disease, and in a most horrible condition. He had been under some one who had promised him a cure. He had then gone to Sir James Paget, who had not promised to cure him, but had told him that nothing could be done. This poor man told me, as well as he could, partly writing it down, that he had been cruelly used by Sir James in being spoken to so plainly. At the same time, he wished me to speak plainly to him. I told him, of course, that he would die. Then he told me the reason why he came to me. He said: "You have forgotten me, but you may remember that I lived at such a place, and that you came to see my child, who died of cancer." Now, that child, twenty-two years before, had died of cancer when two or three years old. I had made a *post mortem* examination, and there was cancer in various parts, disseminated, as it generally is in children. Twenty-two years afterwards, the father died of cancer of the tongue. Now it seems to me that the father had given to the child, not merely a power of growing in his own similitude, but also a power of developing in this particular direction that we term cancer. I have no doubt that most persons present have seen instances of the hereditariness of cancer in their own experience. Dr. Moxon told us that Mr. Birkett had told him, or that he thought he had told him (but he hoped he was not misinterpreting him), that cancer was not hereditary in his experience. Now I think that such a statement cannot weigh for a moment against Sir James Paget's and our own individual experience. I say it is hereditary. It is also true that constitutional conditions are acquired. I suppose I need hardly ask a surgeon here whether he has not hesitated to touch a patient with a knife, conscious that, if he did, the case would go badly. The general health was such that the man would surely die if he were touched. Again, almost every one engaged in general practice, at any rate those engaged in hospital practice among children, will have seen such cases as I am about to refer to. It was not at all uncommon to see at the Children's Hospital mothers who brought children so out of health, that they said: "He never pricks or scratches himself but the place festers." That seems to me to be a general state which is acquired. So I think there is a general and, in this sense, a constitutional appearance of cancer; that there is a general condition affecting every structure of the body; the equilibrium of nutrition is disturbed and the body bursts locally into cancer. Now, why does the patient burst into cancer here and there at many places? We know that local injury will produce it; that a disturbance of nutrition will take place which will eventuate in cancer from a blow. No one disputes for a moment the three propositions that Dr. Moxon advanced; viz., that cancer spreads at the spot; that cancer affects the lymphatic glands next to the primary seat of the cancer; and that cancer often spreads in the course of the veins. He said, if we admitted that, we ceased to be constitutionalists. I do not admit that inference. A woman has an abscess in the breast; the lymphatic glands enlarge in the axilla; they may suppurate or not, or they may subside; they may inflame and subside, and the part be restored to health. Something is absorbed; it is not necessarily pus; there is a disposition in every part to burst forth into cancer when an exciting cause is applied; something is absorbed from the part which irritates a gland, and, in the constitutional state of the patient, cancer is produced instead of abscess or extravasation of blood, or thickening of a tissue. Whether it goes by the lymphatics or the veins is a matter of insignificance: it would not develope into cancer unless you had a primary condition in the patient; viz., a disposition under irritation to form cancer. Reference has been made to spreading into adjacent parts, and it has been said that the cells had wandered from the original cancer into a particular cancer and there developed. Is it necessary to admit that? Mr. Erichsen likened these cells to the Wandering Jew. It struck me at the time that they were, but, perhaps, in a different way, very like the Wandering Jew. Many persons believe in his existence; but I have never known anyone who has seen him. Mr. Simon referred to another form of growth, and he said he had been asked to remove a simple hypertrophy of the skin, which recurred. He then passed down needles, and around each puncture there came new hypertrophied skin. Now Mr. Simon did not suppose, nor would anyone else, that these hypertrophies were due to any Wandering Jew. He said he believed he had not removed the whole part in which the hypertrophic tendency existed. So it is with cancer. Surgeons have not removed the whole part in which the cancerous tendency existed, and the irritation, whatever it might be, was sufficient for the renewal of the growth. At any rate, that is a possible explanation. One thing struck me very much. Where the needles were inserted, there the hypertrophied tissue occurred. That is exactly what you find when you have cancer. I had a case in the hospital not long since in which a man had a number of cancers diffused throughout the body and in the peritoneum. There was fluid in the abdomen, and a great collection of gas in the intestine. The intestine was punctured twice with a fine needle, and the punctures after death were found surrounded with a cancerous growth. I think Mr. De Morgan has mentioned a similar case. It is common enough. It seems that the question of extirpation will still be left to the surgeon. It will not be decided *à priori*. These secondary growths, according to the view I have taken, may be developed from a something, not necessarily a germ—a something taken up (which irritates the part) in consequence of the constitution having this peculiarity.

Mr. DE MORGAN: I am greatly gratified at the result of the paper which I had the honour of bringing before the Society. The discussion which has taken place, I think, has been most instructive and most interesting. The ground gone over has been very vast; and you can well understand that, in the few minutes which remain, I can hardly enter upon any one of the points to which reference has been made, for there is not one of them that has not occupied more time than now remains to me to refer to the various points that have been adduced. I may mention, however, that my feeling throughout has been this—and I felt it especially during the time when Sir William Jenner was addressing the Society in those admirable remarks that he has just made—that all that could be said with regard to the constitutional nature of cancer, applied equally to the constitutional nature of any the smallest growth that can be found in the body. Whatever argument he could advance with reference to cancer being a peculiar constitutional disease, I would advance with reference to a wart or fatty tumour being a constitutional disease. As regards the hereditariness to which allusion has been made, I may say that I perfectly agree with Sir James Paget, that cancer is much more hereditary than is generally supposed. That fact is only in accordance with what we find in other tumours. Curiously enough, this morning I had a case illustrating three of the points alluded to in the paper. A lady came to me with cancer; she had cancer on the maternal side; she had a number of atheromatous tumours on the head; she inherited them on the paternal side, and she had a host of those outgrowths which I alluded to, as being so prevalent in cancerous patients, but which never develop into cancer, all over the arms and the side of the chest. She had a number of them before, but since the cancer came out she had a development of a dozen or more of these moles. Now, why should you assume any special condition as connected with cancer which you would not with regard to these other growths? Surely the same argument will apply to the one as to the other. It seems to me that all that Sir William Jenner said comes exactly to that point. You have a constitutional tendency. That is to say, you have a certain condition of tissue under which certain changes will readily take place, but not as Sir William Jenner says, in all tissues; because we find in cancer that the original disease will only spring up in certain parts, not as stated by Mr. Rivington, or very rarely, indeed, in the lymphatic system in the first instance. It is extremely rare to find primary cancer beginning in the lymphatics or the lymphatic glands. It begins externally to them—in the lymphatic spaces, for aught I know, but I know little or nothing about that. Then, with reference to the observations made by Mr. Simon as to the propagation of cancer; I think Mr. Simon agrees with me that in the first instance it is local, but he thinks that there is a certain spermatic influence. The Society will remember, however, the statements made by Dr. Creighton, and also the statement of Dr. Moxon, which was quaintly put, but still, I think, to some extent correctly, that he had seen rectum-cancer in the liver: that is to say, that whatever the condition of primary cancer may be, you find a tendency towards that same form wherever the cancer disseminates itself. That fact shows that there is not what we should call a spermatic influence, because we mean by a spermatic influence what is understood with reference to the union of the particles of the cells, that the two particles come together, one impregnating the other, the resultant being the resultant of the two. Now, surely, in the case of osteoid cancer, or cartilaginous cancer, or any other form of cancer, if you find that it springs originally as osteoid cancer, that you have it afterwards developed in the liver, in the lungs, and in various parts of the body, still maintaining the characters of osteoid cancer, you would not say that a spermatic influence had been exercised. If it were, you would get the characters of the new tissue in which it was planted—the appearance of the liver-cells, the appearance of the tissue of the lung, or whatever part it might come into. But you do not find that. I do not mean to say that you will always find that a cancer is exactly like the primary one, but you do not find it taking on the conditions of the parts into which it spreads. Therefore, I should rather believe that it was an outgrowth of the part, that it comes into a place where it is arrested, where it is fit to grow, and where it grows, and grows of itself. It is of the nature of a parasitic growth. If you have a parasite attached to a part, it will grow, and at the expense of the part, but not spermatically: it does not affect the tissue in which it lies, so as to bring that into its own growth, but it grows at the expense of the tissue, and multiplies. That I believe to be the case with regard to cancerous growth. As to cancerous growth not being dependent on the general system, I may mention that Sir James Paget misunderstood very much what I said. I say that the general impression is, that the constitution is involved, and that by constitution we mean an all-pervading something. I do not admit that the constitution, as I understand it, is just the same as a constitution that would produce a wart, or peculiar features, or the like. A person is born of a family with a tendency in the individual tissue to disease: that is, not all over the body; and if it do not appear in the disease here, it must appear somewhere else. I do not admit that I believe there are tissues of the body that will take on cancerous action, that they have it in them, that they are born with that tendency, just as persons are born with a tendency to warts, or fatty tumours, or anything else. Mr. H. Marsh brought forward, as an illustration, those interesting facts in pathology, showing that a person gets a blow upon the leg, or a blow upon the arm, and cancer follows. He says you cannot conceive that a cancer was merely localised in the spot—that the blow happened to come upon the very spot intending to be the seat of cancer. Certainly not. I say that any part of the osseous tissue of the subject would be liable to become the seat of cancerous disease under injury. It is almost only in the osseous tissues that we get these rapid growths in the cancer after injury. We know that the myeloid tissue generally is very uncertain in its growth. It is more likely to be attacked with an irregular development than almost any other part in the body. Now, what do we find with regard to those facts, mentioned by Sir William Jenner, in connection with Mr. Simon's remark? A young lady has a tumour in the breast; you cut it out; the skin is apparently perfectly healthy; it is healed, but you find that a cheloid forms; you cut that out, and a cheloid forms again. Wherever you put a needle, a cheloid forms. You may cut other parts of the body, and a cheloid will show itself; but in others, again, it will not. You will not say that there is anything here, peculiar to the whole constitution of the patient, that determined the cheloid in that particular situation; it is a mere peculiarity of local development. I may mention a case which will illustrate this very point. A man was brought to the hospital with a compound fracture of the radius, and he came four or five days after the fracture, with what may be called putrescent cellulitis. The arm was enormously swollen. There was gas in every part, having a filthy odour when let out, but the appearance was so peculiarly healthy, that I would not interfere with it. His pulse was 84. He had a clean tongue, and ate well, and slept well, and in himself he appeared to be wonderfully well, notwithstanding this enormous disease of the arm. By and bye, however, his carpal bones became separated, and were taken out. The ulna exfoliated, and was taken away. All this time his general health was good. All at once he was seized with peritonitis. I thought it was pyæmic peritonitis, and I was afraid that we had carried the experiment too far. He died, and it was found that the peritonitis was due to a portion of the gut having become entangled in some band arising from a peritonitis which he said he had before. But what was the fact with regard to the other condition? The abdomen was full of cheloid cancer. Here was a man with cancer developed in the abdomen, and with a great injury to the limb going on for a couple of months, and yet who was so well that I refused to amputate. Now, where was the general condition there which determined the cancer? Surely, you would say, here you have a disease tending to a certain part of the body, but not pervading the body at large; the body at large may be perfectly free from all predisposing form of cancer. I say that is a strong case; it is a case, perhaps, that you would not meet with once in a hundred years, but there it was as a fact. The argument I made use of with regard to the existence of cancer in females was not satisfactorily answered by Sir James Paget. Dr. Crisp, at the last meeting, said that I was wrong in my conclusions. I may be; but I know this, that of the 500 cases recorded by Sir James Paget, 330 occurred in women, and there was no uterine case mentioned. Now, if you add the immense number of uterine cancers, which are certainly as frequent as breast cancers, the number will come to pretty nearly what I said. Sir James Paget says that it is because, in the female, this particular tissue is so liable to change. It is true that the breast-tissue is liable to great variation. But although we frequently find a breast inactive in which cancer appears, how frequently do we find it occurring in an active breast. And even in the breast in which cancer exists, it is not in the whole breast, but only in a part of it. If the breast be a retrogressive organ, and you find cancer developed because it is retrogressive, why is it that you do not get cancer developed in the opposite breast, when it occurs secondarily, when the opposite breast has been going on two or three years beyond the ordinary period, and is, therefore, in a state of greater retrogression? Surely, we should expect to find, if the retrogression had much to do with the matter, that the second breast would be as frequently the seat of secondary affection, as the first breast was of the primary. But we never find that. I think that is an answer to Sir William Jenner, when he talks about the mode in which cancer is distributed in certain parts. You do not find it in parts where you would expect to have it, but you find it spread here and there at long distances, in the lung, or in the liver, or in the leg, on the opposite side, or in any situation you please, except—where? Except in situations in which you do find primary cancer almost invariably, that is, in the uterus or in the mamma. The mobility of cancer, as being the source of secondary deposits, I suppose, is pretty generally admitted. Mr. Arnott's observations on that point, supported as they are by many members of the Society, I think, go to show that mobility alone will not account for them. What do we find with regard to the most mobile disease we have? The most mobile disease is melanotic sarcoma, a form of disease where you get a secondary outburst, after the primary one, over every part of the body, deposits taking place in dozens, or twenties, or fifties. One of the best pathological observers, has discovered that, in that form of disease, the corpuscles of the blood, and the fluid of the blood, contain dark-coloured pigment matter. Evidently the blood, which is thus dispersed over the body, is diseased blood. Now, I say you cannot argue from that that cancer is a blood-disease. It is diseased blood, just as syphilitic blood is diseased blood. Syphilitic blood is not primarily diseased blood, unless it is born in the person. A person has syphilis; the blood becomes diseased, and if you inoculate it, you will produce disease in another person, or get an outburst, or something of that kind. It is not a growth. It is a deposit, showing that there is mal-nutrition in some parts of the body. That is a secondary condition, dependent upon the primary inoculation. Here you get melanotic disease, in the first instance, before the secondary deposits take place. Examine the blood, and none is found. But if you come to interfere with that, and you get this matter carried into the system, you get it dispersed anywhere and everywhere. It grows by reproduction of the same disease as was originally inoculated in the blood; that is to say, it grows as melanotic sarcoma. If you compare that with true blood-disease, with disease in which the blood becomes diseased by inoculation, what a wide difference there is. In the case of melanotic sarcoma, you get the melanotic sarcoma developed everywhere; in the case of syphilis, you get here a pustule, and there an eruption, over the body; you get a deposit of something here, and, in another place, an ulceration and a whole host of things, not by any means like the primary disease that was inoculated, but a number of phenomena, connected evidently with a diseased condition of the blood. In these cases of syphilis you may have, as Sir James Paget says, a total freedom from all disease for a long period. But the patient is not free from disease. For, if offspring be begotten, the chances are that the child will be ill developed. Something has been propagated that interferes with the nutrition of the offspring, and the offspring will be syphilitic. You do not find that in cancer. A question was asked the other day, as to whether, in the case of children of parents having cancer, there was anything analogous to what was found in syphilis. Certainly not. I have seen many cases in which the patient has died of cancer, and children have been born while the cancer was progressing. I remember the case of a child, whom I removed by the Cæsarean operation from a woman who had cancer of the uterus. The child was born perfectly healthy, though the uterine cancer was going on around the very situation in which the child was developed. You do not find that in syphilis. If you have syphilis developed in the body, there will be something in the growth of the offspring indicating that the poison is there present. I must confess that the whole course of the argument has tended rather to confirm me in the view, that originally cancer is a local affair, in the same sense that any peculiarity that we have in the body is local. It may be determined by some primary conditions of growth; but of that we understand no more than we understand the reason why bones are developed in certain forms, and why muscles are developed in certain forms. It is impossible to go into that. But there is a something in the tissue itself, I believe in the whole range of the tissue; it may be throughout the bones, or it may be throughout connective tissues, or it may be throughout any of the parts in which we have disease tending to develope primarily. If you have a cancerous mother, you have cancer not developed in the breast where it existed in the mother, but you may have it in any other part of the tissues in which a similar structure is present. A parent has a fatty tumour of the shoulder, and the offspring may have a fatty tumour in the arm or leg; but there is nothing in those persons that would necessitate the formation of cancer in some part or another. Suppose, where there was an original tendency to cancer, the breast was removed before the cancer was developed, I believe there is no special reason why cancer should develope at all. You do not know of the early existence of cancer in the uterus or the breast, because, long before the persons themselves are aware of it, the cancer has advanced, and disseminates itself throughout a wide range. I beg now to return my best thanks to the Society for the manner in which they have received this paper. The remarks that have been made respecting it will do what cancer itself does—they will germinate (spermatically, or in some other way) in the minds of those who have been paying attention to the subject. No doubt, as Sir Roger de Coverley says, "There is a great deal to be said on both sides"; but I trust that the result will be, that we shall arrive at some important truths in regard to this subject, and every truth that we do acquire will have its bearing, sooner or later, upon actual practice. I do not mean to say that our views will lead us to a method of curing cancer, but we shall be led in the direction in which we can apply remedial agents, or, if not, we must fall back upon the only alternative left us, that of removing the disease as soon as possible after we have ascertained its presence.

The debate then terminated, and the Society adjourned.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 14th, 1874.

C. J. B. Williams, M.D., F.R.S., President, in the Chair.

THE ETIOLOGY OF BRIGHT'S DISEASE AND THE PREALBUMINURIC STAGE. BY F. A. MAHOMED.

[*Communicated by* W. H. Broadbent, M.D.]

Two signs were described as indicating a condition of high tension in the arterial system; viz.: 1. Sphygmographic tracings, which possessed the following characteristics:—(*a*) considerable pressure required to extinguish the pulse; (*b*) prolongation and undue sustension of the tidal wave; (*c*) well marked percussion; (*d*) small amount of dicrotism: 2. A blue reaction obtained with the guaiacum test for blood, if delicately applied, when no albumen or blood-cells could be discovered by the microscope, spectroscope, or nitric acid test. The mode of procedure, the reagents and paper employed having been previously tested, was as follows: (*a*) dip a slip of white blotting-paper in the urine to be examined; (*b*) evaporate the urine by drying the slip over a spirit-lamp; (*c*) add a drop or two of tincture of guaiacum, and allow time for evaporation; (*d*) add a drop or two of ozonic ether, and allow the paper to become thoroughly dry before the reaction is judged. It was then stated, from cases of so-called "inflammatory Bright's disease", occurring during the convalescence from scarlatina, that the series of pathological events took place in the following order:—1. A poisoned condition of blood: by uric acid or other effete material—as in scarlatina, measles, erysipelas, pregnancy, or a severe chill; 2. Arrest of the action of one of the excretory organs; 3. Increase of tension in the arterial system; 4. Transudation of the crystalloids of the blood through the kidney; these conditions constituted the prealbuminuric stage, and were easily remediable; 5. Albuminuria; followed by dropsy and the usual symptoms of Bright's disease; 6. Changes in the kidney and other excretory organs—namely, the intestinal tract and skin—produced by acute, and afterwards prolonged, congestion and high arterial tension; viz., (1) exudation and plugging of tubules or follicles; (2) fatty degeneration and absorption; (3) contraction. Puerperal eclampsia and albuminuria were accounted for by the predisposing condition of high tension in the arterial system existing during pregnancy. Poisons—such as gout, lead, or alcohol—produced a similar but less intense condition of increased arterial tension and excretory congestion; they also produced chronic changes, though of a different character, their onset being gradual, and not sudden. The first two changes of the acute condition—namely, exudation and plugging of tubules, followed by fatty degeneration and absorption—did not exist; they might, however, at any time be produced, and symptoms of the first stage might then supervene. The name "inflammatory Bright's disease" was discussed: the changes were ascribed to "*congestion* under high pressure"; while a condition of inflammation was denied. The term "Bright's disease" was considered too indefinite. A suggestion was made that the terms "acute" and "chronic excretory congestion" were less erroneous than those in general use; while the amyloid and true fatty kidneys were always included in the forms of degeneration to which they each belonged.

Dr. Broadbent had witnessed Mr. Mahomed's investigations, and could bear witness to the facts. The paper was one of very high physiological and clinical interest. It showed that the blood-tension commenced in the capillaries, and that the arterial tension was secondary, and to some extent resistant. The clinical value of Mr. Mahomed's researches had been shown in cases of the prealbuminuric stage with high tension, threatening albuminuria and inflammatory change in the kidney, where the condition was relieved by the use of purgatives or the hot pack. He had no doubt that, by following up the investigation, many cases of albuminuria after scarlatina would be prevented.—Dr. Dickinson thought that Mr. Mahomed insisted too strongly that the kidney was affected not solely but concurrently with other parts. The disease of the kidney had the priority, and was more certain in its occurrence. He had seen many cases of scarlet fever followed by dropsy, without constipation. He did not agree with Mr. Mahomed in classing two forms of renal disease under the head of excretory congestion. Many forms of Bright's disease were preceded by blood-poisoning; but, in the granular kidney, other causes must be admitted, such as hereditary influence, or gout, or lead-poisoning, or alcohol. The change might also be due to congestion, and not necessarily to the presence of any poison in the blood.—Dr. T. L. Brunton thought that the paper was of value in directing attention to the part taken by increased blood-pressure in producing albuminuria. The presence of albumen in the urine was connected with conditions of the blood and with conditions of the kidney. The constant eating of eggs sometimes caused albumen to appear in the urine; this was because the albumen passed readily through the kidney; but the condition was not one of true albuminuria. Or a similar condition might depend on the presence of a peculiar modification of albumen, namely, that described by Dr. Bence Jones in connection with mollities ossium. Except in these rare cases, there was no proof that albumen in the urine depended on a modification of the blood; for its explanation, we must look to the kidney, its vessels or its tubules. Albuminuria was often ascribed to disease of the epithelium of the tubules; but fatty degeneration of these cells might occur without albuminuria. Again, in numerous cases, the kidneys might be extensively diseased and yet no albumen might be present in the urine. Increased tension in the vessels might be expected to produce albuminuria, but it did not do so always. Although there could not be high tension in the kidney without high tension elsewhere, the tension might be low in the kidney whilst it was high in other parts, as under the action of digitalis. Too much importance, perhaps, was sometimes attached to the presence of albumen in the urine. From Mr. Mahomed's results, it seemed that, if the kidney were not the subject of extensive disease, the discharge of albumen in the urine might be lessened by derivative medicines applied to the intestines or to the skin. Although purgatives might clear away noxious matters, they probably acted also by relieving arterial tension, by diverting the blood from other parts of the body to the intestine.—Dr. Sibson commended the paper as one interesting and valuable, on account of the facts contained in it. The part of the paper relating to the lessening of arterial tension by means of purgatives was among the most valuable. It could not, however, be said that purgatives prevented the occurrence of Bright's disease in the cases described. He believed that the arterial tension was greatly increased during the dicrotic rise in the pulse.—Dr. Fothergill said that Dr. Frerichs had tied the aorta, and had found no albumen in the urine, but much water; while, if the renal veins were obstructed, there was much albumen. In some cases of disease of the heart, there was high arterial tension without albuminuria; the presence of albumen in the urine was a serious matter in heart-disease.—Dr. Drysdale referred to a case of albuminuric retinitis in a young woman who had had amenorrhœa six years, and said that arterial tension might be supposed to be concerned in the case.—The President complimented Mr. Mahomed for the ingenuity and importance of his investigations. He had long ago observed cases such as those described by Mr. Mahomed, in which, before the appearance of albumen, and probably also before the appearance of hæmatosin, the urine was scanty and high-coloured, the pulse being tense and attended with a reduplication of the first sound of the heart. This condition he had noted in the very early stages of kidney-disease, and had been in the habit of predicting from it the occurrence of albuminuria. He believed that the presence of excrementitious matter in the blood excited the arteries to contraction and to increased arterial tension; the capillaries had no power of obstructing the flow of blood. Under any treatment that relieved the circulation in the kidney, such as purgatives, the tension and reduplication disappeared and relief was produced, unless the disease in the kidney had gone on for some time. Albumen in the urine might be produced by congestion; but this was different from albuminuria connected with the natural secretion of the organ. When this was present, and was not relieved by the remedies referred to, it was a sign of a passing beyond congestion into structural disease.—Mr. MAHOMED replied, and the meeting adjourned.

CLINICAL SOCIETY OF LONDON.

FRIDAY, APRIL 10TH, 1874.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

Neuralgia treated by Nerve-stretching.—Mr. CALLENDER read the notes of two cases of neuralgia. In the first, the affection, which involved a stump, seemed to be due to neuritis connected with symptoms of spinal cord irritation. The patient had undergone several operations for the relief of his symptoms, such as amputation and the removal of portions of nerve; and, finally, the median nerve was forcibly stretched by pulling it down from the brachial plexus. No local trouble resulted from the operation; the patient was freed from the pain, and the symptoms of spinal irritation ceased.

Neuralgia treated by Amputation.—In the second case, the affection of the nerves, giving rise to persistent pain and defective nutrition, was entirely peripheral, and was due to the irritation set up by the entanglement of branches of the ulnar and median nerves in the thickened tissue, resulting from diffused suppuration in the hand. No evidence existed of spinal irritation; and, as the trouble seemed to be dissociated from any central cause, amputation of parts of the hand was resorted to, for the purpose of removing the indurated tissues which compressed the nerves. By this procedure, the patient, who had suffered for nearly two years, and who was admitted to have his arm amputated, was relieved of his pain, and preserved the thumb, index and middle fingers of the hand.

In both these cases, details were given of the symptoms, and their influence as determining the treatment was referred to; and, with regard to the stretching of the median nerve, the cases were mentioned in which a like treatment had been employed.

Mr. HENRY LEE, who recognised one of the above patients as a man who had been under his own care in St. George's Hospital, remarked that the first case reminded him of the case of a young woman whose elbow-joint was opened, and who had intense pain, for which the arm was amputated. Pain returned in the stump, and the ends of the nerves were then cut out; pain recurred, and the nerves were divided. The muscles of one side of the trunk then became contracted, so that the patient was twisted to one side. The contortion of the spine continued, but otherwise the patient eventually did pretty well. Mr. Callender's case, in fact, resembled a case of hysteria in a female.—Dr. BUZZARD said that he had treated a case of neuritis of the brachial plexus, in which, although the affected arm was blue and cold to the touch, the thermometer in the axilla of that side was found, by repeated and careful observations, to mark a temperature of 1° Fahr. above that of the other. He suggested that a comparison of the temperature might sometimes prove useful in diagnosing neuritic pain from that dependent upon hysteria.—Mr. BARWELL asked if Mr. Callender was correct in calling the disease neuritis; for, how should the mangling and stretching of such an inflamed part benefit the inflammation?—Mr. CALLENDER remarked that the temperature was taken in each axilla twice daily during the progress of the case, and no difference was discovered. As regarded the patient originally in St. George's Hospital, it was first an acute case of thecal inflammation, and the neuralgic symptoms arose after the patient left Mr. Lee's care, from consolidation of the tissues around the inflamed part. Cases of surgical stretching of affected nerves had been amply illustrated by several writers. Billroth had had a young man under his care who had injured his sciatic nerve, and was subsequently an epileptic: the surgeon cut down and handled the nerve and cured the neuritis. Mr. Callender narrated other instances of nerve-stretching.

Recurrent Tumour of the Breast.—Mr. WARRINGTON HAWARD read notes of the following case. A woman, aged 64, had had a tumour removed from the right breast in 1860. It recurred in 1863, and was again removed. In 1867, another large tumour formed, and the whole breast was removed. In the beginning of 1873, a tumour appeared at the outer end of the scar of the last operation, grew to a large size, and ulcerated. The patient was then admitted into St. George's Hospital, and as much of the tumour as was possible removed by Mr. Rouse; but it could not be extirpated, owing to the implication of the chest-wall in the disease. The patient died, and *post mortem* the tumour was found to have invaded the intercostal muscles, and projected slightly into the pleural cavity, pushing the parietal pleura before it. The contents of the axilla were natural, and no other disease was found in the body. The new growth was soft and easily broken down, of a pale red colour, interspersed with irregular areas of yellow and rusty brown colour. Microscopically, it had all the characters of a myeloid tumour. A case of Sir James Paget's was related, of a myeloid tumour of the breast occurring in a member of a cancerous family, in whom, five years after removal of the tumour, a hard cancer of the breast appeared. Reference was also made to another case related in Sir James Paget's *Lectures on Pathology*. Thus it was shown that there might be a tumour with all the clinical characteristics of recurrent fibroid, containing myeloid cells; and, secondly, a myeloid tumour, followed, after removal, by a recurrent growth having all the characters of cancer. It was shown also that myeloid tumours frequently exhibited all the signs of malignancy; and that it was an error to assert, as Mr. Gray and others had done, that myeloid tumours are perfectly innocent. Finally, it was urged that, if we would make our definitions of disease practically useful, we must beware of making them too exclusively anatomical; the significance of the anatomical characters needing to be determined by the light of the clinical history. —Mr. PICK'S experience would say that, clinically, from the existence of a tumour, one could not affirm whether it was malignant or not. In cancerous tumours, also, one undoubtedly saw various degrees of malignancy. He knew a case of sarcoma mammæ, of six years' standing, where the patient died from empyema, but without any cancerous infiltration of the internal organs; also a case of epithelioma of the tongue which had terminated fatally in less than six months after its first appearance. There must apparently be some connection between cancerous and other tumours, especially the sarcomatous.

Cases of Sterility after Lithotomy.—Mr. TEEVAN related four cases. 1. A hall-keeper, aged 44, was cut by the lateral operation at a provincial hospital twenty years ago. He married three years afterwards; but his wife, although his junior, had never had a child or a miscarriage. The patient stated that he had no emissions during connexion. 2. A painter, aged 47, married when thirty-one years old. Lateral lithotomy was performed on him three years afterwards. His wife bore him two children before, but none subsequently to the operation. He had quite lost the faculty of emission during coitus. 3. A shoemaker, aged 45, was cut by the lateral method when two years old. He married when 25; but his wife, although his junior, had had no child or miscarriage. The patient had no emissions during connexion. 4. A shipwright, aged 45, had lateral lithotomy performed on him when four years old. He was married at the age of 23, his wife being his junior. She had borne him no family. He had no emission during coitus. The cause of sterility was very clear; for lithotomy, as usually performed, involved a laceration of the floor of the prostatic portion of the urethra, and obliteration of the orifices of the ejaculatory ducts. Sometimes the prostate split in the roof, and the infirmity was obviated.—Mr. HENRY LEE desired to know how the right ejaculatory duct could be affected when lateral lithotomy was performed on the left side.—The PRESIDENT wished to learn if Mr. Teevan's cases of lithotomy had been followed by the infirmity under notice.—Mr. TEEVAN, in reply, stated that practically the ejaculatory ducts opened at the same spot and were affected by the same cause. His own cases of lithotomy had occurred at the extremes of life, with one exception, where the young man married after the operation, and had a family. Of his early cases of lithotomy, some were perhaps injured because in those days he was chary of cutting freely; he now made a much more free incision, so as to avoid laceration during the withdrawal of the stone, and the result was much more satisfactory. Those surgeons who were noted for cutting freely in lithotomy were the most successful operators.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, FEBRUARY 11TH, 1874.

SAMUEL GORDON, M.B., in the Chair.

DR. T. W. GRIMSHAW exhibited a described Casella's Spirometer.

Cerebro-Spinal Meningitis treated by Hypodermic Injections of Morphia.—Dr. JAMES LITTLE reported the following case. Isabella S., aged 12, was admitted to the Adelaide Hospital on December 20th, 1873, on the fifth day of her illness, which had set in with severe frontal headache, followed by vomiting. When seen, she was flushed, very drowsy, complaining, if roused, of intense headache and intolerance of light. The ophthalmoscope showed hyperæmia of the retinal vessels; there was slight subsultus, the tongue was coated with a creamy fur, the bowels were rather constipated, pulse 130, temperature 104.8 degs. The headache was relieved by local depletion, cutting off the hair, and a dose of calomel. During the next three days there was occasional vomiting, with throbbing of the carotids, and slight subsultus; and, on December 25th, marked retraction of the neck was observed. Two days later, she seemed to be sinking; the retraction continued, and the surface was very hyperæsthetic. Large sloughs formed over exposed parts. The extremities were cold. Bromide of potassium, which she had been taking, was now discontinued, and a hypodermic injection of morphia with atropia was ordered as often as was necessary to keep her quiet; nourishment and stimulants being freely given. The hypodermic injections were continued for eight days, the general dose being one quarter of a grain of morphia with $\frac{1}{120}$ of a grain of atropia three times a day. On January 4th, all the symptoms lessened, but a dose of morphia was given each night until January 8th. The patient made a perfect recovery, although it was protracted, owing to the bed-sores. Dr. Little regarded the case as one of subacute cerebro-spinal meningitis, and mentioned that, in a very severe case in the great epidemic of 1866-67, he had given a full dose of Battley's sedative liquor by the rectum with the best effect. He concluded by referring to Stillé's strong recommendation of opium in cerebro-spinal meningitis.—The Chairman, Dr. MacSwiney, Dr. Grimshaw, Dr. W. G. Smith, and Dr. Darby, took part in the discussion which followed.

A Case of Hysteria.—Dr. MacSwiney detailed the following case. A. D., a young woman, aged 24, was brought to the hospital, at 5 A.M., December 17th, 1873, in a state of insensibility. Half-an-hour later, she was seized with a terrible fit of convulsions, which recurred again and again. During the attacks she seemed to be, but was not, insensible. Similar attacks occurred at intervals during the next six weeks, and treatment had little, if any effect. There were trifling loss of power in the lower limbs, retention of urine at times, obstinate constipation, marked tympanites, pain varying in site, and hyperæsthesia in the lower extremities. She was very hypochondriacal. She suffered also from "hysterical anorexia", as described by Lasègue and Sir W. Gull; but at other times ate voraciously. Nausea and hæmatemesis were present at one period. Leucorrhœa was the only uterine symptom. Dr. MacSwiney was disposed to ascribe this patient's hysteria to psychical rather than to physical influences. Carefully brought up, she had early fallen a victim to seduction, and finally abandoned herself to a life of prostitution. The miserable state of her mind, brooding over her wasted life, developed the morbid state of her nervous system, which culminated in hysteria.—A discussion followed, in which Dr. M. Eustace, Dr. Foot, Dr. C. F. Moore, Dr. Gordon, and Dr. H. Kennedy, took part.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

F. Moon, M.B., President, in the Chair.

Friday, April 10th, 1874.

Intestinal Obstruction: its Causes and Treatment. By W. W. Wagstaffe, B.A., F.R.C.S.—Mr. Wagstaffe founded his paper upon a case of intestinal obstruction recently under his notice, in which there had been total occlusion for seventeen days, with vomiting and increasing abdominal distension. The obstruction was caused by a hard tumour growing from the left sacro-iliac synchondrosis, stretching across the pelvis, and involving the anterior wall of the rectum. Some other portion of the gut was probably also involved; for the hand could be passed into the rectum (after the manner proposed by Professor Simon of Heidelberg) above the tumour, and the intestine was found empty. Mr. Wagstaffe opened the intestine in the right groin, and the patient had progressed well. After insisting upon the importance of thorough rectal examination, and pointing out the dangers to be avoided in the manipulation, Mr. Wagstaffe examined carefully the means at our disposal for determining the locality of the disease or mechanical defect, and quoted cases which had come under his personal observation bearing upon the various symptoms of importance. He next discussed the kinds of obstruction and their causes, bringing forward illustrative cases; and then dwelt upon the differential diagnosis of these. Lastly, he examined the various kinds of treatment suitable in intestinal obstruction, including gastrotomy, colotomy, enterotomy, inflation, and medicinal means. He ended by stating the following propositions. 1. The symptoms of obstruction, though sometimes obscure, may generally be determined in time for the adoption of curative means. 2. The causes of obstruction can generally be determined by the history of present and past illness, and by thorough external and internal examination; and manual exploration of the rectum is perhaps the greatest advance in our means of diagnosis. 3. The locality of the disease may be generally discovered by use of the means of diagnosis, particular attention being paid to internal examination by the rectum. 4. The early treatment, whatever the cause, will be the same—by opium and belladonna, by rectal distension, and, in the majority of cases coming early under notice, by careful external manipulation. 5. After the failure of such simple means within a reasonable time, and in the presence of general obstructive symptoms, operative measures should be adopted without delay. 6. If the cause of the obstruction be known and in reach, and not removable, colotomy should be preferred. 7. If the obstruction be beyond reach and unknown, tapping the intestines may be sometimes serviceable; otherwise, gastrotomy or enterotomy must be done. 8. Gastrotomy, by at first a limited incision for the purpose of exploration and removing mechanical obstacles, is likely to be the most beneficial operation. 9. Above all things, it is most necessary to avoid delay; for conditions of strangulation, at first relievable by operation, soon become unrelievable.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

Postural Treatment for Extensive Distension of the Intestines with Gas.—Dr. C. T. Parkes recommends (*Chicago Medical Journal*, March 1874) that what he terms the "postural treatment" should be tried in all cases of tympany, especially in those complicating gestation. A large enema should be given, so as fully to empty the lower bowel; the patient should then be turned with the face downwards, so as to throw the weight of the body on the distended abdomen; the thighs being flexed on the abdomen, the patient should be directed to make straining efforts, which are usually followed by the escape of large quantities of gas.

PATHOLOGY.

Cholesteræmia.—In a paper read before the New York Academy of Medicine (*The Medical Record*, December 1st, 1873), Dr. Austin Flint, junior, discussed the condition which has been called cholesteræmia, and concluded that cholesterine is an excrementitious substance, produced chiefly by disassimilation or physiological wear of brain and nervous tissue; that it is taken up by the blood and carried to a special organ for its elimination, and that that organ is the liver. In the liver it is separated from the blood, and finds its way into the bile discharged into the small intestines, and is there changed into stercorine, which is discharged from the body at about the rate of ten grains each twenty-four hours. In certain cases of disease of the liver, accompanied by grave nervous symptoms, there is an accumulation of the cholesterine in the blood, giving rise to cholesteræmia.

SURGERY.

Acute Periostitis of the Occiput and Upper Cervical Vertebræ.—Dr. George Atwood reports (*Boston Medical and Surgical Journal*, March 19th, 1874) the case of a stout, healthy man, aged 50, in whom an erysipelatous inflammation of the face and neck was followed in about a month by severe pain, which seemed at first to be neuralgic, but soon developed alarming characters. There were frequently recurring spasms of the neck; the muscles were rigid; the jaw was tightly closed; the patient could only take liquids, and these, on being swallowed, excited spasms; he could not lie down in bed, for immediately on making the attempt spasmodic action would follow. On moving the head, pain would commence in the neck, and extend upward over the back of the head, and downward to the shoulders, but never any farther. The pulse was 95, and at times intermitting. During the next four weeks, he did not lie in bed, but slept in a chair when he was not walking the room. He was given iodide of potassium, bromides, cod-liver oil, strychnia, with tincture of iodine, blisters, and counter-irritation to the neck, and obtained some relief, which was, however, only temporary. A month or two later, he had a paralytic attack, and, three months from the commencement of his troubles, he expired suddenly. On dissection, the condyles of the occiput, both articulating surfaces of the atlas, the axis, and the odontoid process were denuded and eroded, the latter feeling smooth and like a piece of ivory. No induration of the tissues, and no effusion of pus or lymph, was apparent; but the periosteum and ligaments around the spine, and on the base of the occiput, to the extent of an inch from the foramen magnum, could be easily torn; the softening being more marked on the left side than upon the right, although the tissues generally were of a dull red colour and softened. The transverse ligament connected with the odontoid process was destroyed, and mobility of the head was quite free.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 2ND, 1874.

THE DEBATE ON CANCER IN THE PATHOLOGICAL SOCIETY.

THE experiment of a debate on a definite theme has been again tried at the Pathological Society, and we must say, notwithstanding the unavoidable defects of such a discussion, with marked success. It is far less easy to debate on matters of fact than on matters of opinion, and there is no possibility of enforcing an uniform use of terms; but these drawbacks were less felt than in the debate on tubercle of last year, perhaps from the preponderance in this year's discussions of more practised speakers and riper teachers. As was to be expected, the speakers ranged themselves pretty fairly under two banners. Mr. De Morgan kept the lists, if the phrase be allowed, with Mr. Hutchinson, Dr. Moxon, Mr. Arnott, Sir William Gull, Mr. Erichsen, and others; while Sir James Paget, Dr. Greenhow, and others were the assailants; and were finally reinforced by the powerful aid of the President, while Mr. Simon occupied a somewhat independent position. The Society had thus the advantage of an unusual array of talent on both sides.

The controversy is an old one, but still there was much novelty in the manner in which many points were presented; and, if we compare the present statement of the question with that of twenty years ago, we see, besides the immense advance in facts, an equally important change in the direction of omission. Mr. De Morgan stated, with perfect clearness and precision, the views of the younger school, in our own country and abroad; and, as an exposition of what we should have regarded as the prevailing opinions on the subject, left nothing to desire, while his own arguments introduced many novel and most interesting points. Nor did he shrink from defining his terms, though some subsequent speakers seemed to deprecate attaching any other than a traditional meaning to the word cancer. Without depreciating other speakers, it is not too much to say that the chief force of the opposite side was contained in the singularly able address of Sir James Paget, in which the fruits of an almost unequalled experience were presented with every advantage of forensic skill. On comparing Sir James's present position with the teaching of the surgical pathology, we see at once the modifications which he has implicitly introduced into his constitutional theory; though on some points it may be a matter of surprise that he has so completely escaped the contagion of modern ideas. We hear nothing now of the cancerous cachexia, which, as used to be contended, preceded the formation of cancer. Hereditariness in general is not alleged in proof of the constitutional character of a growth, but only hereditariness of a certain kind; while the participation of the blood is treated as a question independent of constitutionalism in general. Of the more important critical points, the only one which Sir James left untouched, was the production of secondary tumours. Probably the part of Sir James's address which made most impression upon his hearers was that relating to the inheritance of cancer. He showed, with great force, how a prolonged experience, and the more precise knowledge of the history of his patients, gained in private practice, had raised his estimate of the potency of hereditary tendency in this disease, till he had come to rank the cases known to be hereditary as one-third at least of the whole number. Now this of itself would not, as Sir James admitted, and even urged, prove more about cancer than about simple tumours, where inheritance is also often demonstrable. Here, however, lay the difference: that, while inheritance in simple tumours transmits a tendency to growth in one special part or special tissue, the hereditary tendency to cancerous growth is not attached to any one organ or tissue, but may break out anywhere. What is transmitted is, then, not a property of any part of the body, but of the body as a whole. This, which was the most salient point in Sir James Paget's argument, is worthy of the most serious consideration.

When, however, we examine the statistics referred to by the speaker, they turn out to be somewhat less striking than they appear at first sight. In only one-half of the cases in which inheritance was observed was it observed to follow this peculiar law; in the other half the transmission was to the same organ in the offspring as in the progenitor, this division being composed almost exclusively of cases affecting the uterus and the breast. These latter cases are certainly not inconsistent with the transmission of something general, since the implication of the uterus and mamma might be explained by other causes; but they do not support this view, and the whole strength of the argument must, therefore, fall upon the other half of the hereditary cases—that is, upon one-sixth of the whole number. Now this proportion seems small to serve for the foundation of so important a conclusion; and when the numbers are small, an enlargement of the lists might make a very great difference. Moreover, we want to compare with such statistics equally careful accounts of the inheritance of simple tumours, for these have certainly not been examined with the same attention. Some hints were indeed given by Mr. Hutchinson of a relationship between inheritance of simple growths, inheritance of cancer, and the occasional transmutation of hereditary transmission—facts which, if multiplied, would completely undermine Sir James Paget's modified argument from inheritance.

It is also to be noted that, even in the striking instance quoted by Sir James, and the similar case of Dr. Greenhow, hereditary transmission did, after all affect, in most cases, tissue of the same kind; all but one of the series being cancer of the epithelial organs, and the exception being cancer of a lymphatic gland, with respect to which there is always a presumption that the disease may be secondary. This looks like transmission of a peculiarity of epithelial tissue; that is, of the tissues arising from one part of the embryo. Cancer, in the sense used by Sir James, means, in fact, chiefly cancer of epithelial organs. Again, the very explanation given by Sir James, of the inheritance of uterine or mammary cancer, tells against himself. This, he says, happens because the uterus and mamma in women, being organs prematurely old, are especially subject to cancer, which is a disease of old age. But, as was pointed out by Dr. Payne and Dr. Broadbent, this is a property of these tissues, and not of the body as a whole. It is not the blood in women that is old, as Dr. Broadbent said. On all sides, then, we are driven back to the tissues; and the only hypothesis which covers all the cases, from those of inheritance of simple tumours to those of the disease which appears most general, is that some property affecting a larger or smaller portion of the body, perhaps an organ, perhaps a whole system, possibly, in some cases, all the tissues, is what is actually transmitted. The nature of the tendency thus transmitted was happily illustrated by Mr. Hutchinson. It is so clear that all the main points contended for by Sir James Paget might be explained by reference to the tissues alone, that it seemed hardly worth while to enter into the question whether cancer is a blood-disease; and it was with reference to this point that he seemed to betray some unfamiliarity with the ideas which, rightly or wrongly, are current among the younger generation of pathologists, and which were expressed with much bluntness by Sir William Gull.

The argument that, if cancer be not a blood-disease, this name should not be applied to gout, diabetes, tubercle, or "scrofula", is merely what the old logicians called an *argumentum ad silentium*, addressed to those who may be in the habit of calling these diseases blood-disease, and refusing that name to cancer. But such persons are probably very few in number; and, even were they more numerous, to convict them of inconsistency would by no means establish the truth of the proposition maintained. Why should these affections be called blood-diseases at all? In two, there is no demonstrable alteration of the blood; and in the other two, no person can doubt that an affection of the solid organs is antecedent—that is, that the liver or the nervous system acts wrongly before uric acid or sugar appears in the blood. We need not magnify the importance of the blood with the older pathologists, nor disparage it, with Sir William Gull, but treat it, like other organs of the body, with simple justice, assuming its innocence until it is proved guilty. Mr. Simon, once the most ingenious defender of the blood-disease theory, has thrown it over altogether, or rather explained it to mean something else. No other speaker defended this mode of expression, except, in one sense, the President, though even he avoided definitely committing himself to such a term. Perhaps, after all, Sir James Paget thought it necessary only to strike a blow for the honour of the flag, and did not mean permanently to defend a position so difficult to maintain and so particularly exposed to attack.

Besides inheritance and the blood, another important point of discussion was the occurrence of secondary tumours, which might have received even more attention than it did. No one, indeed, denied the fact that one tumour is generally to be called primary and others secondary, certain cases of simultaneous cancer being referred to as singular rarities by Mr. Marsh; and so far the doctrine of a cancerous diathesis seemed to be by common consent forgotten. It was generally admitted that the secondary growths take place in virtue of something transmitted from the primary. The only question was, What is it that is thus transmitted? Mr. De Morgan talked of the conveyance or transplantation of germs. Mr. Simon thought there was something more than transplantation; that the juices from the primary tumour exercised upon other parts a sort of impregnative spermatic influence, causing them to grow in a particular way—a theory not very different from Virchow's of a "seminium", or more resembling that which has been lately formulated with much precision by Wilhelm Müller of Jena. Dr. Creighton gave an account of some interesting histological researches further illustrating this point, which is, of course, a very important one. If we can show that some definite material substance, transplanted from the primary growth to a distant part, sets up new growth there, whether it be by actual multiplication of the elements transported, or by stirring up a new life in the elements of the part, this appears a sufficient explanation, without supposing the existence of a general disease or diathesis. On the other hand, there might be a constitutional state predisposing these parts to the formation of new tumours under the stimulus of some influence derived from the original tumour. This appeared to be what Sir William Jenner thought it necessary to insist upon. The secondary product, he said, would not develope into cancer unless there were a primary condition in the patient—viz., a disposition, under irritation, to form cancer. Thus he regards what is conveyed from the original seat of disease as a simple, and not a specific stimulus. But, on this supposition, it is difficult to see why any irritation should not produce a secondary tumour in a cancerous person, which, as a matter of fact, is not usually the case.

In fine, there are in the production of secondary tumours three factors: something conveyed from the original tumour, the tissues of the part newly affected, and the general condition of the body. According to Mr. De Morgan (and also Waldeyer), the first is everything; according to Mr. Simon and Dr. Creighton, the first and second; according to Sir William Jenner, all three, but especially the last. As a histological question, we cannot doubt that the tissues of the new part do participate in the secondary growth, and that the position of Mr. De Morgan and Professor Waldeyer is far too absolute; but whether actual cells or some seminal principles are conveyed, must be regarded as quite uncertain.

Mr. Simon's position was to some extent peculiar, and requires special notice. He compares cancer to tubercle—not according to the view formerly taken of tubercular diseases, but according to that suggested by recent researches; and supposes that some poison or seminal principle is elaborated at the seat of primary disease, which, distributed through the body, gives rise to secondary growths. Whether such a poison is ever introduced into the body from without, Mr. Simon regards as a question not absolutely decided. This modified constitutional theory must be far less repugnant to the histological school than the older one, and perhaps contains the germ of the ultimate solution.

All theories lead us in the end to search for some actual substance, which shall be to cancer what the infective poison of pyæmia is in that disease, but even more subtle and more impossible to specify. If this is ever to be known, or if we are ever to know positively that there is no such thing, can only be looked for as the result of experiment; and perhaps, for this reason, the debate at the Pathological Society has taken place not at the most favourable moment in the history of science. The results of experiment up till the present moment have been negative; but, when once that crucial test of positive science has been made available, the whole aspect of the question must certainly be entirely changed. The scientific mind, in relation to this subject, is like a medium supersaturated with facts and opinions, but wanting only the contact of some positive experimental knowledge to crystallise into a coherent theory.

THE MAINTENANCE OF LUNATICS.

THE Government are to be congratulated on the wisdom of their decision to contribute from imperial resources a fixed sum towards the maintenance in asylums of pauper lunatics. Much might be said in favour of the view that the whole cost of pauper lunacy ought to fall upon the State, and not upon local areas; and the subsidy now offered by Sir Stafford Northcote may perhaps be regarded as a step in that direction. But, whatever may be its ultimate tendency, the immediate effects of that subsidy cannot fail to be advantageous. It will afford relief to a class of occupiers hitherto heavily overweighted by poor-rates; and it will insure early, and therefore efficacious, treatment in recent and acute cases of insanity happening amongst the humbler orders. By diminishing the inducements to detain paupers in workhouses, it will greatly restrict the pernicious practice of sending thither, for a period of probation, those of them who have just succumbed to any mental derangement. That practice, although clearly contrary to law, has prevailed in some districts to a lamentable extent, and has undoubtedly been responsible for a part of that increase of insanity, or accumulation of insane persons, which we are constantly deploring. Tempted by the paltry saving of five or six shillings a week—the difference between the cost of a lunatic in an asylum and that in the workhouse—the Poor-law officials and guardians have widely adopted a system of sending all lunatics deriving relief from the rates to the workhouse, before forwarding them to the asylum. If great violence, or dangerous or troublesome propensities, be manifested, the sojourn in the workhouse is comparatively brief; and the patient, sometimes injured and exhausted, is sent on to the asylum in a few days; but if no unpleasant traits present themselves, if the symptoms of the cerebral disorder be mild or subacute, the workhouse novitiate is protracted for weeks, months, or even years, and the unhappy patient is denied all curative treatment until it can no longer be of any avail, and all those alleviations of his condition which are provided in a special lunatic hospital. The result of this is, that lives are lost, and that chronic lunatics are manufactured. Precious moments are wasted. Appropriate treatment is withheld just when it would be most useful; and what might have been only a transient ailment is converted into hopeless disability. It is impossible to calculate the cost of such ignorance and folly; but it is evident that it must be enormous. To save five shillings a week for, say six months, an imposition of ten shillings a week for, say twenty years, is incurred. Then it may be the bread-winner of a family that is thus economically dealt with when he becomes insane; and, in that case, his wife and children, by their necessities and claims, still further swell the penalties paid for a policy of cheese-paring.

There is scarcely a medical superintendent of a public asylum in England, who has not protested against the system of workhouse probation referred to, and urged the importance of prompt and skilful treatment where disorders of the mind are concerned; but their remonstrances, if we may judge from the frequency with which they are repeated, have, as yet, been but little attended to. Now, however, that the clink of coin chimes in with these remonstrances, they will be more favourably regarded. The payment offered by Government in aid of the maintenance of lunatics in asylums will, unquestionably, conduct to asylums many lunatics who would otherwise have found their way to workhouses, and thus early and suitable treatment and speedy restoration to health will be secured to many forlorn beings who, but for this payment, would have been allowed to drift to irremediable shipwreck of their mental powers. The budget of 1874 will be more memorable than many of its more startling and pretentious predecessors, if it achieves this and contributes to an increased ratio of recoveries amongst the insane poor. In order that it may do so, the Chancellor of the Exchequer must firmly maintain the position which he has taken up, and extend assistance to lunatics in asylums only. Pressure will doubtless be brought to bear upon him to induce him to contribute also to the support of those who are confined in workhouses, but we trust that he will avoid falling into such a grievous error, which would not only make further unwelcome inroads upon his surplus, but would perpetuate and intensify those evils which we have been exposing. The firm attitude assumed by the President of the Local Government Board during his interview with the managers of the metropolitan imbecile asylums affords a guarantee that no such disastrous mistake will be committed.

It need not, we think, be feared that the aid given by the Government will empty the lunatic-wards of workhouses of those imbeciles and chronic lunatics for the accommodation of whom they are properly adapted, and will thus entail an immense outlay on the county rates for the enlargement of existing asylums or the erection of new ones. On January 1st, 1873, there were, in workhouses in England and Wales, 14,343 lunatics, idiots, and persons of unsound mind; and we do not anticipate that the new arrangement will greatly, if at all, reduce that number. It is to be borne in mind that the aid offered—four shillings a week for each lunatic—does not fully represent the difference between the workhouse cost and the asylum charge; and that there will still be a small margin of saving by the detention of chronic lunatics, who require no extras and no particular attention, in workhouses. Then, wherever wards for lunatics have been specially fitted up and organised in workhouses, it will be found economical to keep them fully occupied, especially when, as often happens, their occupants are industrious and useful. Guardians, too, dressed up in a little brief authority, delight to exercise it, and will not readily curtail the sphere of their official activity by handing over one whole class of their pauper subjects to the jurisdiction of the county magistrates. They are influenced, too, by the relations of the lunatics, who often prefer to have their afflicted kindred near to them in the union workhouse, rather than at a distance from them in the county asylum, and who decidedly object to the latter establishment when they are called upon to supply part of the rate of maintenance. These considerations will operate in preventing the taking of any undue advantage of the help offered, and any extraordinary demand for additional asylum accommodation.

It has been hinted that the assistance now given towards the maintenance of lunatics is only an instalment of further favours to come. The subject must again come up for consideration, in connection with local taxation and government; and it seems not improbable that, when it does so, a larger measure of relief will be conceded, while, at the same time, a larger measure of central control will be claimed. Nor shall we regret when that occurs. The visiting justices, who have hitherto held supremacy over our public asylums, have certainly fulfilled their duties towards them in an able and praiseworthy manner. But it must not be forgotten that the vast majority, if not all, of those reforms, which have made English lunatic asylums patterns to other countries, have originated with the medical officers of these asylums, or with the Commissioners in Lunacy. The visiting justices have proved a wholesome check upon extravagant enthusiasm, but perhaps sometimes, also, they have proved a drag upon real progress; and we confess we should not be sorry to see the hands of the central authority strengthened, as we are confident that, whatever power is intrusted to the Board over which Lord Shaftesbury presides, will be judiciously and philanthropically employed.

ST. GEORGE'S HOSPITAL.

A FORTNIGHT ago, we published the text of the memorial which has recently been presented to the Weekly Board of St. George's Hospital. Some correspondence on the subject has since appeared in the *Times*. The paragraph relating to the attendance in the out-patient department has been referred to the medical officers in charge of out-patients, and they have expressed their opinion that, since the changes which were introduced twenty-two years ago, there has been no overcrowding of the waiting-rooms, and that the labour imposed upon the staff is not excessive.

The attention of three very distinguished medical men who had signed the memorial—Sir James Paget, Sir William Fergusson, and Sir William Gull—was especially called by letter to the same paragraph, and they were asked whether they had any "personal experience" of the way in which the out-patient department of St. George's Hospital was administered. Of course, they had no such "personal experience". The question was merely a means of discrediting the value of their signatures. But it is obvious that the memorial was submitted to them because of their large experience at other hospitals, and because of their intimate acquaintance with the medical wants of the community, as well as with the just demands of the various sections of the medical profession. It is clear from their replies that this was the view which they themselves took of the matter. Sir William Fergusson says: "I appended my name on a general professional experience of nearly half a century. In doing so, I was gratified to think that these matters were thus about to be brought under the notice of such an influential body of hospital governors"; and Sir William Gull says: "I regarded the memorial to the Board of Management of your hospital as of a general kind, and applicable to all the large London hospitals". It is evident that, in their extensive acquaintance with medical institutions, they had no reason to think that St. George's differed essentially from the other large London hospitals, but that it was as open to improvement as the memorial suggested.

These signatures are of great weight. They serve to show that these experienced men believe there is good ground for alterations in the out-patient departments of the London hospitals, and that they have the good will to say so. They indicate their agreement in the main point of the memorial, which is the encouragement of thrifty habits among the working classes in the matter of sick relief. There is no doubt that, if the provident system were as well established in other districts as it is in the neighbourhood of St. George's, they would be glad to see a similar memorial addressed to every large hospital in London. If none but governors or those who have "personal experience" of the out-patient department have a right to memorialise the managing body, as the Weekly Board seem to imply, there would be small chance of introducing fresh ideas or impartial criticism. Probably many of those who are striving to carry on provident institutions in the neighbourhood are infinitely better acquainted with the working and influence of out-patient departments, than are nine-tenths of the governors of the hospitals. No one who has not given special attention to the subject can appreciate their pauperising effect; and the memorial sets forth the opinion of many who have carefully studied the question.

The Weekly Board of St. George's Hospital have now an excellent opportunity of introducing reforms into the administration of medical relief, and for putting themselves at the head of a movement which must, sooner or later, spread throughout the whole length and breadth of the land. We still hope that such may be the course which they will pursue, and that no discussion of matters of minor importance will deter them from giving due weight to the main objects of the memorial.

As we pointed out last week, some change is almost necessitated by the social revolution which is going on among us, and which is placing so much power in the hands of the working classes. If we would have them bear their share of the responsibilities of life, if we would have them feel that they have a stake in the country, we should lose no opportunity of encouraging them in habits of providence and self-reliance. It is not a question of the precise wording of a document—it is not a question of the greater or less abuse of any particular institution: the question of real importance is—Shall we encourage the well-to-do poor to rely, as far as possible, upon their own exertions, or shall we discourage such praiseworthy efforts? It is this, we have no doubt, which has impressed itself upon the minds of those distinguished men—statesmen, medical men, clergymen, and philanthropists—who have signed the memorial, and which has made them desirous of seizing this opportunity of appealing to the great West-end hospital—the hospital which stands in the midst of the wealth and intelligence of London—in the hope that it will begin changes which may prove to be an incalculable blessing to society.

THE "WESTMINSTER REVIEW" UPON MEDICAL CHARITY.

We noticed, at the time of its publication, an article which appeared in the last number of the *Westminster Review*, upon "Medical Charity; it extent and abuses". This has been followed by another in the new number of the *Review*, upon the best mode of administering medical charity. Both articles are vigorously and clearly written; and whether the reader agree with them or not, he can hardly fail to be instructed by the array of facts they marshal. The reviewer first gives a summary of the evils under which the present system labours, going (as we think) a little out of his way to deal with the troubles which are now agitating King's College and the Women's Hospitals. He then clears the ground by disposing of one or two very crude remedies which have been proposed; such as that no limit should be put upon the number of out-patients, but that the physicians and surgeons should be indefinitely increased, so as to meet the demand that is made on their energies. We quite agree with the reviewer that this remedy would certainly and speedily develope the mischief to a tenfold degree. He next proceeds to point out the difficulties which the existing out-patient departments offer to all provident schemes; and he quotes, in detail, the obstacles with which the hospital reformers in Birmingham and Manchester are just now meeting. He then unfolds his own plan, which consists of an extension of the Poor-law system, so as to assimilate it somewhat to the Irish dispensary system, thus supplying the wants of the poorest; and a large development of provident dispensaries for the classes immediately above them.

For indoor treatment, the reviewer would have three kinds of hospitals — poor-houses, public hospitals, and provident hospitals: the first, for pauper cases; the second, for those who were not paupers in the full sense, but who had received their out-patient relief at the rate-supported dispensaries; and the third for all classses above these.

It will be seen that this is a very large scheme, embracing the entire administration of medical charity for the wholly and the partially necessitous classes. In order to carry it out, the reviewer would call in the aid of Parliament, and an intelligent appeal is made to the Home Secretary to take up the subject as a matter of social reform, and to complete the work which was commenced by Mr. Gathorne Hardy in 1867. We should be pleased to see the question occupying the attention of Government, and we would gladly give any assistance in our power in carrying out a well-weighed measure. The interests involved are so vast, the sum of money annually disbursed is so large, and the difficulty of bringing about concerted action is so great, that the matter seems to be one of sufficient importance to justify the intervention of Parliament.

KING'S COLLEGE HOSPITAL.

We have before us three carefully drawn documents which have been issued concerning the nursing arrangements of this hospital. We have already expressed an opinion on the general merits of the question. The three documents now before us are, the Report of the Referees, Lord Selborne and Lord Hatherley, which is, on the whole, favourable to the sisterhood; "Observations" on the report of the referees, which traverse some of the general principles assumed by the referees, as well as oppose their conclusion; and an energetic "Statement" by the lady superior, which is at once a movement of offence and defence. The differences between the committee and the sisterhood are such as to involve the almost impossibility of harmony unless either the committee or the sisterhood are willing to surrender what they seem to consider organic principles, or unless the constitution of the committee be changed. It would be idle to analyse the documents in advance, nor need we do more than express the hope that, looking to the interests of the hospital, neither party will at the meeting to-morrow push matters too extremely, and that both will subordinate personal feelings to a common regard for the interests of the institution.

THE PROPOSED PHARMACY BILL OF THE COLLEGE OF PHYSICIANS OF IRELAND.

The Apothecaries' Hall of Ireland have issued the following manifesto respecting the Bill proposed by the King and Queen's College of Physicians in Ireland, a copy of which was given at page 526 of the Journal for April 18th.

The Governor and Company of the Apothecaries' Hall of Ireland, having carefully considered the Bill of the College of Physicians under its several provisions, feel constrained by a sense of public duty to make known the reasons for objecting to it.

1. Because a proposition similar to this was rejected by the House of Commons in the Session 1868, when the English Pharmacy Bill was before Parliament, on the ground "that the provisions of the Bill are throughout intended for Great Britain, and consequently they cannot be extended to Ireland"; the difference between the two parts of the kingdom in this respect being that, while in Ireland, for nearly one hundred years every person who practised pharmacy was compelled by law to attend a prolonged course of study, and undergo a strict examination prior to his doing so, in England and Scotland any person, however qualified, might keep shop for that purpose.

Because it would subvert the rightful control over pharmacy which is exercised by the Company in virtue of their Act of Incorporation, conferred upon them by authority of the Irish Parliament, Anno Domini 1791; a duty which they continue faithfully to discharge, as appears from the report of the Inspector (an Ex-President of the King and Queen's College of Physicians) appointed under the Medical Act, who visited the examinations at the Apothecaries' Hall in the year 1868—"The examinations in Chemistry, Inorganic and Organic; in Botany, General and Medical; Materia Medica; and General and Practical Pharmacy, embraced a number of questions, which were admirably put and must be considered as a searching test of the knowledge of the candidates in these departments."

2. Because, by this clause, there would be introduced into Ireland a number of English "chemists and druggists", who are on the English Register, and who never passed through the course of study or examination required for pharmaceutical chemists under the Pharmacy Acts, and with reference to several of whom an eminent member of the Pharmaceutical Committee of the House of Commons is reported to have said, "that many persons, under the name of druggists, are now entrusted with the selling and compounding of poisons, who are utterly ignorant of the nature of these poisons, and of the general effects of drugs". Yet such is the class that the Bill of the College of Physicians would, in all probability, introduce into Ireland as compounders of prescriptions for the public.

3. Because "the licence of the Apothecaries' Hall" is a legally recognised medical qualification throughout the Queen's dominions, and already entitles their licentiates to practise both pharmacy and medicine.

The dearth of apothecaries "in parts of the country" is the natural result of the "Medical Charities Act" (1851), whereby dispensaries were distributed all over Ireland for supplying medical aid, including advice and medicine, to the major portion of the Irish population; and it is not the result (as has been stated by the College) of "the protracted and expensive course of instruction", forasmuch as the medical curriculum of the Hall has been the same for nearly the last forty years, and an average number of licentiates continue to be qualified annually.

But the especial reason why the Company object to the Bill of the College is, that they have a Pharmacy Bill of their own, which does not disturb vested rights—one, drafted by request of Government a few years since, which provides amply for the pharmaceutical wants of the public, has the approval of the Associations of "the Licentiate Apothecaries" and of "the Chemists and Druggists" of Ireland, and which they willingly offer without any pecuniary gain whatever.

DR. FERRIER has been appointed Croonian Lecturer at the Royal Society.

DR. SHARPEY has resigned the Professorship of Physiology in University College, which he has held since 1836.

DR. RUTHERFORD has been appointed Assistant-Physician to King's College Hospital.

IT is proposed to establish an Infirmary for Children at Bolton, with twelve beds.

CHOLERA has broken out in the suburbs of Calcutta, and great uneasiness is felt lest it spread to the densely populated heart of the city.

WE much regret to have to announce the death, after three weeks' illness from rheumatic fever, of Dr. Bird of the Westminster Hospital.

WE learn that Dr. Sansom has been selected for the vacant office of Physician to the London Hospital.

THE Secretary of State for War will next week receive a deputation from the Parliamentary Bills Committee of the British Medical Association, on the subject of Army Medical Grievances.

WE are informed that Mr. John Foster has resigned the Surgeoncy of the Cancer Hospital—a step on which we beg leave to offer him our congratulations.

THE following members of the medical profession are among the candidates recommended by the Council of the Royal Society for admission to the Fellowship: T. Lauder Brunton, M.D.; Prescott G. Hewett, F.R.C.S.; and Henry W. Rumsey, M.D.

M. GAVAND, the French Minister Plenipotentiary, presided at the sixth annual dinner in aid of the funds of the French Hospital and Dispensary, Leicester Square, which took place on Saturday evening in Willis's Rooms. Subscriptions amounting to £1,000 were announced.

THE Governors of the Devon and Exeter Hospital have partially adopted the recommendation of the Committee to reduce the number of physicians from four to two, by deciding not to appoint any one in succession to the late Dr. Elliot, and to reconsider the question upon the occurrence of another vacancy.

THE Rhyl Convalescent Home was formally opened last week, in the presence of a large number of the local gentry and clergy. The proceedings commenced with service in St. Thomas's Church, when the Bishop of Bangor preached, after which a procession was formed and proceeded to the Home, where another service was held. The building was decorated with choice plants and flowers sent specially from London by the Duke of Westminster.

MR. ALDERMAN TYZACK, of Sunderland and Thirsk, has purchased a building at Monkwearmouth for the purpose of converting it into a dispensary for the poor of that, his native parish.

METROPOLITAN HOSPITAL SATURDAY AND SUNDAY FUND COLLECTIONS.

A MEETING of the Council of the Metropolitan Hospital Sunday Fund was held last week at the Mansion House, "to consider what action should be taken in respect of the Hospital Saturday movement, and for organising collections in aid of the metropolitan hospitals and dispensaries amongst the working classes". After some discussion, the following amendment was put to the vote and carried.

"That, whilst recognising and highly appreciating and wishing God speed to the laudable efforts of working men to aid the object for which the Hospital Sunday Fund was established, this Council feels that, under existing circumstances, it is expedient that the working men of the metropolis should be left to take any independent action they may think desirable to carry out the Hospital Saturday Fund movement; and that a copy of this resolution be forwarded to the two working men's committees."

THE SPREAD OF INFECTIOUS DISEASES IN SCHOOLS.

THE facilities afforded for the spread of infectious diseases, notably scarlatina, measles, and whooping-cough, through the agency of schools, has often resulted in epidemics of considerable magnitude; and, in those schools which receive grants of money from the Education Department of the Government, there has often been both considerable reluctance on the part of the masters to send the children away who came from infected houses, and a great inclination to receive their pupils back again before they could possibly have ceased to be a source of danger to others, lest they should so far diminish the average attendance of scholars as to affect the amount of the grant they would otherwise receive; and, although there were circumstances attending such outbreaks of disease which were taken into consideration by the department in determining the amount of the grant, yet these were by no means generally known; and we believe that the instances in which the masters voluntarily submitted to a pecuniary loss, rather than sacrifice the health of their scholars, were few and far between. Under these circumstances, we are glad to find that, in the new Code of Regulations which has just been issued by the Education Department, provision has been made to the effect that, if a school be closed under medical authority, a proportionate reduction will be made from the number of meetings and attendances prescribed for the purposes of the grant. This provision is an extremely important one; and whenever cases of any infectious disease are known to exist amongst children attending a school, the medical officer of health of the district should bring the fact under the notice of the school authorities; and he should call the attention of the sanitary authority to the necessity which exists for strictly enforcing the provisions of the Sanitary Act of 1866 which relate to the exposure of infected persons and things, with a special view of prohibiting the attendance at school of any child residing in an infected house.

CREMATION.

THE subject of cremation has begun to be commented on in the pulpits of the various churches and chapels in London. Last Sunday, Canon Liddon, at St. Paul's, espoused the maintenance of the present system of burial, whilst Mr. Moncure Conway (Unitarian) devoted his whole discourse to the support of Sir Henry Thompson's proposals.

THE WOUNDED FROM THE GOLD COAST.

PROFESSOR LONGMORE, of Netley Hospital, writes to us as follows, in reference to the observation that "it is notorious that some of the worst wounds in the late campaign were inflicted by our own troops upon themselves during the bustle and confusion of bush-fighting".—"As this statement is calculated to create an unpleasant impression on the minds of relatives and friends of the wounded, it seems only right I should mention that, so far as evidence is afforded by the injuries of the wounded invalids from the Gold Coast at Netley, nineteen in number, it does not confirm the statement. The most severe wounds among the troops were those that were under treatment on board the *Victor Emmanuel* hospital-ship, and were transferred to Netley; and, out of the nineteen cases above mentioned, there is only one which there is reason for believing was inflicted by a rifle-ball, and in this case the evidence is not conclusive that it was an Enfield rifle-ball. I regret that Deputy Surgeon-General Mackinnon, who was the principal medical officer in the field where the wounds were inflicted, is at present absent on the Continent, as he could have replied to the statement with more direct authority; but he informed me, on his return from the Gold Coast, that he only knew of one case in which the wound had appeared to be other than a wound from an Ashantee firearm—the case to which I have above alluded; and Dr. Fleming, who was pathologist at the Gold Coast, has also made a like report to me with reference to the wounds under his observation. Indeed, I have been led to regard the complete absence of wounds inflicted by our own troops upon themselves (with the one exception above mentioned, admitting it to be such), under the circumstances in which the military operations were carried on during the late war on the West Coast of Africa, as a very remarkable fact, and one that could only be explained by an excellent tactical disposition of the troops, and by their having been kept thoroughly in hand by their officers while they were engaged with the enemy."

UNIVERSITY COLLEGE.

THE prizes in the Faculty of Medicine in this College will be distributed at 2 P.M. on Wednesday, May 6th, when Mr. Quain will preside.

ST. GEORGE'S HOSPITAL.

SOME interruption will necessarily occur in the work of the hospital and school of St. George's during the approaching session, owing to extensive repairs having become necessary in the basement of the building. The drains of the original portion of St. George's Hospital, which includes all except the new block facing Grosvenor Crescent, were made of brick, according to the system in practice at the time it was built. They have now become so rat-eaten and imperfect, that it is found necessary to renew them with proper tile-drains. For this purpose, the whole of the basement, including the kitchen, must be taken up; and advantage will be taken of the opportunity to make many other sanitary improvements in connection with the water-closets and sinks of the building. The estimated time required for these repairs is three months; but, as a matter of fact, when once the foundations of a building are disturbed, it is as well to prepare for an extension of the specified time. As it is desirable that the hospital should be in working order again by the 1st of October, it has therefore been thought prudent by the authorities to commence the work in the beginning of June. The question of keeping the new wing open was under consideration; but it was felt that there would be considerable danger in treating patients so near to a whole system of open drains; besides which, it would have been necessary to construct a new temporary kitchen at a great expense. The house-surgeons of St. George's will be in charge of the branch hospital in the country, where one hundred patients will also be housed. Several plans for the due instruction of the students during this interregnum have been under the consideration of the Medical School Committee, but nothing definite has, we believe, been decided upon to the present time.

VACCINATION ON THE AFRICAN COAST.

THE *Manchester Weekly Times* of April 18th quotes the following extract of a letter received by Mr. R. A. Philips, of Temple Chambers, Manchester, from his son, dated Cabenda, January 30th.

"The small-pox has been terrible here. This morning, I saw a man who had just lost his eldest son, the twenty-second of his family who had died of small-pox within the twelve months. We had some vaccine lymph sent out, from which our Krooboys were vaccinated. I marched five of them into the town, and vaccinated from them nearly two hundred natives. Only six failed to take; of those, four had the small-pox, and two died; of the successfully vaccinated, not one had the small-pox. Now, let the anti-vaccination leaguers say what they will, here is a positive proof of the good results of vaccination, for the natives have been dying right and left. I once walked eight miles, and was never out of hearing of the crying for the dead."

THE TEACHING OF PUBLIC HEALTH.

THE authorities of the Charing Cross Hospital Medical School, recognising the fact that the subjects comprised under public health belong to distinctly different branches of science, have appointed three gentlemen—a chemist, a physician, and an engineer—to give the course of lectures. Mr. Heaton, the lecturer on chemistry, Dr. G. V. Poore, and Mr. Eassie, C.E., whose name is especially well known to our readers in connection with sanitary engineering, will each give six lectures. The introductory lecture will be given on Tuesday, May 12th, at 2 P.M., by Dr. Poore.

LIFE AT SEA.

THE President of the Board of Trade received on Friday week a deputation from the Social Science Association to present a series of resolutions passed by its Council as to the extension of the legal securities accorded to life on land being extended to human life in British ships at sea. A copy of the resolutions appeared at page 534 of last week's JOURNAL. After introduction by the Hon. A. Kinnaird, the resolutions were spoken to by the Chairman of the Association, by Commander Dawson, R.N., by Dr. Hardwicke, the Deputy Coroner for Middlesex, and by Mr. Stirling Lacon. About 1,500 deaths, assumed to be from disease, annually occur in British ships at sea, for which medical registration is asked. There are also about 1,500 other annual deaths, other than from shipwreck, which, were they on land, would call for legal inquiry, but are now unquestioned; and there are about the same number annually from shipwreck, of which it was said that only one case had led to punishment during the last twenty years.

RETURNS OF SICKNESS.

IN a letter to the Local Government Board, an "Union Clerk" calls the attention of his fellow clerks to another addition to their duties for which no provision is made by payment. He refers to the preparation of the weekly returns for the medical officers of health, under the circular of the Local Government Board just issued. The payment to the registrars is secured, but nothing is said about paying the clerks.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual general meeting of the Society was held on April 22nd, by the kind permission of the Royal Medical and Chirurgical Society, in their rooms, 53, Berners Street; Mr. Charles Hawkins, V.P., in the chair. A letter was read from Sir George Burrows, President, regretting his unavoidable absence from the meeting, in consequence of an engagement of long standing to act as steward at the festival of the Royal Medical Benevolent College. The Secretary read a statement of the affairs of the Society for the past year, from which it appeared that the available income for payment of grants and expenses had been £3013; the grants £2530 to 56 widows and 34 children; the expenses £208; leaving a balance of £275 to meet any fresh applications for assistance. Legacies of the value of £1500 had been received. The funded property had been increased by the purchase of £1772 New Three per Cent. Stock. The list of members showed a further decrease of eight, the Society consisting of 9 honorary, 159 life, and 229 subscribing members. During the year, the Society had lost by death two Vice-Presidents, two Directors, and one of the Treasurers. The usual business of such meetings having been concluded, the meeting was made special, to consider some alteration in the bye-laws proposed by the Acting Treasurer, Mr. Fuller; the alterations, with slight amendments, were carried, and referred for confirmation to the next general meeting, to be held on May 13th. The alterations were to facilitate the election of members, and to give the Directors, in the case of members of some standing, obliged, through ill-health, to discontinue their subscriptions, the power of granting assistance to their widows and children. A vote of thanks was passed to the editors of the medical journals. After the usual thanks to the chairman, the meeting was brought to a close. The officers of the Society take this opportunity of earnestly requesting the members to attend the meetings; it was with the greatest difficulty, on this occasion, that the required quorum of nine could be formed to constitute the meeting.

AGASSIZ MEDAL.

THE Government of the United States is having prepared at the Philadelphia Mint, to be added to the list of public medals, a medal commemorative of the late Professor Agassiz and his devotion to and achievements in science.

POOR-LAW CONFERENCE: WEST MIDLAND DISTRICT.

IT has been arranged that the West Midland Poor-law Conference should meet at the Imperial Hotel, Great Malvern, on Tuesday, May 5th, at a seven o'clock dinner. On Wednesday morning, it is proposed to discuss—1. What accommodation is essential in a workhouse to enable the guardians to carry out an efficient administration of the Poor-law, and to meet the present requirements of the Local Government Board? and 2. How far is the appointment of medical officers of health working satisfactorily? The latter subject has been suggested by Mr. Sclater-Booth, the President of the Local Government Board.

PREMATURE SUMMER-HEAT.

THE premature summer (according to Dr. Horace Dobell) is likely to prove injurious to the public health, if the sewers be not well looked after. Writing to the *Times*, Dr. Dobell says: "The last two or three warm days have been sufficient to wake up an unmistakable sickening smell of sewage over the whole of London. Last week I detected it, especially in Belgravia, Westminster, Bayswater, St. John's Wood, Bloomsbury, and in the Grosvenor and Portland districts. This indicates an alarming condition of the drains, which must be foul with stagnated sewage; and it is urgently necessary that all sanitary authorities should set to work at once to remedy the evil by a thorough flushing of sewers before the increasing heat and the crowd of the season have brought things to a calamitous crisis."

BALANCE-SHEET OF THE MEDICAL COUNCILS.

A RETURN of the receipts and expenditure of the General Medical Council, and of the Branch Councils for England, Scotland, and Ireland, for the year ending the 5th of January last, has been issued. The expenditure of the General Council during the year was £3,945 : 14 : 6; and the receipts of course amounted to the same sum, made up chiefly of the contributions from the Branch Councils, which are levied *pro rata* in accordance with requirements. The receipts of the English Branch Council were £7,709, and the expenditure £4,738 : 7 : 1, leaving a balance of £2,871 : 4 : 1. The receipts of the Scottish Branch Council were £1,594 : 14 : 6, including a balance in bank at the beginning of the year of £662 : 15 : 8, £863 : 5 from fees, and £68 : 13 : 10 dividend on consols and bank interest. The expenditure was £949 : 1 : 9, consisting of £45 : 3 in fees to the Council for attendance and travelling expenses, £226 : 17 : 9 for salaries, printing, stationery, rent, and other disbursements, and £677 : 1 the *pro rata* contribution toward the expenses of the General Council. The balance was £645 : 12 : 9, or £17 : 2 : 11 less than at the beginning of the year. The receipts of the Irish Branch Council were £847 : 0 : 6; and the expenditure was £1,277 : 13 : 7, leaving a balance due to the treasurer of £430 : 13 : 1.

PROVIDENT MOVEMENT AT NEWCASTLE-ON-TYNE.

WE learn from the *Northern Daily Express* that a movement is on foot, at Newcastle-on-Tyne, to promote the establishment of a provident institution on a large scale. What the exact form of the proposed institution is to be, does not appear to have been agreed upon. The meeting which is reported is only a preliminary one. But whether the movement follow the well-established lines of the existing provident dispensaries, or whether it lean towards a medical institute in connection with the friendly societies of the town, it has our best wishes. What is needed at the present time is the means of making the pence of the well-to-do poor contribute, on an organised system, to their own medical relief; and we have no doubt that this can be done in various ways. So long as the best interests of the artisan class, of the medical profession, and of society at large are duly considered, the more plans we have, suitable to different localities and industries, the better.

THE APOTHECARIES' ACT.

A BILL bearing the names of Sir John Lubbock, Dr. Lyon Playfair, and Mr. Plunket, proposes to amend the Apothecaries' Act by removing restrictions as to the qualification and number of examiners, and to give power to the Society of Apothecaries to strike off the list of licentiates the name of "any person who shall be convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or who shall, after due inquiry, be adjudged by the General Council to have been guilty of infamous conduct in any professional respect."

UNIVERSITY OF LONDON.

THE Committee on Examinerships have recommended the following gentlemen for re-election as Examiners for Degrees in Medicine. *Medicine:* Dr. Bristowe; Dr. Wilson Fox, F.R.S. *Surgery:* Professor Marshall, F.R.S.; Mr. W. S. Savory, F.R.S. *Anatomy:* Mr. Callender, F.R.S.; Professor Viner Ellis. *Physiology, Comparative Anatomy, and Zoology:* Dr. Michael Foster; Dr. Rutherford. *Obstetric Medicine:* Dr. Robert Barnes; Dr. Graily Hewitt. *Materia Medica and Pharmaceutical Chemistry:* Dr. T. L. Brunton; Dr. T. R. Fraser. *Forensic Medicine:* Professor Arthur Gamgee, M.D.; Professor Maudsley, M.D.

THE ROYAL ACADEMY.

AMONG the pictures in the Royal Academy which we have had the opportunity of inspecting, and which will be found of especial interest to the medical profession, are: No. 128, a fine picture by Mr. J. C. Horsley, R.A., "The Healing Mercies of Christ", undertaken at the request of the late Sir William Tite, and which will, in accordance, with his intention, be presented as his gift to the chapel of St. Thomas's Hospital. It illustrates Malachi iv and St. Matthew xi, 4, 5. No. 164 is an excellent portrait of Mr. Samuel Hey of Leeds, by Mr. T. Hodges, presented by his friends and fellow-practitioners. No. 192 is Mr. Lehman's characteristic portrait of Sir William Fergusson, also painted by subscription. Mr. Hodges shows also (No. 393) a very good portrait of Mr. Wheelhouse of Leeds. Mr. Richmond's portrait of Dr. Bence Jones is well engraved by Mr. C. Holl. Mr. W. H. Thornycroft has a bust of Dr. Mouat, and Mr. C. B. Birch a model of the late Dr. Webb. Sir Henry Thompson shows a study of still life, "Tea à la Russe", in which the colouring is remarkably powerful; the whole picture is of far higher than an amateur standard.

THE UNIVERSITY OF VIENNA.

THE veteran Rokitansky is about to retire from the chair of Pathology in this University; he will, however, lecture during the present session. Professor von Recklinghausen, now of Strasburg, has been invited to become his successor, and will probably commence his duties at the beginning of the next winter session. He has sent to the Austrian Ministry of Instruction proposals for improvements in the building of the Pathological Institute.

THE SANITARY ASSOCIATION OF THE LOWER RHINE.

THE second volume of transactions of this Society has lately been published. It contains statistical reports on the mortality in the districts comprised in the Association, numerous articles on all subjects relating to public health, etc. The Association now extends over 76 towns and 37 country districts, and contains 1,751 members; in the previous year, the numbers were respectively 9, 15, and 182. The localities included in the operations of the Association contain a population of about 1,350,000.

SCOTLAND.

OPENING OF THE NEW EYE INFIRMARY IN GLASGOW.

THE very handsome new building erected by the Eye Infirmary was formally opened on April 27th. The Eye Infirmary of Glasgow is intimately associated with the name of Dr. Mackenzie. He, along with Dr. George C. Monteath, started the hospital in 1824. After various movements, in the course of years it came to be established in its present premises in Charlotte Street. There it has remained for some years; and, though the building was not originally erected for hospital purposes, yet it has met with most undoubted success. In 1870, the directors resolved to build an Eye Infirmary; and it is this building, now complete, which was opened on Monday last. It is an exceedingly handsome erection, situated in the West End, but within easy distance of all parts of the city. At present, it is fitted up to contain 40 in-patients, but is so arranged as to increase the accommodation to one hundred with little difficulty. It is also intended to keep on the building in Charlotte Street as an East End dispensary, all the in-patients being, however, treated at the western branch.

CASE OF MUSHROOM-POISONING.

MR. SADLER, who was to have lectured to the North British branch of the Pharmaceutical Society in Edinburgh, was prevented from doing so by the following rather singular circumstance. While preparing for the Society his lecture on edible and poisonous fungi, he accidentally swallowed a quantity of the spores of a large species of puff-ball (*Lycoperdon giganteum*), and within the space of an hour and a half he was seized with severe illness, accompanied with violent pains. The violent symptoms could not be subdued until nine days after the first attack, by which time the patient was much weakened. Sir Robert Christison, Dr. Balfour, and Dr. William Craig, who have attended Mr. Sadler, are of opinion that the continued irritation was kept up by the fungus spores. Mr. Sadler, though now in a fair way of recovery, is still confined to bed. The giant puff-ball is edible in its young state, but its matured spores ought certainly to be avoided.

SMALL-POX IN PAISLEY.

THE condition of this town in respect to small-pox is, we read, beginning to lead to serious alarm, especially in view of the exceedingly defective hospital accommodation. There is no small-pox or fever hospital in the place; and, at the beginning of the epidemic, an ordinary house, which was being fitted up as a convalescent home, was borrowed by the authorities to hold their cases of small-pox. The house was intended to accommodate about twenty-five convalescents, and it is now made to hold forty-one cases of small-pox. This itself should surely justify the issue of a commission to inquire into the action of the Local Authority. If any credence is to be given to current statements, matters are in a condition urgently calling for redress. It may be remarked, in passing, that, for some years now, Paisley has had an unenviable pre-eminence in the Registrar-General's returns, as yielding an unusually high number of cases of fever. This should, long ere this, have roused the Local Authority.

UNIVERSITY OF GLASGOW.

THE Chair of Chemistry in the University of Glasgow is vacant. It is to be hoped that the Home Secretary, in filling up the vacancy, will show, by the appointment he makes, the appreciation in which he holds original research. It is now high time that it should be distinctly understood that no man deserves to be appointed to a chair of science in any of our Universities unless he has shown that he has that knowledge of his subject which can only come from original investigation.

THE UNIVERSITY OF EDINBURGH AND LADY STUDENTS.

A PETITION, signed by twenty-six professors in the Universities of Scotland, has been presented to the Prime Minister, calling his attention to the position of the ladies admitted to matriculate as students of medicine in the University of Edinburgh, and afterwards refused the right to graduate, and urging the Government to take the whole subject of the University education of women into consideration, with the view of devising a remedy for the present anomalies.

IRELAND.

SMALL-POX has broken out in Waterford, four cases having been reported last week, of which one has proved fatal.

ROYAL COLLEGE OF SURGEONS.

ON Tuesday, the 5th May, there will be the usual annual meeting of the President, Vice-President, and Council of this College, for the purpose of appointing examiners to examine candidates for the fellowship and license in Surgery, diploma in Midwifery, and for the preliminary examination in Arts for the ensuing year. It is expected that those who at present examine in the various medical subjects will be re-elected without opposition.

SURGICAL SOCIETY OF IRELAND.

AN alteration in the mode of appointing the office-bearers of the Society has taken place; and, for the future, the Council, which heretofore were a self-elected body, will be appointed solely by the votes of the subscribing members of the Society.

REORGANISATION OF TRINITY COLLEGE, DUBLIN.

THE Senate of this University were engaged on last Saturday in examining the new scheme for the government of that institution. The measure is principally framed according to Mr. Fawcett's suggestions, which have been accepted by the Board and Senate. After a long debate, it was ultimately decided to adjourn the further consideration of the subject until the 18th of May next, to give ample time for a proper examination of the proposed plan.

MEDICAL STUDENTS AND THE POLICE.

THE attention of the Branch Medical Council of Ireland has been lately called to the fact that certain young men, charged from time to time by the police with riotous or disorderly conduct, frequently describe themselves as medical students, although their names are not found in the authorised list or register of such students. The Council consequently felt it to be their duty to address a letter to the Chief Commissioner of Metropolitan Police, who, on receipt thereof, kindly undertook to furnish to the Council the names and particulars of all persons so charged, and who so describe themselves; and he has recently communicated the names of two young men styling themselves medical students, who were charged with breaking a street lamp, but who, on investigation, proved not to be registered as students of medicine. The Council have thus taken the right step towards removing from a most deserving class of our students an opprobrium which now appears to be unmerited.

SIR PATRICK DUN'S HOSPITAL: ARMY MIDWIVES' CLASS.

FIVE years ago, at the suggestion of the King's Professor of Midwifery, the authorities of Sir Patrick Dun's Hospital obtained the sanction of H.R.H. the Commander-in-Chief to establish a school for training the wives of soldiers stationed in Ireland as midwives and nurses for service in their respective regiments. During this period, upwards of two hundred soldiers' wives have been trained in the hospital maternity, and have taken out their diplomas in midwifery. The women so trained came from sixty-five regiments, including household troops, artillery, cavalry, and line. The great benefit conferred by this training upon the regiments and on the women belonging to them, has attracted the attention of Her Most Gracious Majesty the Queen, who has within the last few days expressed her intention to become the patroness of the Army Midwives' School of Sir Patrick Dun's Hospital. The King's Professor of Midwifery is appointed by the King and Queen's College of Physicians, who have recently expressed their sense of the importance of a proper supervision of the education of women professing to act as midwives, by establishing an examination, and granting their licence to such midwives as shall pass the examination of the College. We understand that it is in contemplation to obtain the licence of the College in future, in addition to the diploma of the hospital, for the soldiers' wives trained as midwives in this school.

ROYAL COLLEGE OF SURGEONS.

We understand that Mr. Hilton has, at the wish of many friends, expressed his intention to allow himself to be nominated for re-election to the Council of the College of Surgeons. There will be much division of opinion as to the wisdom of this course. On the one hand, Mr. Hilton is unquestionably one of the most efficient, attentive, and able members of Council, and has shown conspicuous ability and industry in the management of its affairs, of which he has now an intimate knowledge. On the other hand, he has enjoyed office, if it be an enjoyment, for, we think, upwards of fifteen years. It is understood, however, that Mr. Hilton proposes to retire definitely from the post of examiner next year; and it is maintained by his friends that, as the post of councillor is not now at all a necessary antecedent to that of examiner, and as the duties are of a business character, the occasional re-election of a man of tried and acknowledged capacity will be far from a misfortune. It is not thought that all the recent new elections have added so much to the business power and capacity of the Council as to recommend the principle of trying new members in place of old ones. The argument is capable of abuse, but it is not without cogency.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A special meeting of the Committee of Council will be held on Thursday, the 7th day of May next, at the Freemasons' Tavern, Great Queen Street, London, at 2 o'clock in the afternoon.

Francis Fowke, *General Secretary*.

April 24th, 1874.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEETINGS.

The next meeting will be held on Thursday, May 14th, at the Crystal Palace Hotel, Norwood. The Chair will be taken at 4 p.m.

Dr. Lanchester having resigned, a new Honorary Secretary will be appointed.

Papers, etc., are promised by Mr. Christopher Heath, Mr. Sidney Turner, Dr. Galton, etc.

The dinner will take place at 6 p.m.

Henry T. Lanchester, M.D., *Honorary Secretary*.

Croydon, April 27th, 1874.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

There will be only one meeting this spring, which will be held at Gravesend, on Friday, May 29th (d.v.); A. Shewen, M.B.Lond., in the Chair.

Frederick James Brown, M.D., *Hon. Sec.*

Rochester, March 30th, 1874.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

At a meeting of the Committee of Council, held at the Freemasons' Tavern, London, on Friday, the 17th day of April, 1874—present, Mr. George Southam (President of Council) in the Chair; Dr. Falconer, Treasurer; Mr. Baker, Mr. Bartleet, Dr. Bastian, F.R.S., Dr. Bryan, Dr. Carpenter (Croydon), Dr. Chadwick, Mr. Cresswell, Dr. Foster, Dr. E. L. Fox (Bristol), Mr. Fowler, Mr. Reginald Harrison, Mr. Berkeley Hill, Mr. Husband, Mr. Nicholson, Dr. Parsons, Dr. Procter, Dr. Richard Quain, F.R.S., Dr. Sibson, F.R.S., Mr. Heckstall Smith, Dr. A. B. Steele, Dr. Stewart, Dr. Shettle, Dr. Wade, Dr. Waters (Chester).

The minutes of the last meeting were read and confirmed.

Resolved—That the sixty-seven gentlemen whose names have been circulated be, and they are hereby, elected members of the British Medical Association.

Resolved—That the recommendations of the Finance and Journal Committee be approved and carried into effect.

Moved by Dr. Sibson, seconded by the Treasurer, and

Resolved—a. That it be recommended to the annual meeting at Norwich to grant a sum of £200 for distribution in grants in aid of researches in anatomy and physiology, the action of remedies, clinical medicine or clinical surgery.

b. That a Grant-Recommendation Subcommittee be appointed by the annual meeting to advise the Committee of Council as to the proper distribution of the proposed grants—one-half at least of such subcommittee to consist of members of the Committee of Council, with power to add to their numbers within the assigned limits.

c. That repeated notice be given in the Journal, that in the expectation that this recommendation will be adopted by the annual meeting at Norwich, gentlemen desirous of pursuing investigations of the nature specified be invited to send in to the President of the Committee of Council applications for grants in aid of these researches; such application to be made not later than the time of the annual meeting, and to specify the nature of the researches they propose to make.

Moved by the Treasurer, seconded by Dr. Steele, and

Resolved—That the Financial Statement be received, adopted, and published in the Journal.

Summary of Receipts and Payments for the Twelve Months ending December 31st, 1873.

Dr.] To Receipts.	£	s.	d.	£	s.	d.
Cash in hand on 1st January, 1873, viz.:—						
In Treasurer's hands	625	3	8			
At Messrs Robarts, London	168	17	10			
With General Secretary	9	9	10			
				803	11	4
Subscriptions				5333	12	6
Advertisements				2912	13	7
Sundry Receipts				11	14	0
Sale of Waste				11	15	9
Sundry Sales of Journal				217	19	0
Interest				22	19	3
				£9,314	5	5

Cr.] By Payments.	£	s.	d.	£	s.	d.
Editor				250	0	0
Sub-Editors				118	15	0
Printer, for Journal				5883	15	3
Contributors				977	16	6
Engraving and Lithographing .. .. .: ..				49	2	6
Reporters				47	1	4
Sundry Journal Expenses (Newspapers) ..	£20	0	5			
Ditto, Editor's (Telegrams, Cabs, etc.) ..	9	14	6			
				29	14	11
Grants to Committees, Scientific, etc.:—						
Dr. J. Hughes Bennett				50	0	0
Dr. Tripe, Subcommittee on State Qualification				10	0	0
Dr. Stewart, Joint Committee on State Medicine				15	0	0
Expenses of Medical Reform Committee				28	12	5
Special Grant to Mr. Hart				26	5	0
General Secretary				350	0	0
Salaries and Wages (two Clerks, Office Boy and Editor's Boy) ..				224	19	0
Rent of Office				25	10	0
Accountant's Examination of Books and making out standing of Association for the two years 1871 and 1872 (Kain, Bullen, & Co.)				277	0	0
Law Charges				13	10	10
Cheque Book and Guarantee Policy of Collector				4	10	0
Postages (Office, Editors, and Journals to Foreign Subscribers) ..				157	0	2
Office Expenses—viz., balance from last year.. ..	£13	12	4			
Travelling Expenses of General Secretary	9	19	7			
Carriage on various Parcels	1	11	9			
Registered Letters, Unpaid Postage and Postal Cards	0	13	2			
Office Stationery, Ledgers, Account Books, Pens, Ink, Paper, etc.	26	18	10			
Office Telegrams	1	14	6			
Cleaning Office	12	13	6			
By Charges for Committee Rooms..	2	3	0			
Receipt Stamps	1	16	1			
Assistance in Office, Copying, etc.	47	0	2			
Commission paid for Advertisements	20	9	7			
Branch Secretary..	0	17	2			
Sundries	21	8	9			
				160	18	5
Bank Charges				0	5	6
Sundry Expenses of Honorary Secretaries				9	17	9
Cash in hand on 31st December, 1873, viz.:—						
In Treasurer's hands	578	13	5			
At Messrs. Robarts, London	42	2	7			
With General Secretary	13	0	9			
Less—	633	16	9			
Amount due to General Secretary on Office Expenses.	29	5	11			
				604	10	10
				£9,314	5	5

Profit and Loss for the Twelve Months ending Dec. 31st, 1873.

Dr.]	£	s.	d.
To Editor	250	0	0
,, Sub-Editors	118	15	0
,, Printer, for Journal	4445	1	5
,, Contributors	924	0	5
,, Engraving and Lithographing	41	15	6
,, Reporters	63	12	10
,, Scientific and other Grants	135	13	1
,, General Secretary	350	0	0
,, Salaries and Wages of Clerks, Office and Editor's Boys	225	17	0
,, Rent of Office	25	0	0
,, Accountants (Kain, Bullen, and Co.)	277	0	0
,, Miscellaneous	4	10	0
,, Postages	157	0	2
,, Office Expenses	147	6	1
,, Sundry Journal Expenses	29	14	11
,, Bank Charges	1	5	3
,, Miscellaneous Printing	347	17	3
,, Discounts and Allowances on Advertisements	135	9	10
,, Losses upon Subscriptions, from Deaths, etc.	45	14	1
,, Sundries	34	4	0
,, Expenses of Honorary Secretaries	9	17	9
By Profit for the Year ending December 31st, 1873	1003	13	4
	£8,773	7	11

Cr.]	£	s.	d.
By Sundry Sales of Journal	217	19	0
,, Subscriptions	5448	7	2
,, Advertisements	3060	12	9
,, Sundry Receipts	23	9	9
,, Interest	22	19	3
	£8,773	7	11

Balance Sheet, 31*st December*, 1873.

Dr.] Liabilities.	£	s.	d.	£	s.	d.
Subscriptions paid in advance				113	4	8
Printer, for Journal				6	5	5
Contributors				278	9	7
Reporters				16	11	6
Medical Reform Committee				5	15	8
Salaries and Wages				0	18	0
Rent of Office				12	10	0
Bank Charges				0	19	9
Sundries				34	4	0
Miscellaneous Printing				347	17	3
				816	15	10
Balance on January 1st, 1873	£1683	17	6			
Profit for the Year ending December 31st, 1873	1003	13	4			
Total of excess of Assets over Liabilities				2687	10	10
				£3,504	6	8

Cr.] Assets.	£	s.	d.	£	s.	d.
Subscriptions				642	9	9
Advertisements				2188	7	5
Furniture				68	18	8
Cash in hand on 31st December, 1873, viz.:—						
In Treasurer's hands	£578	13	5			
At Messrs. Robarts, London	42	2	7			
With General Secretary	13	0	9			
	633	16	9			
Less— Amount due to General Secretary on Office Expenses.	29	5	11			
				604	10	10
				£3,504	6	8

R. Wilbraham Falconer, M.D., *Treasurer.*

We have examined the above accounts for the year 1873, with the books and vouchers of the Association, and find the same to be correct.

(Signed) Price, Holyland, and Waterhouse.

13, Gresham Street, E.C., 15th April, 1874.

The minutes of the Subcommittee appointed to suggest alterations in the laws, together with the scheme prepared by the Subcommittee appointed to carry out the incorporation of the Association, were laid on the table.

Moved by the Treasurer; seconded by Dr. Carpenter (Croydon), and

Resolved—That the Laws and Incorporation Subcommittees be re-requested to confer, in order to consider the proposed alterations in the laws of the Association and the articles of incorporation, and to report to an early special meeting of the Committee of Council.

Read letter from Dr. Ward Cousins, Honorary Secretary, reporting the formation of a new Branch—viz., the Hants, Dorset, and South Wilts, together with copy of the laws proposed.

Resolved—That the laws of the Hants, Dorset, and South Wilts Branch be approved, and the Branch recognised.

Moved by the Treasurer, seconded by Dr. Steele, and

Resolved—That the Committee of Council learn with pleasure the formation of so important a Branch as the Hants, Dorset, and South Wiltshire; and they desire to express their warm congratulations and thanks to Dr. Ward Cousins, Inspector-General Smart, C.B., and others, for the great success which has attended their efforts.

Resolved—That the letter from Dr. Playfair be referred to the Journal and Finance Committee, with a request to report on the same to a future meeting of the Committee of Council.

Dr. Stewart read a communication from Dr. Rumsey, Chairman of the State Medicine Qualification.

Resolved—That a copy of the Provisional Report of the Committee on State Medicine Qualification be forwarded to each member of the Committee of Council.

Moved by Dr. Parsons, seconded by Dr. Steele, and

Resolved—That the Secretaries of Branches be requested in future to confine their applications for subscriptions to the members of their respective Branches.

Moved by Dr. Steele, seconded by Dr. Parsons, and

Resolved—That the General Secretary be instructed to make out the list of members alphabetically, and not as usual in counties.

April 24th, 1874.

MILITARY AND NAVAL MEDICAL SERVICES.

PROMOTION IN THE ARMY MEDICAL SERVICE.

Sir,—I invite your attention to matters of fact, which it might be as well to lay before those in whose hands our destiny is placed.

Ten years ago, a medical officer of fifteen years' service had not only been on the pay and allowances of a full surgeon, with all the privileges and advantages of a field-officer for seven or eight years, but he also had more than twice the chance (*cæteris paribus*) of reaching the inspectorial ranks than men of the same service now have, for the number of men between him and the rank of Deputy Inspector-General was less than 200, whilst now the medical officer of fifteen years' service has upwards of 400. I have constructed a table, and herewith send it.

Table to illustrate, by a comparison, the chances of any of the present 500 *Junior Officers of the Army Medical Department ever reaching the Rank of Deputy Surgeon-General.*

1. *Twelve Medical Officers of* 1850-51.

Name.	Entered Service.	Promoted.	After Service o
Arthur Rudge	April 1st, 1850	Nov. 2nd, 1857	$7\frac{6}{12}$ years.
John Irvine	March 15th, 1850	Nov. 2nd, 1857	$7\frac{7}{12}$,,
John Gibbons	June 7th, 1853	Nov. 3rd, 1857	$7\frac{5}{12}$,,
R. C. Todd	Sept. 24th, 1850	Nov. 3rd, 1857	$7\frac{2}{12}$,,
Jones Lampney	Oct. 8th, 1850	Nov. 3rd, 1857	$7\frac{1}{12}$,,
H. T. Reade	Nov. 8th, 1850	Nov. 3rd, 1857	7 ,,
R. M'Nab	Nov. 8th, 1850	Jan. 26th, 1858	$7\frac{2}{12}$,,
R. B. Smyth	Dec. 15th, 1850	Jan. 26th, 1858	$7\frac{2}{12}$,,
D. Macqueen	Dec. 15th, 1850	Jan. 26th, 1858	$7\frac{2}{12}$,,
J. Carroll	Jan. 3rd, 1851	Jan. 26th, 1858	7 ,,
W. J. Murray	Jan. 10th, 1851	Jan. 26th, 1858	7 ,,
W. Armstrong	Jan. 10th, 1851	Jan. 26th, 1858	7 ,,

The above had less than 200 seniors between them and the rank of Deputy Surgeon-General when they had fifteen years' service. They now at twenty-four years' service have only about 50.

2. *Twelve Medical Officers of* 1859.

Name.	Entered Service.
C. W. Griffith	January 12th, 1859.
Alex. Allan	January 12th, 1859.
Henry Walker	January 12th, 1859.
William Hensman	January 12th, 1859.
C. E. Wilkeley	January 12th, 1859.
Arthur Sanderson	January 12th, 1859.
Alex. C. M'Tavish	January 12th, 1859.
James Watson	February 1st, 1859.
J. E. Clark	February 1st, 1859.
J. D. Sainter	March 1st, 1859.
E. C. Markey	March 1st, 1859.
William Millar	March 1st, 1859.

The above, now of fifteen years' service, are not yet promoted, and have 414 seniors between them and the rank of Deputy Surgeon-General.

There are now 101 surgeons (assistant-surgeons) of upwards of twelve years' service, 89 of whom have over thirteen years' service, 59 over fourteen years, and no fewer than 28 are in their sixteenth year of service. Along with such facts, please to keep in your mind's eye these other facts: that ten years ago, a service of eleven years before promotion was unknown; and that fifteen years ago, a prospect of as much as ten years without promotion was not contemplated as possible.

The "surgeons ranking as captains" appear to be not one whit better off than those who entered the service a quarter of a century ago, notwithstanding the various Warrants of 1858, 1866, 1867, and 1873, which have appeared. Granting that previously to 1858 officers began on 7s. 6d. *per diem*, it must be remembered that they only served on that pay about seven or eight years, in many cases under seven years; that when they were promoted they received 13s. *per diem*, and that at ten years' service they always had their 15s. *per diem*; and that is exactly what we have at ten years. They were never unpromoted at ten years' service; at fifteen years' service they had their 18s. *per diem*, whilst we draw but 17s. 6d. It must be distinctly understood, that in any comparisons which I institute between the younger and the older officers, I do not refer to any who joined previously to 1848-49. It is to be presumed that some improvement has been made since Sir Galbraith Logan joined the 53rd Regiment in November 1830.

I could concede to my opponent in this argument that the officers of the last two decades have drawn from the State during their first ten years of service a sum which, aggregated, would be represented by an increase of 25 per cent. *per annum* on the average income of those who served as juniors before 1858, without damaging my cause, for have not the prices of all things risen more than 30 per cent. during the past sixteen years? The concession is, however, unnecessary.

With reference to the precedent of promoting all men of twelve years' service, I have learned that when Sir C. Wood's Indian Medical Warrant of November 1864 was promulgated, there were about 58 officers of the junior rank of over twelve years' service. The augmentation of the ranks above assistant-surgeon due to that Warrant was about one-sixth of their previous strength. A proportionate addition to the senior ranks of our department, by the promotion of all men of twelve years' service, would light up, as with sunshine, the gloom of many a desponding mind; there would be joyousness where now there is heaviness of heart; and with renewed hope there would come renewed vigour, renewed exertion, and renewed efficiency.

I am, etc., VINCENT VERITAS.

THE MEDICAL DEPARTMENT OF THE ARMY.

IN the first clause of the Abstract of Suggestions for the Improvement of the Condition of the Army Medical Department (see JOURNAL, April 25th, 1874, p. 554), an omission occurred with regard to the retirement of officers promoted to the administrative ranks. The sentence referred to should have been, "In case of promotion to the administrative ranks, surgeons-general should retire after five years in rank, and *deputy surgeons-general after ten years in rank*, unless promoted to higher rank". The remark concerning the deputy surgeons-general was accidentally omitted.

LARGE INFLUX OF INVALID SOLDIERS FROM INDIA.

THE *Times* publishes a statement that the troop-ships *Crocodile* and *Jumna* have just arrived, with upwards of 1,500 invalids from India, and the *Euphrates* with 750 more, exclusive of women and children, amounting to 830 more in the three ships. Netley Hospital, which was supposed to receive all these cases on arrival, is very full, and only able to accommodate a portion of them; and there is no alternative but to send a large number suddenly to the depôts of their regiments, often in Ireland and Scotland. These fine ships, although admirably adapted for troops, are not fitted up as hospitals; and apart from the danger of crowding such large bodies of sick into any ship, no matter how well regulated or ventilated, great discomfort must be the result, in the tropics especially. The question naturally occurs, Who is responsible for these bad arrangements? It is quite true the arrival of two ships almost simultaneously is accidental, still the principle of crowding nearly all the invalids of the season into a few weeks is wrong, and has not been found really advantageous in practice. It is stated that this questionable arrangement was one of the last acts of the present Director-General, Sir W. Muir, before leaving India, in opposition to the opinion of the Bombay authorities, and the responsibility rests with the Government of India, acting on Sir W. Muir's advice.

The statements contained in the foregoing extract we find, on inquiry, are in most particulars correct; and we learn that, as regards the invalids, a very much more serious term than "discomfort" might have been applied to the results entailed upon them by the overcrowding therein described. The *Euphrates* has arrived; and as Netley, with all its capacity and extra accommodation by tents, etc., was not able to receive all the invalids it conveyed, the direct transmission of a certain proportion to their depôts had to be repeated. The strain thrown on the establishment at Netley has been more than it has been able to meet with due regard to the proper care and accommodation of the patients sent there, a large number of whom are suffering from tropical diseases in their worst forms. Indeed, from all we hear, the whole system, or want of system, in the employment of these vast troop-ships as hospital-ships, and especially the sudden in-pour of such large numbers of severe cases as are contained among them into the military hospitals, requires thorough investigation. We cannot believe that Sir W. Muir, or any other individual, is answerable for these arrangements; we are rather inclined to believe that the costliness of constructing regular hospital-ships has led the Government of India to use their large troop-transports instead of hospital-ships, and that the cost of maintaining these troop-ships has led to their employment being restricted to as limited a period of the year as possible. The chief fault of the recent excessive influx of invalids obviously lies in India, for it must be due to their being dispatched to England in too large masses together and at too short intervals of time; but, on the present occasion, the evils resulting from this bad system have been aggravated by the accident of one of the vessels having been delayed on its voyage, while the passages of two of the other transport-ships have been quicker than expected.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Thursday, April 23rd.

Dwellings of the Poor.—Lord NAPIER and ETTRICK moved for a copy of a memorial on the improvement of the dwellings of the poor in London from the Royal College of Physicians to the First Lord of the Treasury, and expressed a hope that the document would receive the attention of her Majesty's Government.—The Duke of RICHMOND did not object to the production of the return.—The motion was consequently agreed to.

HOUSE OF COMMONS.—Thursday, April 23rd.

Contagious Diseases (Animals) Acts.—Lord SANDON stated to Mr. J. Barclay that it was not the intention of Government this year to bring in a Bill to carry out the recommendations of the committee of last session for the amendment of these Acts. The matter was under consideration.

Maintenance of Lunatics.—The CHANCELLOR of the EXCHEQUER stated to Mr. Leith that the proposal of the Government upon this matter extended to Scotland and Ireland, and when the estimates were before the House that would be the proper time to discuss the precise cases to which the new rule would apply. As a general rule, however, he might state that the new practice would apply to those who were maintained by an asylum rate as distinguished by those maintained by the poor-rate.

Broadmoor Asylum.—Mr. WALTER asked the Secretary of State for the Home Department whether his attention had been called to the several reports of the Commissioners in Lunacy, and of the Council of Supervision of the Broadmoor Asylum, suggesting the urgent necessity of adopting measures for the better classification of the criminal lunatics in that asylum; and whether he was prepared to carry into effect all, or any, of the suggestions contained in those reports.—Mr. CROSS, in answer, expressed the hope that an arrangement would be made with the two classifications of criminal lunatics.

Registration of Births and Deaths.—Mr. SCLATER-BOOTH gave notice of his intention to bring in a Bill to amend the Act relating to the registration of births and deaths.

Monday, April 27th.

The Workshops Inspectors.—Mr. DALRYMPLE asked the Home Secretary whether his attention had been called to the fact that the number of inspectors under the Workshops Act is still altogether inadequate to carry out its provisions; and whether he intends to make any addition to the number of inspectors during the present year.—Mr. CROSS said his attention had been called to this matter. He must refer the hon. member to the answer given by Lord Aberdare in April last year. Since that answer was given, three additional subinspectors had been appointed, and, although it was not the intention of the Government to appoint more inspectors during the present year, yet they hoped by some modification of arrangement to make the matter very much easier for the number of inspectors there were now. The whole matter of workshops and their relation to factories was also under the consideration of the Government.

The Maintenance of Lunatics.—The CHANCELLOR of the EXCHEQUER, in reply to Mr. Coope, said the expense of the maintenance of lunatics inflicted on the counties of Middlesex, Essex, and Kent by the large number of lunatics sent home from India who, being landed in the Thames, were afterwards placed in the asylums of those counties, was a very important question with reference to the three counties, but the question was outside the proposal made in the budget.—Mr. Coope then gave notice that he would take another opportunity of bringing the question before the House.—The Chancellor of the Exchequer, in answer to questions from Mr. Lambert and Mr. S. Stanhope, said it was intended to confine the Government grant to the case of lunatics who would be chargeable as asylum patients and not as lunatic patients. It was proposed to pay the grants in cases where they were not now made after the Michaelmas audit, and the accounts would be paid about October or November. With regard to the police-rate, the additional payments would be made at the usual times, which differed in different parts of the country.

Adulteration of Food.—The Select Committee of the House of Commons on the Adulteration of Food Act, 1872, will consist of the following members:—Mr. Clare Read, Mr. Muntz, Mr. Welby, Sir Charles Dilke, Mr. Peck, Mr. Colman, Mr. Carpenter Garnier, Mr. Alexander Brown, Viscount Barrington, Mr. Backhouse, Mr. Heygate, Mr. Mundella, Mr. Sandford, Dr. Brady, and Mr. Benyon.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 23rd, 1874.

Elliot, John, Bernard Street, Russell Square
FitzRayne, William Allen, Tooley Street, Borough
Tipple, Edward, Erith, Kent
Turtle, James Henry, Medway Priory, Chatham

The following gentlemen also on the same day passed their primary professional examination.

Potts, Edward, Queen's College, Birmingham
Schlésinger, Maurice Martin, St. Mary's Hospital

At the Preliminary Examination in Arts, held at the Hall, on April 24th and 25th, 1874, 56 candidates presented themselves; of whom 22 were rejected, and the following 34 passed, and received certificates of proficiency in general education. In the First Class, in order of merit:

1. Edith Shove. 2. Henry Hoole. 3. Edgar Atlee Hunt. 4. Henry J. G. Wilkins. 5. Elizabeth Vinson.

In the Second Class, in alphabetical order:

T. E. Abbott, F. W. Apthorpe, F. A. N. Bateman, W. L. Batson, H. H. Bovill, C. D. Briggs, C. H. Daniell, W. A. Davies, L. M. Earle, J. W. Evans, John Floyd, Isabella M. Foggo, J. Harran, J. H. Harris, F. Jennings, John Jones, E. E. King, Agnes McLaren, A. M. Megginson, W. Megginson, H. Powell, Jane R. Rosison, J. L. Rubel, Arthur Savory, W. F. Smith, D. Thurston, F. Wells, David J. Williams, and G. F. C. Williams.

The Examiners in Arts direct the attention of candidates and their teachers to the answering of the English paper in the current examination. Classifying the 56 candidates present, according to the merit of their answers, to the English paper, the examiners find that 40 have done badly, 12 fairly, and only 4 well. It is noteworthy that, of the male candidates, only one-fourth, while of the female candidates, five-sixths, have answered fairly or well.

MEDICAL VACANCIES.

The following vacancies are announced:—

ALNWICK INFIRMARY—House Surgeon: £120 per annum, furnished apartments, etc., and the privilege of taking an apprentice. Applications, 2nd inst., to W. T. Hindmarsh, Honorary Secretary.

ARDEE UNION, co. Louth—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Dunleer Dispensary District: £120 per annum, and fees. Applications, 2nd instant, to Patrick Carroll, Honorary Secretary.

COVENTRY PROVIDENT DISPENSARY—Dispenser: £80 per annum, to commence, unfurnished rooms, etc. Applications, 7th instant, to M. D. Fenton, M.D.

COVENTRY URBAN SANITARY DISTRICT—Medical Officer of Health: £100 per annum. Applications, 18th instant, to Thomas Browett, Town Clerk.

CRANBROOK UNION—Medical Officer and Public Vaccinator for the Benenden District: £43 per ann., and fees. Applications, 5th inst., to H. J. Farrar, Clerk.

CROOM UNION, co. Limerick—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Adare Dispensary District: £120 per annum, and fees. Applications, 5th instant, to Matthew O'Flaherty, Honorary Secretary, Donoman Castle, Croom.

EAST DISPENSARY, Liverpool—Assistant House-Surgeon.

ERPINGHAM UNION, Norfolk—Medical Officer for the Aldborough District: £40 per annum.

GATESHEAD DISPENSARY—Resident Medical Officer: £200 per annum, with furnished apartments.

GLASGOW ROYAL LUNATIC ASYLUM—Resident Physician-Superintendent: £600 per annum, house partly furnished, coal, etc. Applications, 12th June, to J. Roxburgh Strong, Secretary, 110, West George Street, Glasgow.

GRAY'S HOSPITAL, Elgin—House-Surgeon: £55 per annum, board and lodging. Applications, 20th instant, to David Forsyth, Secretary.

KILBURN DISPENSARY—Assistant Resident Medical Officers: £80 per annum, apartments, etc. Applications, 4th instant, to the Honorary Secretary, 33, Boundary Road, Finchley Road.

LEICESTERSHIRE and RUTLANDSHIRE LUNATIC ASYLUM—Assistant Medical Officer: £100 per annum, board, and lodging. Applications, 9th inst., to W. Napier Reeve, Clerk to Visitors, Leicester.

LINCOLN COUNTY HOSPITAL—House-Surgeon and Apothecary: £100 per annum, board, and lodging. Applications, 4th inst, to J. W. Danby, Secretary.

LITTLEMORE PAUPER LUNATIC ASYLUM—Assistant Medical Officer: £100 first year, £110 second year, and £120 third and succeeding years, furnished apartments, and board.

LONDON HOSPITAL—Surgeon-Dentist. Applications, 11th instant, to W. J. Nixon, House Governor and Secretary.

MOHILL UNION, co. Leitrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rynn Dispensary District: £100 per annum, and fees. Applications, 11th instant, to Francis Gearty, Honorary Secretary, Finaloughta, Dromod.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury—Medical Registrar: £50 per annum. Applications, 7th inst., to B. B. Rawlings, Secretary.

NEWPORT (Monmouthshire) INFIRMARY and DISPENSARY—Resident Medical Officer: £85 per annum, furnished lodgings, board, etc. Applications, 6th instant, to E. W. Willey, Secretary.

NEW ROSS UNION—Medical Officer for the Templeudigan Dispensary District: £50 per annum. Applications, 7th inst., to Edward Kavanagh, Honorary Secretary, Ballygalvert, Ballywilliam.

OXFORDSHIRE—Public Analyst.

QUEEN'S HOSPITAL, Birmingham—Pathologist. Applications, 16th instant, to W. Young, Secretary.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields—Curator. Applications, 4th instant, to R. J. Newstead, Secretary.

ROYAL PIMLICO DISPENSARY—Attending Medical Officer. Applications, 4th instant, to the Secretary, 83, Cambridge, Street, S.W.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

ST. THOMAS'S HOSPITAL—Resident Assistant Physician: £100 per annum, furnished rooms, and commons.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

SURREY COUNTY LUNATIC ASYLUM, Wandsworth Common—Junior Assistant Medical Officer: £170 per annum, furnished apartments, etc. Applications, 23rd instant, to Dr. Biggs, Superintendent.

UNIVERSITY COLLEGE HOSPITAL—Resident Medical Officer. Applications, 23rd instant, to John Robson, B.A., Secretary to Council.

WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board, lodging, etc. Applications, 4th instant, to the Secretary.

WESTERN INFIRMARY, Glasgow—Superintendent: £250 per annum, with board and lodging. Applications, 15th June, to W. H. Hill, Honorary Secretary, 106, Ingram Street, Glasgow.

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, furnished apartments, etc. Applications, 27th instant, to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*Barnes, Robert, M.D., appointed Consulting Physician for Diseases of Women and Children to the Hospital for Diseases of the Nervous System, Portland Terrace, Regent's Park.

*Bellamy, E., F.R.C.S., appointed Lecturer on Anatomy at Charing Cross Hospital.

Britton, Thomas, M.D., appointed Physician to the Halifax Infirmary and Dispensary.

Dunnage, Arthur R., M.R.C.S.E., appointed Assistant Surgeon to the Central London Ophthalmic Hospital.

Griffith, Robert Poole, L.K.Q.C.P.I., appointed Assistant Civil Surgeon in the Island of Mauritius.

*Molony, P. J., B.A., M.D. appointed Medical Officer and Public Vaccinator for the Chesterton District of the Chesterton Union.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGES.

Hadley—Cutcliffe.—On April 15th, at Aston Parish Church, by the Rev. F. Williams, assisted by the Rev. J. H. Scowcroft, Clement Hadley, M.R.C.S., of Ashted House, Birmingham, to Fannie, only daughter of John Cutcliffe, Esq., of the Olives, Smallheath.

Perigal—Beck.—At the British Legation, Rome, on April 16th, by the Right Rev. the Bishop of Aberdeen and Orkney, assisted by the Rev. T. B. Grant, English Chaplain, Arthur Perigal, Esq., jun., M.D., Wheatley, Oxon., son of Arthur Perigal, Esq., R.S.A., Edinburgh, to Helena Jane, only daughter of the late F. T. Beck, Esq., Norbury Villa, Blackheath, Kent.

DEATHS.

Arnold, Rickard, Esq., late Surgeon-Major Her Majesty's Indian Medical Service, aged 40, at Grove Cottage, Woolston, Southampton, on April 20th.—Indian papers please copy.

Lightfoot, Robert, M.D., of Newcastle-upon-Tyne, Medical Officer in the Dutch Expedition to Acheen, at sea, of dysentery, on his way from Padang to Batavia, aged 30, on April 20th.

Manley, Edmund, M.B., at Rydal Mount, Manchester, aged 46, on April 8th.

Spicer, Richard William, F.R.C.S.Eng., at Chard, aged 72, on April 25th.

Telford, Thomas, M.D., F.R.C.S.I., at 23, Clarinda Park East, Kingstown, Dublin, on April 23rd.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8 P.M. Annual Oration and *Conversazione.* Mr. R. Brudenell Carter, F.R.C.S., will deliver the Annual Oration. Subject: "The Waste of Life by Preventable Disease". To be followed by the *Conversazione.*—Odontological Society, 8 P.M. Casual Communications. Mr. Thomas Bryant, "On Dentigerous Tumours of the Jaws".

TUESDAY.—Pathological Society of London, 8 P.M. Dr. Wickham Legg: Xanthelasma Multiplex: Sarcoma of Stomach. Dr. Peacock: Dissecting Aneurism of Aorta; Perforation of Bowel in Typhoid Fever; Malformation of the Heart. Sir Wm. Jenner: Specimens from a Case of Leucocythæmia. Mr. Howard Marsh: Hydatids of the Spermatic Cord. Mr. Nunn: Tumour which was attached to the Cervical Vertebræ. Dr. Goodhart: Fibroma of the Ovary; Cancer of Uterine Mucous Membrane, secondary to Cancer of Ovary. Dr. Hilton Fagge: Fibroid Disease of the Heart, with Gelatiniform Degeneration and Pericarditis: Repaired Fracture of the Sternum; a Bladder several years after Lithotomy. Mr. McCarthy: Ulcer of Duodenum from a Case of Death by Burning. Mr. Norton: Syphilitic Gummatous Tumour of Larynx. Dr. Leared: Bothriocephalus Latus. Dr. Squire: False Membrane from the Sputum of a Case of Herpetic Catarrh. Dr. Fletcher Beach: A Bladder with a Pouch communicating with a third Ureter; Brain, Heart, and Trachea, showing Absence of Thyroid Gland in a Cretin. Dr. Morell Mackenzie: Growth from Larynx and Trachea; Bronchocele in a Dog.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Dr. Godson will show a remarkable Specimen. Dr. Copeman (Norwich), "On Consultation Midwifery in Private Practice"; Dr. Bassett, "On the propriety of administering Iron during Pregnancy as a preventive of *Post Partum* Hæmorrhage"; Dr. Tilt, "On Lymphangitis in Pelvic Pathology"; and other communications.—Royal Microscopical Society, 8 P.M. Mr. H. J. Slack, "On certain Silica Films artificially produced".

THURSDAY.—Harveian Society of London. 7.15 P.M.: Special Meeting of Council. 8 P.M.: Mr. J. R. Lane, "On a Case of Aneurismal Dilatation of the Occipital Artery treated by Ligature of the Common Carotid."

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Cripps, "A Case of Palmar Aneurism"; Mr. Callender will describe and exhibit "The Sarcotome" for Dr. Hollis; Dr. H. Weber, "Cases illustrating the Communicability of Consumption from Husband to Wife"; Dr. Donkin, "A Case of Diabetes treated by Skim Milk".

NOTICES TO CORRESPONDENTS.

Correspondents not answered, are requested to look to the Notices to Correspondents of the following week.

Public Health Department.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

Authors desiring reprints of their articles published in the Journal, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

Correspondents, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

We cannot undertake to return Manuscripts not used.

Communications respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the Journal, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

The General Secretary of the British Medical Association acknowledges the receipt of two Essays for competition for the Hastings Gold Medal, one with the motto "Quo me, Bacche, rapis tui Plenum?" and the other with the motto "Ipsissima verba".

There will be no appointment of an Assistant Dental Surgeon at the Middlesex Hospital consequent upon the appointment of Mr. Turner as Dental Surgeon, and Mr. Tomes as Consulting Dental Surgeon.

Punic Faith.

The *Lancet* has now for many years watched with interest and annotated with affection the growth of the British Medical Journal. It complained that it was a small journal, and it has seen it grow to noble dimensions; that it was badly printed, and that it had more than a fair share of errors of the press; these faults also have passed away, and it has beheld, no doubt with pleasure, the British Medical Journal rise to a position of eminence in the medical press and attain a circulation considerably greater than its own. Once faintly denying a fact of which it has now been well convinced, it still feels a platonic interest in the affairs of the British Medical Journal, and showed last week its anxiety to consolidate the good relations which exist between the editor and a staff of nearly two hundred editorial contributors, by an amiable commentary on an incident touching the authorship of an article which otherwise in no way concerns it.

We shall not discuss the matter with our contemporary, whose tender and disinterested regard for the personal interests of our staff will assuredly be appreciated by all its members. They, however, are better informed than the editor of the *Lancet* can possibly be of the careful precautions which are taken to secure their interests, and must feel his interference obtrusive. A casual perusal of the correspondence—certainly a full knowledge of the facts—will have easily satisfied any candid person that the incident referred to is precisely the sort of accidental and inadvertent exception which proves a rule that has held good in a thousand instances and over a series of years. It is apparent that the communication made to the President was held by the one side, but not on the other, to be a privileged communication. Seen through the spectacles of affection for the Journal, this incident appears to the watchful eye of our contemporary in a magnified and distorted aspect. Time will calm its fears and tranquillise its emotion on this as on other subjects which concern the progress of the Journal and the welfare of the Association and its officers.

Punic Faith.

Sir,—The *Lancet* under this title publishes an attack on Sir William Fergusson, which is at least injudicious on its part. There must be many as old as I who retain a vivid recollection of the fact that that newspaper, not from any misunderstanding, but deliberately, and as a means of injuring Mr. Lawrence, with whom it had a quarrel, published his name as the author of certain editorial articles which had previously appeared in its columns, attacking Mr. Guthrie and the London College of Surgeons. It is no secret that a similar threat is alleged to have been recently held out to another well known official person in London. This article, therefore, betrays both an excess of malice and defect of memory, and reminds modern readers that these unpardonable faults are stereotyped in the management of this newspaper. I am, etc. Tenax Propositi.

Puerperal Thrombosis.

Sir,—In your report of the discussion at the last meeting of the Obstetrical Society, I observe that Dr. Playfair remarked that "there was not a single English textbook on midwifery in which puerperal thrombosis was even alluded to". If Dr. Playfair will refer to page 132 of my *Obstetric Aphorisms for Students*, he will find that I have treated of this subject, and have quoted freely from a paper by Dr. Robert Barnes which appeared in the *Obstetrical Transactions* for 1863.

Clifton, April 26th, 1874. I am, etc., J. G. Swayne.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, April 24th; The Ayr Advertiser, April 23rd; The West County Lantern, April 18th; The Scotsman, April 23rd; The Brighton Examiner, April 21st; The Leicester Advertiser, April 25th; The Blackburn Standard, April 29th; The Hull Evening News, April 24th; The Sunderland Times, April 24th; The Auckland Chronicle, April 17th; The Blyth and Bedlington Star, April 25th; The Northern Daily Express, April 21st; The Sussex Advertiser, April 22nd; The Newcastle Daily Journal, April 22nd; The Bridgwater Mercury, April 15th; The Richmond and Twickenham Times, April 25th; The Brighton Daily News, April 27th; The Sussex Advertiser; The Bradford Observer: The Naval and Military Gazette; The Dorset County Chronicle; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Rev. Dr. Haughton, Dublin; Dr. Murchison, London; Dr. Trench, Liverpool; Dr. Morell Mackenzie, London; Dr. J. W. Moore, Dublin; Dr. S. Wilks, London; Dr. Gordon, London; Surgeon-Major Gore, Ballinglass; The Secretary of the Odontological Society; A Regimental Officer; Dr. Russell, Montrose; An Associate; Dr. Jagielski, London; Mr. T. Holmes, London; Dr. J. Crichton Browne, Wakefield; Dr. Holman, Reigate; Dr. Robert Barnes, London; The Secretary of Clinical Society; Dr. Arlidge, Newcastle-under-Lyme; Mr. Eassie, London; Mr. Southam, Manchester; Mr. H. Sewill, London: Mr. E. W. Barton, Leeds; Mr. G. Hett, London: Mr. T. H. Bartleet, Birmingham; Mr. Golding Bird, London; Mr. Jordan, Newcastle-upon-Tyne; National Anti-Income-Tax League; Dr. Edis, London: Dr. J. Hughlings Jackson, London; Mr. W. Fairlie Clarke, London; Dr. T. Blunt, Leicester; Mr. T. P. Pick, London; Our Paris Correspondent; Dr. Wardell, Tunbridge Wells; Dr. Lanchester, Croydon; The Secretary of the Pathological Society; Dr. Wiltshire, London; Our Edinburgh Correspondent; Mr. T. J. Hadley, Birmingham; Commander Dawson, London; Mr. Greenway, Plymouth; Mr. Lyth, Rotherham; Dr. Diver, Southsea; The Secretary of the Obstetrical Society; Mr. H. M. Evans, London; Our Glasgow Correspondent; Dr. Noel Gueneau de Mussy, Paris; Mr. R. G. Whitfield, London; Mr. J. B. Blackett, London; Dr. J. G. Swayne, Clifton; Dr. E. C. Fox, Sidmouth; Dr. W. A. McKeown, Belfast; Mr. William Cooper, Widnes; Our Dublin Correspondent; Chirurgien, Manchester; Mr. Fowler, Bath; M.D.Ed.; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Galt, Ashton-under-Lyne; Messrs Bullock and Reynolds, London; Dr. E. J. O'Neill, Dublin; Dr. T. More Madden, Dublin; The Subdean of Charing Cross Hospital, London; Dr. A. Ransome, Manchester; Mr. Burford, Hastings; Mr. John Allen, London; Dr. W. Tyndale Watson, Tottenham; Surgeon-Major, Dublin: Mr. C. L. Prince, Tunbridge Wells; Some Members of the Brisish Medical Association; Dr. Styrap, Shrewsbury; Mr. A. W. Spicer, Chard; Dr. J. F. Payne, London; etc.

CLINICAL LECTURES
ON
MENTAL AND CEREBRAL DISEASES.

By J. CRICHTON BROWNE, M.D., F.R.S.E.,
Medical Director, West Riding Asylum; and Lecturer on Mental Diseases to the Leeds School of Medicine.

V.—Senile Dementia.

Gentlemen,—Aged people, as well as the young and adults, are liable to various distinct forms of mental disease, distinct in their origin, in their progress, and in their treatment; and it is an error, therefore, to speak of senile insanity as if it were a pathological entity, and to group under such a term conditions which have really nothing in common simply because they occur in the last decade of life. I have specially pointed out to you to-day three cases, and I would now briefly recapitulate the symptoms which we noted in each of them. In the first place, you saw, in Ward 21, Elizabeth M., who is 71 years of age, and you could not fail to remark that she was in a state of great mental distress. She sat wringing her hands, rocking her body, and whimpering from time to time. Her expression of countenance was terribly woe-begone, and, when I questioned her, she freely acknowledged that she was uneasy and wretched. She told you that she was accused of having taken away the character of her nephew, and of having murdered some one, and that she was in momentary expectation of the officers of justice, who would convey her to prison and thence to the assizes, to be tried on the capital charge. This it was, she said, that preyed upon her mind, deprived her of rest, and took away her appetite. But, however much the fear of detection and punishment might distress her, it did not blunt her intelligence. She at once understood all that was said to her, and answered quickly and clearly. Her memory, as tested by the information contained in the case-book, was found to be in excellent working order. She correctly stated her age, the date of her admission to the asylum, and numerous incidents in her past life, informing us that she had been a housekeeper, and had lost a good situation which she had long held immediately before the fears which she now suffers from first assailed her. You remarked that she was a feeble, withered-looking old woman, with pale skin and mucous membranes; that her pulse was weak and compressible; that there was a soft *bruit* with the first sound of the heart at the base, but that there was no arcus senilis nor cording of arteries.

In the same ward, Mary L., 87 years of age, was next brought before you, and you must have been struck with the contrast which she presented to Elizabeth M. She was all smiles and hilarity, wandered restlessly about, addressing each of our party, and talking so rapidly that it was difficult to make out what she said. The gist of her conversation, however, was that she wished us all to dine with her, and that she was about to confer great benefits on each. She appeared to talk incoherently, but analysis revealed that there was a connection in all her rambling discourse. When spoken to quietly, she gave no heed to what was said; but, when a question was asked very emphatically, she would reply to it and then rush off again in her headlong monologue. She was a little emaciated woman, with a flushed face, a hot head, and a pulse of 90. Arcus senilis was visible in both eyes, and both the radial and temporal arteries felt hard under the finger. The records which were read to you show that she has been an inmate of this asylum for seven years, and that she is subject to attacks of excitement similar to that through which she is now passing about every three months, these attacks being easily controlled by ergot. Between the attacks, she is said to be an industrious, contented, brisk old woman, with faculties singularly clear and vigorous considering her advanced age.

Passing to the male wards, you encountered, in No. 2, Joseph B., aged 74, pawnbroker from Leeds, who, on being interrogated, gave the following account of himself. "I am 22 years old, and came here this morning, having walked over from Doncaster. I am a schoolmaster by trade, and have been at all the best colleges in London. This is Monday, and to-morrow will be Friday. I am so poorly that my lips cling together. I have no money, but can get some from my friend Mr. L." After pausing a few moments, I again put the same series of questions to Joseph B., and elicited the following somewhat inconsistent version. "I am 40 years old, and a married man. My wife and I came here last Sunday from New Wortley. I am in the glove and hosiery trade, and was trained in Leeds. This is Tuesday, and to-morrow will be Wednesday. I never was in better health in all my life. I should have £30 in my pocket, but I can't find it." Further questions followed, and the result of the examination must have been to satisfy you that Joseph B.'s memory is completely gone, and that his mind is generally much enfeebled. Watching the old man's manner, you might have thought that he was explaining himself with great accuracy. He was neither excited nor depressed. He replied to questions readily and courteously, but his whole discourse was inaccurate and incoherent. His features, much wrinkled, still wore an expression of intelligence. In his eyes, the arcus senilis was distinctly seen, while on his temples the temporal arteries were observed to stand out prominently and to pursue a very tortuous course. Touched by the fingers, these arteries were felt to be hard and unyielding, as were also the radial arteries at the wrist. The hands of Joseph B. trembled much, and his gait, when he walked, was tottering, and his whole aspect was that of an infirm, broken-down old man. Referring to the case-book, we ascertained that Joseph B., having suffered reverses in business, showed signs of mental decay two years ago. His memory gradually failed; he became childish and physically weak, and was ultimately sent to the asylum because he was restless at nights and was constantly wandering away from home and losing himself. It is reported of him that he is always cheerful and tranquil, but that he is confused in his ideas, and can never tell where he is, nor recall any recent experiences. He is constantly mistaking the identity of the persons around him, and making ridiculous blunders. He is occasionally sleepless and restless. His appetite is good.

Now, these three patients whose cases we have been recapitulating are all far advanced in life, and by some they might, therefore, be grouped together as instances of senile insanity. But the assemblage of symptoms which each presents is surely very distinctive—so much so as to warrant their separation in anything but a crude and superficial classification. The first patient pointed out to you, Elizabeth M., is obviously labouring under delusional melancholia; the second is as obviously the victim of recurrent mania, and the third is unmistakably affected by senile dementia; for there is one kind of mental derangement which is properly specified by the adjective senile, and that is the fatuity, which is simply an intensification or morbid exaggeration of the mental enfeeblement which is incidental to old age. The human brain, as you know, waxeth old as doth a garment, and there are few, if any, of our race that reach a great age without giving external manifestations of its thread-bare texture. When the allotted boundary of man's days is approached or survived, his eye necessarily grows dim, and his natural force is in some degree abated, and, although in many persons the change which is brought about by the passage of time may be scarcely perceptible, in others it is more conspicuous, and is designated dotage. Now, dotage is simply senile dementia in a mild form, and senile dementia is advanced dotage. In both, the essential condition is a gradual degeneration and decay of the mental faculties, without either maniacal perturbation or melancholic depression.

The chief and earliest characteristic in senile dementia is a failure of memory, especially as to recent events. Long past occurrences, the incidents of youth and boyhood, may be readily recollected, but the affairs of yesterday cannot be recalled. This, in all probability, is due to some dulness of perception and imperfection in the processes of sensation, as well as to an enfeeblement of the conservative powers themselves. With the weakness of memory in the aged, there is also very often weakness of sight and hearing; and, even when these senses are not demonstrably impaired, there is frequently, I believe, some deterioration in their functional activity, so that the impressions they transmit are faint and unenduring, and cannot link themselves with previous mental possessions. Had we an instrument for clinical use by which to measure the rate of nervous conduction, I have no doubt that we should find in the aged an appreciable increase in the time taken by a stimulus to travel along a sensory nerve. And, with that tardier propagation, there must be diminished intensity, and so a less powerful solicitation of attention. But attention is itself enfeebled; it can be directed, but not concentrated, and thus it comes about that the whole process of sensation and perception is vitiated, and that all new impressions made upon the mind are feeble and are speedily obliterated. Deprived of recent acquisitions, the mind busies itself with its older stores. It turns from a confused and indistinct present to a clear and well-ordered past, and, when called into action by an external agency, it makes use of long past experiences. In many patients in this asylum who are advanced in life, you may at all times find this state of matters exemplified. They cannot tell you what happened to them a few hours ago, but they can vividly describe events which occurred at the distance of half a century. If pressed with questions, they will often mix up ancient and modern reminiscences, and produce strange and incongruous combinations, mistaking the identity of the persons around them, and jumbling up places, seasons, and incidents in "a concatenation accordingly".

As senile dementia advances, the failure of memory becomes more extensive and pronounced, the ideas become more confused, and pass from under the control of volition. By no effort, then, can a series of thoughts be connectedly carried on. Apprehension may remain, so that a question asked is understood, and an attempt is made to answer it; but, before the reply can be fully formulated something has turned aside the current of thought, and incoherence is the result. Irrelevancy reigns supreme. The mind is disintegrated, only fragments of intelligence remain. Amidst all this confusion and disjointedness, it is not surprising that delusions should arise. An old man who finds himself, after some great rent in memory, in a large building with numerous rooms and corridors, may be excused for fancying that he has got into a grand hotel, and for deploring that he has no money wherewith to pay for his bed. And an old lady, who is living in the memories of blooming fifteen, may well suspect the motives of companions who administer gin, and insist upon her wearing spectacles. Delusions of suspicion very often arise in senile dementia, and these may be either of a definite type or multiform and various. They are much more frequently the latter. This moment, the patient fancies that he has been swindled; the next, that he has been poisoned, and, the next again, that he has been beaten and abused. Even the delusions of the senile dement are dilapidated. Invariably—and this is the important point in diagnosis—they are associated with obvious failure in perception, memory, apprehension, judgment, and depend really upon errors of sense and reasoning. With the delusions there is sometimes excitement, but this is not mania. The patient is restless and garrulous, but he is at the same time incoherent and demented. No flood of ideas overwhelms him; on the contrary, a mere dribblet of thought trickles through him, and his objectless wandering, his cries, and his unintelligible loquacity are only expressive of vague stupor and perplexity.

The final phase of senile dementia is, of course, almost complete abolition of mental power. A question asked is not comprehended; a state of drowsy stupidity is established; the patient is helpless and inattentive to the calls of nature, and then death is not far distant.

In the sphere of the emotions, throughout the whole course of senile dementia, all tends towards bluntness and impotency. The feelings grow narrow and egotistic, and cannot be touched by the joys or sorrows of others. Deep feeling becomes impossible, and the most cherished sentiments, those that seemed bound up with being, drop out of sight. Hatred, a firm adherent, is lost and forgotten; and love, that survives the grave, pales in the misty twilight of senile fatuity. Indifference to everything but personal considerations is the prevailing attitude of mind. You tell an old man in this state that his wife is just dead, and his comment is that it is very cruel of her to go at a time when he wanted his dinner. You intimate to an old woman that her son has succeeded to a fortune, and she hopes that he will send her a pound of tea. Selfish, superficial, inconsequential emotions are alone manifested. The dominant emotion is generally one of vague discontent and querulousness; but sometimes a sprightly hopefulness is uppermost. Just as old people are either crusty or genial, so are senile dements; and of course the prevailing temper of the man comes to the surface in the diseased condition. Then morbid propensities occasionally display themselves; and of these, perversions of the sexual appetite are most frequently met with. Old fatuous men, in whom passion might be supposed to be dead, contract foolish marriages. An octogenarian celibate seeks out an Abishag to comfort his chill decrepitude. Dr. Carpenter has been made acquainted with six cases in which an extraordinary salacity developed itself at an advanced period of life, whilst concurrently with this, or following upon it, there was that kind of unsteadiness of gait which may be held to indicate chronic disease of the cerebellum.

This brings us, gentlemen, to the physical symptoms of senile dementia; and, in dealing with these, I would first speak of the facial expression. Now, although senile dementia is often, as we have seen, profound enough, yet the countenances of those suffering from it are not so expressive of mental obscuration as in other forms of dementia which occur earlier in life, and especially in the dementia which is induced by epilepsy. The fine lines of expression are not smeared out. The fact is, that the faces of old people are tattooed with expressions. Ruling passions, habitual sentiments, dominant moods, have been indelibly stamped upon them. The bent of manner, too, has been so fixed and settled, that it retains some of its pristine characteristics even far into fatuity. It is, however, modified in several ways, and most notably by the muscular weakness and tremor which is an almost constant accompaniment of senile dementia. The figure stoops, the step is uncertain, the gait unsteady, and there is muscular tremor, which is more persistent and regular than in general paralysis, and which affects the hands and arms first, and not the face and tongue. We all know the shaky hand, the tottering gait, the squeaking voice, which are so often observed in the octogenarian, and which constitute the stage tricks for the characterisation of old men. Well, these we have constantly associated with senile mental weakness; sometimes to a slight degree, and sometimes to a remarkable extent. But, however severe these involuntary movements may be, they are not, I think, to be regarded as manifestations of paralysis agitans. That I should class as a neurolytic or functional nervous disorder, indicating heightened excitability in nervous tissue, and therefore curable; whereas these tremors of which we are now speaking are dependent upon organic wasting changes in the brain and spinal cord, and are quite irremediable. As a rule, they affect the whole body, but are most intense in those muscles which are most frequently involved in voluntary movements.—those of the hands, arms, neck, and face. The agitation is more violent on one side of the body than on the other; is increased by any attempt at exertion, or emotional excitement, and is diminished by rest and mental tranquillity. It ceases altogether during sleep.

A patient who was in this Asylum about eighteen months ago afforded a good example of senile trembling of the worst type. He was a sexton from Leeds; and, although only sixty years of age, had the aspect of an extremely old man, and laboured under distinct senile dementia. His memory had given way fifteen months before he was brought to this hospital, and had become gradually more and more enfeebled. The calendar was a blank to him; and he could not even be brought to remember the days of the week. His apprehension was slow and imperfect, and his attention could not be fixed. He was restless and ill at ease, for ever wondering where he had got to, and spending most of the night in exploring the four corners of his bed-room. Delusions and hallucinations also distressed him; he was about to die, strange figures gathered round him, and fumes of sulphur invaded his nostrils. Emaciated and haggard, he could not walk about without assistance, his inability to do so being partly owing to weakness, and partly to excessive muscular tremor affecting the whole body, but more decidedly its right half. The shaking continued without intermission throughout his waking hours, and prevented him from dressing or feeding himself. When he tried to lift anything, his hand trembled violently. When he spoke, his head nodded and shook, and his features quivered. The grasping power of the hand was weakened, and indeed all the muscles were wasted and enfeebled. This singular muscular agitation, we were informed, came on at the same time with the mental failure, fifteen months prior to his admission here, and was preceded by a peculiar numb dead feeling in the right foot. The right side had always been more severely affected than the left. It was noted that the left pupil was considerably larger than the right, and that the patient laboured under abnormal thermal sensations. Even in cold winter weather, he would throw off all the bed-clothes except one sheet, and complain that his skin was burning, when it was shown by the thermometer to be only of normal temperature. Treated by a liberal dietary, by wine and by succus conii, this old man considerably improved. He became composed in mind, slept well, and the muscular trembling greatly abated. To the end, however, he was demented and afflicted by tremor.

The muscular tremor and weakness which we have been considering do not pass into paralysis in senile dementia. If an apoplectic stroke occur and hemiplegia follow, the case is no longer one of senile, but of organic dementia. A new set of symptoms has been introduced, the whole course of the case has been altered, and a different line of treatment is indicated. Towards the close of senile dementia, epileptiform seizures sometimes occur. Coma comes on; then occur muscular twitchings, and then perhaps severe clonic spasms; these, as well as the coma, being due to a rapid increase of serous effusion in the ventricles or in the meshes of the pia mater. Several attacks of this kind, followed by recovery, with general muscular weakness, but no distinct paralysis, may precede the final coma of senile dementia.

Sometimes patients in a state of senile dementia complain of pain in the head and dizziness. As a rule, however, they make no such complaints. A large majority of them present evidences of chronic atheromatous changes in the arteries. As we shall hereafter see, senile dementia may occur without any vascular degeneration. Still, it is correct to say that, in about three-fourths of the cases which come under observation, the simple and numerical atrophy—the necrobiosis—of the brain in which it essentially consists, is due to atheromatous changes in vessels and impeded blood-supply as much as to diminished functional activity. The vascular changes, the fibroid or calcareous thickening of the arteries, can usually be recognised externally either in the temporal or radial arteries, which, when thus degenerated, have a hard corded feel to the finger, and are much twisted and contorted. Occasionally, the disease of the arterial coats is so extensive, and is so combined with other conditions, that we have senile gangrene along with senile dementia. That was so in William S., aged 60, a gentleman's servant, from Leeds, lately an inmate of Ward No. 4. He was stupid, and would not speak; his utterances were incoherent; he was restless at nights; his limbs trembled; and his arteries were hard and rigid. The day after his admission, a purple-black spot appeared on the left little toe. That spread, involved two other toes, and ran up the back of his foot, and he sank exhausted.

The pulse in senile dementia is generally slow. This may be owing to the increased resistance of the vessels, rendered inelastic by disease; or to atrophy and degeneration of the muscular substance of the heart; or to both these causes. The temperature is always slightly below the normal standard, and this, too, even when excitement is present. The appetite is capricious; sometimes the patient will eat voraciously, and at other times will altogether refuse food. But whether nourishment be taken freely or scantily, emaciation goes steadily on. The body loses its plumpness; the skin becomes wrinkled and flabby; and the muscles soft and flaccid. In some cases, wasting reaches an extreme degree. The nutrient activity of all the tissues seems to be defective, and so senile marasmus occurs. One woman labouring under senile dementia and marasmus now in this Asylum, Jane F., Ward 21, has, since her admission, fallen from 96 to 75 lbs. Considering that she is a woman of average height, that is a very light weight to attain to. She was terribly emaciated when received here, and now she is a mere skin-clad skeleton. This is an extreme case, but in all cases of senile dementia there is some loss of weight. As a contrast to Jane F., I may point out to you Hannah W., aged 72, who is subject to recurrent maniacal attacks, and who now weighs 246 lbs.

Senile dementia has been spoken of as "the last infirmity of noble minds".

> "From Marlborough's eyes the tears of dotage flow,
> And Swift expires a driveller and a show."

But experience will convince you that it is also the infirmity of minds which have no pretensions to nobility. For my part, I should be inclined to assert that the stupidest people are the most prone to it. The statistics of Franchini and Hawkins and Madden show that the lives of *literati* are unusually prolonged; and that, of course, means that senile decay was deferred in them beyond its usual period of incursion. No doubt, there are certain forms of brain-activity that tend to curtail existence; but, on the other hand, the cultivation of science and literature appears to be favourable to longevity. Some of the ablest and hardest working people that I have met have been those who have longest preserved their mental faculties intact; and some of the feeblest and idlest have been those who have dropped most prematurely and suddenly into senile dementia. The brain that is "quick to learn and wise to know" is that which will longest retain its vigour, unless it allow thoughtless follies to lay it low in the flower of its youth. Again, let me impress this truth upon you, that it is not pure brain-work, but brain-excitement or brain-distress, that eventuates in brain-degeneration and disease. Calm, rigorous, severe mental labour may be far pursued without risk or detriment; but, wherever an element of feverish anxiety, wearing responsibility, or vexing chagrin, is introduced, then come danger and damage. Entire abstinence from mental labour is much more likely to bring on senile dementia than any excess in it; and so is an abrupt cessation from any moderate and partial mental exercise which has been habitual. The tradesman who retires with a view to *otium cum dignitate* generally gets *tædium vitæ* instead. No more pitiable picture can, I think, be conceived, than the retired man of business wandering about in listless ineptitude and dreary opulence, without resources, reminiscences, aspirations, and with the great burden of fatuity settling down upon his mind. A lively bankruptcy must be delightful when compared with the state of that man. Struggling poverty would be a positive blessing to him. Sustained activity is essential to the maintenance of an habitually active organ in health; and atrophy—swift atrophy—must follow when it is deprived of its wonted exercise.

But any excessive activity or unusual excitement may accelerate the supervention of those changes which are incidental to advanced life, and aggravate their character, so that senile dementia is reached. Concussion from a fall or blow, an unexpected shock either of grief or joy, or excessive sexual or alcoholic indulgence, may prove an injurious stimulation to the tissues of an old man's brain, and hasten their decay. Those who have been accustomed to indulge too liberally in wine or beer, or who have suffered from exhausting disease, are, of course, more liable to pass into senile dementia than those who have lived more temperately, and have not been so weakened.

I am able to show you the brain of a man who suffered under senile dementia, and who died in this Asylum a few days ago. William A. was seventy-three years of age, and a saw-sharpener from Leeds. Two of his sisters had been insane, one having been an inmate of the Retreat at York; but he never showed any signs of mental aberration until the infirmity of age crept over him, when he became low-spirited and stupid, wandering about from place to place without object, and talking in a rambling incoherent manner. After a brief sojourn in the workhouse, he was brought here, and manifested all the usual symptoms of senile decay. His strength failed rapidly, and he died after an attack of asthma and bronchitis. His brain is now submitted to your inspection. You see that the arachnoid covering it is thickened, and has a whitish cloudy aspect over the frontal and parietal lobes, where, also, a large amount of subarachnoid fluid buoys it up, and fills the interspaces between convolutions which are attenuated and wasted. Note that the cloudiness of the arachnoid and the wasting of the convolutions are limited to the frontal and parietal lobes. They terminate abruptly at the horizontal line of the Sylvian fissure below, and at the external postero-parietal fissure behind. No trace of them can be detected over the occipital or temporo-sphenoidal lobes, nor on the orbital lobule. The pia mater strips from the gyri with great facility; it can be removed from nearly the whole of a hemisphere in one piece, and yet some of the vessels ramifying in it look as if their coats were thickened. The larger of them, as seen with the unaided eye, running over the summits of the convolutions, have a dull opaque red colour, as if filled with red paint. When you look at them closely, you will, I think, have little doubt that their walls are thickened. If that be so, we have here thickening of the walls of vessels without any adhesion of the pia mater; and I must ask you carefully to note that fact, as I shall have occasion hereafter to show you thickening of the walls of vessels with strong adhesion of the pia mater to the subjacent cineritious substance. I shall then explain to you some important distinctions between changes in vascular walls originating in the vessels themselves and changes originating in surrounding tissues and secondarily propagated to the vessels. That the vessels here are really degenerated, will be evident to you if we turn over the brain and examine the large arteries at its base. These, you see, are studded with atheromatous patches of a dirty yellow colour, chiefly located at points of bifurcation, but scattered also along the coats of vessels where no branches are given off. The internal carotid and vertebral arteries, where cut across, present round gaping orifices, and all the large vessels retain a roundish or nodulated contour. But there are still other anomalies. The left posterior communicating artery has entirely disappeared. In its place, there is a tough fibrous band perforated by no canal; and at its points of union with the posterior cerebral and internal carotid arteries the atheromatous changes are singularly well marked. It seems that this vessel has been occluded by atheromatous metamorphosis, and has then undergone a fibroid degeneration. Let us next cut into this brain. You now see that the grey matter of the hemisphere is shallow and pale, and that the white matter has a rather dirty colour, and is of somewhat softer consistence than in a healthy brain. The ventricles are of large size, and are filled with clear serous fluid, and the ganglia which project into the ventricles are not quite so full and plump as they ought to be.

We have here a tolerably typical example of a brain from a senile dement. It will be well, however, that I should read to you part of my notes of the *post mortem* examination of the brain of another man, who was also old and fatuous. Thomas K., aged 81, died in this Asylum about a year ago, after being an inmate of it for thirteen months. He exhibited during life all the well known symptoms of senile dementia, and after death the following appearances were observed. The skull was fairly symmetrical, but considerably thickened—most so in the frontal region, and presented deep grooves for the meningeal vessels. The dura mater was adherent to it in the frontal region and along the median line, where there were numerous Pacchionian bodies. So great was the adhesion of the dura mater, that shreds of it were left attached to the bone. The brain had a shrunken appearance, and did not adequately fill the cranial cavity. It weighed just forty-two ounces, and eight ounces of serous fluid escaped during its removal. There were thickening and milkiness of the arachnoid over the frontal and parietal lobes. The pia mater stripped easily. All the convolutions were wasted but those of the frontal lobe, and the annectant gyri were most so. The sulci were very capacious, and formed, indeed, large hollows where they met each other. There was no vestige of atheroma in any of the vessels. These were, indeed, quite normal in appearance. The cortical matter of the convolutions was wanting in depth, and was abnormally pale; the medullary substance was white and watery. The cerebellum, pons Varolii, and médulla oblongata weighed five ounces and a quarter.

In this case we have all the cerebral atrophy and œdema, which are characteristic of senile changes in the brain, without atheroma of vessels. The atrophy and œdema must, therefore, have been dependent upon conditions of the nervous tissues themselves, and not upon defective vascular supply.

[*To be continued.*]

ADDRESS ON THE PROGRESS OF MEDICINE.*

By JOHN RICHARD WARDELL, M.D., F.R.C.P.,
Physician to the Tunbridge Wells Infirmary.

GENTLEMEN,—Having had the honour of being requested to preside over the meeting of to-day, it was suggested that an address on some medical subject might not be regarded as inappropriate, this being the first of those gatherings of the East Sussex and West Kent Districts which, it is proposed, shall annually be held at Tunbridge Wells. In compliance with this request, I shall endeavour in brief manner to glance at a few of those subjects which may be considered as being amongst the most prominent of those recognised advances which have been made in medicine during recent years, and which are within the recollection of most or many of us here assembled. In making this attempt in the short time which I shall venture to detain you, I feel no little difficulty, as there has latterly been such a vast accumulation of facts, so much real knowledge established on a firm and lasting basis, and such veritable improvements in practice, that it would be hard to crowd into a short space even but a passing reference to them.

It has been, and truly, said that Cullen did for medicine what Newton did for astronomy. He reduced it to order and a system. He culled from generalities, vague speculations, and transmitted empiricisms, materials out of which he reared the superstructure of a science. He saw that, in addition to a close observance of morbid phenomena, to arrange and classify diseases would confer great aid in the prosecution of their more successful study. He conceived, and correctly, that many ancient dogmas and much of false philosophy, which had trammelled thought and fettered physic, ought to be discarded. His clearer conceptions, and the method which he propounded for a long period in this and other countries, found acceptance; and to his genius our art lies under an enduring obligation. If, however, we take a retrospect over the last quarter of a century, it becomes obvious that philosophic experiment, wider observation, and real discovery, have tended in no slight degree to break down the Cullenian classification, and they have shown that his nosological arrangement was far too defined and absolute. Whoever will compare the nosology recently published by the Royal College of Physicians with the nosology of Cullen, will at once be impressed with the truth of this remark. They will then see that his divisions and distinctions erred in the way of separateness, that his definitions were too nicely drawn, and that symptoms were erroneously put down as primary conditions and essential differences. It is the acknowledgment of explicable or the presumption of occult correlation between morbid processes, which constitutes one main feature in that change of thought which distinguishes modern medicine from the reasonings and deductions of the older physicians; and it is indisputable, that to hold fast to this principle in our clinical studies is of paramount importance. Indeed, in the aim at furtherance in knowledge in all of the other physical sciences, to become better acquainted with fundamental causes is to give a correcter notion of the more manifest phenomena; and, without such knowledge, inference is then mere empiricism. If, for instance, the attempt were made in any way to illustrate the definition of disease given by Fernelius—"Morbus est effectus contra naturam corpori insidens"—such would be very imperfectly achieved by the mere pointing out of objective symptoms, as the true explanation would imply change of structure and perversion of function. In thus incidentally speaking of symptoms, it may be remarked, that the better and more accurate employment of this term really constitutes one example of that progress in medicine which it is the object of this address to recount. Physiological pathology has greatly shown, and is showing more and more, that diseases are not those individualisms, those distinct material entities, which the older authors and systematic writers had led their readers to suppose; and when diseases are now, in more strictness of language, defined to consist of tissue-change and perverted function, the symptoms by no means stand apart from the complex alterations going on in the organism; and, as it has been observed, the once more prevalent notion of disease being one thing and symptoms another for a long time opposed the advance of pathology. Symptoms are the appreciable parts or facts of integral disease; and we now, for the useful purpose of increased precision, speak of *physical signs*, qualities least observable from without, which in reality are, however, symptoms under another name. Amidst these new views, the thing pneumonia means much beyond that which the term implied a generation ago; it is something more than structure-change. We hardly ever now speak of it as an idiopathic affection; and, when it occurs, we seek for some explanation of its presence in certain more diffuse and fundamental mutations in the system. We regard it as intercurrent or sequential, rather than as a primary lesion; and, according to the objective symptoms, we ask ourselves if it be the outcome of an antecedent cardiac, tubercular, or renal cause; or whether it be the complication of a foregoing and an attendant pyrexia. And our treatment becomes modified according to the decision at which we arrive. The old notion which once mainly possessed the physician's mind, of the expediency to subdue and expel from the body this entity, this something of a material nature, which was deemed more or less substantive, or coming externally into, or engrafted on, the system, was an idea of the past; nor can it ever hold a place again in the more recondite reasonings of scientific men. With the truer knowledge of pneumonia, in all that pertains to its essential qualities, it is not now by any means regarded with those apprehensions with which once it was contemplated. In the example of a still more familiar affection, if we take hooping-cough, comparatively, the cough, spasmodic and distressing though it be, is but a subordinate characteristic in the course of the complaint. The name implies, as we now know, a good deal more than by it is inferred. It really means the absorption of a *materies morbi* of zymotic qualities. In 1867, Poulet discovered in the mucus of hooping-cough a specific microscopic organism. Jansen also made similar examinations, and found bacteria-like animalcules, which were the *chilomona sparamecium* of Ehrenberg. The effect of such cause is a potential influence on the medulla oblongata and the pneumogastric nerve, and in morbid sequence may eventuate pulmonary congestion, bronchitis, pneumonia, emphysema, and sometimes convulsions and hydrocephalus. To take one more illustration: formerly there was much of oneness and distinctness ordinarily entertained in the conception of acute peritonitis. Types of its idiopathic character were broadly admitted; and I think, in some exceptional cases, such admission cannot be disallowed. But many leading authorities of the present day will hear of no such thing, as they regard acute inflammation of the peritoneum as being always associated with other and foregoing structural change. In the article on Peritonitis in Reynolds's *System of Medicine*, I have more fully discussed this subject, but without concurrence in a doctrine so unexceptional and absolute. The term idiopathic, in most inflammatory affections, is now doubtless to be used in limited, if not in very dubious manner. Names in medicine are but arbitrary distinctions, and any nomenclature must vary with the acceptance of new facts. From what has been said, it is evident that the interrelation which subsists between the processes of morbid action is far greater than once was imagined. The thoroughness of our knowledge relative to organs and tissues, in such as pertains to their intimate formation and vital endowments, as compared with such attainments in the past; the new aids which have been brought to bear on the various modes of investigation, and the multitude of observers who follow up any so-called discovery, have tended to prove how effects were formerly too frequently interpreted as primary conditions. And this profounder examination and more inductive method of reasoning have exerted a marked and beneficial effect upon practice. We now look upon dropsy as a symptom, as one integral part entering into the sum of changes, structural and functional, during life, and not as a substantive complaint, any more than cough in pleurisy and dyspnœa in pneumonia are substantive complaints. According to the cavity or tissue in which fluid is effused, we elect the right class of therapeutic agents. We do *not* give diuretics in renal anasarca, as it was once the custom, but we act upon the skin and the radicles of the portal vein; but we *do* give diuretics, and freely, when there is only hepatic disease, and such is evidently cirrhosis. This ability thus to judge and thus to act is the kind of improvement towards which our main efforts are, or ought to be, directed. It is progress in the right line, because it is progress which tends to certitude as the result of remedial measures. The want of certitude as the effect of our resources has been the lament of physicians in all ages. From the ancients to our own day, there has been, and it is feared will long continue to be, more or less of guessing in physic. "I have reached the end of life," said one of the older physicians, "and am tired of guessing."

Pathology, or that knowledge of morbid changes, and the mode in which such changes occur in structure and function during life, as evidenced by examination after death, has accomplished great things. The facts which have emanated from its more careful and extended prosecution have thrown great light upon and vastly improved diagnosis; and, as all treatment becomes immediately referable to that process of thought whereby we decide on the nature and working of diseased conditions, thus our practice has become more perfected. Perhaps the greatest achievement in pathology during the present century was that made by Bright relatively to renal maladies. This discovery opened out a new territory, and heralded the way to marked and manifest improvements. The new region he made known has been surveyed and mapped out by many successors, and much, such as our acquaintance with the gouty and syphilitic conditions of the kidney, has been added to what Bright first revealed. The presence of albumen points with index finger to the diverging roads of many pathologic changes. If, by the process of exclusion, we find it is not owing to mechanical obstruction, the result of cardiac or pulmonary disease, we assign to it a humoral origin—a morbid condition of the blood. It is now admitted that the different forms of kidney-lesion come from a conservative effort in the system to free itself from the noxious materials diffused in the circulatory fluids. Their irritant qualities give rise to tissue-changes. We are aware also how retained urinary excreta produce inflammation of the serous membranes, and that uræmia often proves fatal. Again, as one more example of many consequent on this new knowledge, it may be said that cardiac complaints have received much elucidation. Blood thus poisoned gives rise to obstruction in the minute vessels and capillaries. The heart labours to overcome such obstruction. Excess of function has an hypertrophic tendency, and more especially in the left ventricle. But the result does not stop at mere hypertrophy: vital nutrition is impaired; tissue-metamorphosis eventuates, and thus molecular perversion supplants the sarcous element and substitutes olein. In other words, there is fatty degeneration; and then follow dilatation of the cavities, more especially of the right side, and visceral congestion with effusive products.

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* Read before the East Sussex and West Kent District Branches.

Our better acquaintance with the retrograde metamorphosis of the tissues is a prominent feature in the recent progress of pathology. Indeed, it may be said that a clearer conception of these degenerations can hardly, in a practical point of view, be over-estimated. To recognise these gradual mutations of structure, such as the granular, the fatty, the albuminoid, and the calcareous; to know that they thicken, diminish elasticity, and render brittle organs and structures concerned in vital processes, is to prepare us for sequential occurrences, and to confer knowledge of paramount clinical importance. To know in the young a tendency to *ramollissement* in the central commissures; and in those of advancing years, and the aged, to detect fatty waste in the cardiac ventricles, or to shrewdly suspect stiffening of the cerebral arteries, is to put us in possession of such information as may confer some power, at least, in deferring other contingencies. We can then comprehend the correlation between a soft heart and apoplexy, and between the narrowed calibre of some artery in the brain, and the circumscribed decay of white structure. The kind of knowledge now indicated, and which has latterly overgrown former attainments, has notably modified treatment. Practice, once strangely termed heroic, has passed into the domain of history; the old notion of a phlogiston has all but departed, and hence we hear less of antiphlogistics; we bear in mind that the sum total of disease means perverted function with correlated nutrition change, and that vice, in these interstitial processes, is from diminished rather than from excessive vitalism, and thus our remedial endeavours have become mainly supporting and sustaining, as contradistinguished from the hypotheses and convictions of a passing age. Next in importance may be named the discovery of Kirkes and Virchow. Embolism and thrombosis have solved problems which previously had received very different kinds of solution. They have explained morbid actions, which before were wrongly interpreted. A piece of lymph is swept afar in the current of the circulation, and plugs a distant vessel, it may be in the spleen, the liver, the kidney, or the brain. Disease, by this abrupt cutting off of nutrient blood-supply, follows, which used to be referred to the doctrine of crasis. Those pyramidal patches in the solid viscera, which are preceded by congestion, the consequence of blockage, and that pass into the suppurative state, and which Rokitansky explains on the dyscrasial theory, are doubtless caused by embola; and the purulent deposits spoken of by Rayer, in his great work on the kidneys, are now referable to a like cause. Nothing amongst our recent attainments, relative to pathologic and chemic changes in dead parts, are more interesting than embola and thromboses.

With regard to inflammation, a condition with which, both as physicians and surgeons, we have much concern, no great mutation of views has latterly obtained. Cellular pathologists have long told, and still tell us, that its leading phenomena are those of abnormal nutrition. The doctrines held respecting it may be looked upon as a sort of compromise between solidism and the humoral theories. From a truer conception of its essential nature has come great gain. The object now is to favour plastic exudation, and not to lower vitalism, and thus degrade effusive materials.

With a more demonstrable and sounder pathology, is a clearer recognition of those eliminative efforts in the system, which may be deemed conservative. To favour, not to subdue and check their excess, is generally the aim of our remedies. We now are aware that blood-poisoning is frequently the etiological explanation of many morbid phenomena. In diabetes, the elimination of sugar is protective from worse results. The flow of bile through the ductus communis, from some temporary or permanent cause, being arrested, the secretion is revulsed into the circulation, when the urine carries out that which would be harmful, if retained. In gout, the giving off of uric acid, and the deposit of urate of soda, are salutary. Malaria, or the specific poisons of typhus, enteric, or relapsing fever, are contracted when the bowels and skin form the great outlets whereby nature essays to cast out the noxious agents. The alvine evacuations in cholera, it is now held, are to be favoured rather than restrained, as by these outpourings the system is eliminatively relieved—a doctrine which has become widely accepted. In variola, the pustular deposits on the surface are a means whereby nature frees the blood from materials which could not innocuously be retained in the circulation. And of the other exanthems the same observation holds good. By this mode of reasoning, the majority of chronic cutaneous affections may be accounted for; because it is now allowed that certain alterations in the composition of the blood produce disturbances in the investments of the body, from modified blood-distribution, consequent on changes in the nerve-centres, the more apparent secretional products being essentially eliminative, and consequently dermatologists, in these days, look deeper into the pathology of skin-diseases than the epidermis and the derma. This spontaneously curative effort of elimination may also occur without the expulsion of morbid products from the system. For instance, in dropsies; effusion is determined into the great cavities of the chest or the abdomen, or, it may be, into the pericardium, or the areolar tissue, when local vascularities become relieved, or, perhaps, saved from rupture, and the more continued congestive and inflammatory states are benefited. We then mark how such event mitigates the more urgent and distressing symptoms of an acute stage. For example, in pericarditis and endocarditis, when the heart labours and the pulse intermits, with the outcome of the fluid into the pericardium follow lessened præcordial impulse and intermittence, and often an expression on the part of the patient as being more comfortable. In pleurisy and in peritonitis, the advent of effusion, sometimes with much suddenness, cuts short the more prominent characteristics of the inflammatory phenomena. Various other illustrations of the salutary tendency of this eliminative secretion might be cited had time allowed.

Another great addition has been made to pathology by our being far more conversant with the affections respectively known as pyæmia, septicæmia, and ichorrhæmia. It is now allowed that the last named may have its origin in hospitalism, and from without, and that it may also be caused within the organism. From recent and extended discussions, it is also clear that this affection is by no means confined to hospitals, as it was once assumed, but that it may, and does, occur in the most healthily situated houses in the country, remote from deleterious gases, and in the purest atmosphere. We now acknowledge the difference between pyæmic and infective inflammation and septic action; and pyæmic disease can hardly be said to obtain without more or less of septicæmia as the concomitant, but the septic action is far feebler and less irritative. Most pathologists now believe that the transference of pyæmic products from one part to another is by means of the lymphatic system or of the veins. Some have lately spoken of idiopathic pyæmia. In such cases, most probably the local starting point, or focus, has not been discovered. There still remains much that is uncertain relative to these affections; yet we can now anticipate a train of diseased processes which formerly were much less suspected, and, when they did occur, were far less understood.

[*To be continued.*]

CASE OF RENAL CALCULUS BECOMING VESICAL: LITHOTOMY: ABSCESS OF KIDNEY: PERITONITIS: DEATH.

By J. H. PORTER, Surgeon-Major, Assistant Professor of Military Surgery, Royal Victoria Hospital, Netley.

PRIVATE H. W., 103rd Regiment, aged 20, eight months in the service, on May 7th, 1873, whilst exercising in the gymnasium, pressed his abdomen against the horizontal bar, and immediately felt a most acute cutting pain in the right hypochondrium. He continued to suffer from acute paroxysmal cutting pains, which obliged him to go into hospital, where he remained a month under treatment, and was discharged apparently cured. A fortnight afterwards, the pain returned, and compelled him to again seek admission into hospital, whence he was sent to the Royal Victoria Hospital, Netley, on July 30th. On arrival, he presented a healthy aspect; his circulatory and respiratory systems, temperature, and urine were normal; he, however, could not rest on his right side, and he complained of severe cutting pain in the right hypochondrium, which was tender on pressure, and somewhat fuller than the left. A tumour, about the size of the palm of the hand, was found to occupy the lower part of the right hypochondrium and upper part of the iliac region; it was smooth, firm, and elastic, with a defined circular border, on the left side, but on the right the margin was more irregular.

Opinion at that time differed as to the nature of the tumour, some thinking it probably hydatid, growing from the under surface of the liver, others that the kidney was implicated. About the beginning of October, he began to suffer from rigors and perspirations, which were excessive at night; his temperature rose to 99.5, his pulse to 90. The tumour increased a little in size, and became more painful.

These symptoms continued off and on until October 28th, when they became greatly aggravated. The rigors became more frequent and severe, as did also the nocturnal sweats; the pain became worse, and his appetite failed. On the following day, he complained of scalding sensation accompanying micturition, which became very frequent. His urine was found to be turbid, of a pale yellow, nearly white, colour, depositing, on standing, a yellowish sediment; specific gravity, 1014; reaction faintly acid. Pus-cells were found to be present, also some very large cells, most of which were round or oval, though some had processes. Each of those cells was nucleated, and contained large brilliant nucleoli; crystals of triple phosphate were also present. The appearance of these large cells led to the belief for a short time that the tumour was of a cancerous nature, the kidney, in all probability, being the seat of the disease. During the next two days, the tumour decreased in size, the pain diminished, and large quantities of pus came away in the urine.

On November 1st, he again experienced very severe paroxysmal pain along the course of the ureter, and the right testicle became retracted. On the 2nd, he was suddenly seized with difficulty of micturition. An instrument was introduced to relieve him, and, after the urine was drawn off, the bladder was sounded, and a distinct click of a calculus heard. The tumour now began rapidly to decrease in size, large quantities of pus passing through the urethra.

On the 11th, the tumour had nearly disappeared; the urine was slightly turbid, containing only a few pus-cells and triple phosphate crystals.

On the 17th, the tumour had entirely disappeared. The urine was quite clear, but contained a few pus-cells; his general health was good; he slept and took his food well, but occasionally suffered from slight shooting pains in the right hypochondrium and slight frontal headache. The bladder was occasionally examined, the sharp click of a calculus being always present.

Little change took place in his condition from the latter end of November to December 16th. He was most anxious to have the calculus removed; and the general opinion was that, if the operation of lithotomy were to be performed at all, it should be done at once, though the case was grave and unpromising. It was not suited for lithotrity, on account of the hard nature of the stone.

The lateral operation was decided on, and performed in the usual manner, occupying four minutes, some delay being experienced in finding the calculus on entering the bladder. The calculus resembled the pointed end of a gum elastic bougie, having been apparently moulded by the ureter. It was partially increased by a phosphatic deposit, the remainder of the surface having a polished coppery, metallic lustre. It measured 1⅓ inch in length, and was one-third of an inch in diameter. It was composed of uric acid.

His temperature fell after the operation to 98.7, and he progressed satisfactorily till December 26th, when intense febrile symptoms set in. No cause could be found for this, as the condition of the wound was satisfactory, healing from the bottom, and urine passing through it. He now steadily lost ground; his appetite failed; he became greatly emaciated; the temperature varied from 102 degs. Fahr. to 104 degs. Fahr., and the pulse from 100 to 130.

On the morning of January 4th, 1874, he expressed himself as feeling somewhat better. His pulse was 100, and his temperature 101 degs. Fahr. Towards evening, his symptoms became greatly aggravated; he had several rigors; his temperature rose to 103, his pulse to 104, while his respirations were 44 per minute. For the first time since the operation, he now complained of slight tenderness over the site of the original tumour, but there was no pain on deep pressure. On the 5th, he was much worse; the rigors had recurred, and most profuse diarrhœa and perspirations came on. He lay on his back with his legs drawn up, though there was still no pain on deep pressure; his abdomen became tympanitic, and he gradually sank, expiring at 10 P.M. He was conscious to the last.

POST MORTEM APPEARANCES.—*Abdomen.*—There was a quantity of sero-purulent fluid in the peritoneal cavity. Flakes of recent lymph coated the coils of the intestines and other viscera. On separating the coils from the right lumbar region, a purulent collection, situated at the upper end of the right kidney, was set free. *Kidneys and Bladder.*—The right kidney was coated with thickened lymph externally; its measurement after dissection was 8.9 inches in length by 4.3 in breadth. On section, it was found to be excavated with sacculi, no normal texture remaining. One very large sac, about four inches in diameter, projected from the upper end. The walls of this were thin, and in two places had become perforated, hence inducing peritonitis. The infundibulum of the kidney was enormously dilated; the mucous membrane of the ureter was thickened, granular, and vascular. All the coats of the ureter were greatly thickened to nearly half an inch in diameter. Six inches from the kidney, the ureter was occupied by a calculus; above, it was pouched. This pouch contained two more calculi, and measured one inch and a half in circumference. At the lowest calculus, there was a ring of ulceration three-eighths of an inch in depth, and with a very unhealthy aspect; hence, from the kidney downwards, the ureter was pouched as far as the impaction of the lowest calculus. In the pouch and sac of the kidney there was purulent fluid. The left kidney was congested, otherwise normal. The bladder was comparatively healthy. The wound of the operation was closed and healthy throughout.

THE RELATION BETWEEN ARTERIAL TENSION AND ALBUMINURIA.

By GEORGE JOHNSON, M.D., F.R.S.,
Professor of Medicine in King's College, Physician to King's College Hospital.

I HAD intended to be present at the reading of Mr. Mahomed's paper at the Royal Medical and Chirurgical Society, but unfortunately I was detained elsewhere. I have now read with much interest the abstract of the paper and the discussion thereon in the JOURNAL of May 2nd, and I beg permission to make a brief comment on one or two points.

Mr. Mahomed's clinical observations show that in certain cases of scarlet fever there is a condition of high arterial tension before the occurrence of albuminuria. This is believed by the author to indicate a poisoned condition of blood. I have always maintained that the albuminuria and the renal disease frequently complicating scarlet fever are results of blood-poisoning, and it is especially interesting to me to find in Mr. Mahomed's paper additional evidence in favour of that doctrine. But the statement that the albuminuria and the renal disease are due to "congestion under high pressure", appears to me questionable; and, if I could have been present at the reading of the paper, I should have asked the author for an explanation of his views on this point. I assume that the increased arterial tension is a result of contraction of the terminal muscular arterioles, excited by a morbid condition of blood; but I do not see how this arterial tension explains the albuminuria. We know that increased pressure on the walls of the Malpighian capillaries, consequent on the impeded return of blood through the veins, in cases of valvular disease of the heart, for instance, is a common cause of albuminuria; but undue contraction of the renal arterioles excited by morbid blood would tend to lessen capillary engorgement in direct proportion to the increase of arterial tension to which it gives rise. In the April number of the *Edinburgh Medical Journal*, Dr. Begbie has published a very interesting paper on the Association of Albuminuria with Vascular Bronchocele and Exophthalmos. Two of the cases whose histories are given in that paper, I had, through the kindness of Dr. Begbie, the opportunity of seeing. Dr. Begbie explains the albuminuria in these cases by the engorgement of the Malpighian capillaries, which results from a want of tonicity in the afferent arteries, the congestion being increased periodically by the afflux of blood which takes place after the ingestion of food. This explanation appears to me reasonable and intelligible; but the condition of the vascular system which exists in these cases of exophthalmic goître is the exact opposite of that which Mr. Mahomed describes in the prealbuminuric stage of scarlet fever. In the one class of cases, there is diminished arterial resistance, and a consequent increase of capillary engorgement; while in the other there are increased arterial resistance and tension, and, *pro tanto*, diminished pressure on the walls of the capillaries. It is intelligible that albuminuria may result from engorgement of the Malpighian capillaries consequent on an impeded return of blood through the veins, or an increased afflux through unduly relaxed arterioles; but it is difficult to understand that albuminuria can be a direct mechanical result of increased arterial resistance and tension, and still more difficult to explain in this way the desquamation of renal epithelium and the other phenomena which occur in cases of acute Bright's disease.

THE LIVER IN JAUNDICE.

By J. WICKHAM LEGG, M.D.,
Casualty Physician and Demonstrator of Morbid Anatomy to St. Bartholomew's Hospital.

By jaundice is meant a yellowness of the skin. It is a name drawn from the French word *jaune*. By the Greeks the disease was called icterus. In most modern books, the fanciful etymology of Pliny the Younger (*Nat. Hist.*, lib. xxx, cap. xi) is given. A certain yellow bird was called icterus; and the sight of this by one jaundiced was death to the bird, but recovery to the man. If Aretæus, as seems more probable, lived after Pliny, he was likely to have had this derivation in mind when he says: the name icterus "is derived from certain four-footed and terrestrial animals, called ἰκτίδες, whose eyes are of this colour" (*On the Causes and Symptoms of Disease*, book I, chap. xv). This animal, the ἴκτις, was the yellow breasted marten, and appears to have been kept by the Greeks in their houses for the same purpose as we keep cats, viz., that of killing mice. The object of comparison would thus be close at hand. As to Pliny's derivation, it seems highly improbable that a means of curing the disease should be known before the disease itself had a name. The name used by the Latins, *morbus regius*, has also a common and faulty explanation. It is so called, not on account of the royal diet and regimen needed by jaundiced patients, but on account of the resemblance of the yellow colour of their skin to gold, the *rex metallorum*.

It is my object in these papers to describe those changes in the liver which follow an obstruction to the flow of bile into the duodenum. These morbid appearances divide themselves into two heads: 1, the changes met with in the bile-passages; 2, those met with in the parenchyma of the liver itself. The former of these will first be considered.

The first effect of an obstruction in the bile-ducts is a dilatation of the duct behind the obstruction. Should the obstruction be in the common duct, it is the gall-bladder which suffers at first. Its walls are easily distended, and it may, therefore, become enormously dilated. One of the most dilated gall-bladders on record was met with by Cline (reported by John Andree, *Considerations on Bilious Diseases*, Hertford, 1788, p. 18). A tumour gradually formed in the belly of a boy, aged 16. Fluctuation was clearly felt, and the swelling was tapped. More than twenty ounces of a bilious fluid were let out. The boy died in seven days; and, on examination, the gall-bladder was found to contain two quarts of bile, and stretched from the liver to the pelvis. Van Swieten likewise (*Comment.*, sect. 950) found in a boy, aged 12, the gall-bladder of immense size, holding eight pounds of a thick bile. The greatest amount of fluid in the gall-bladder that Frerichs has seen (*Klinik der Leberkrankheiten*, Braunschweig, 1861, Band II, p. 447) is eighteen ounces. I have never seen the gall-bladder distended so much as this, although it is not uncommon to find it as long as six, seven, or eight inches.

Usually it is filled with a dark viscid bile. But if the gall-bladder be much distended, and any obstruction to the flow of bile through the cystic duct take place, as often happens when gall-stones are the cause of jaundice, the bile becomes absorbed, and its place taken by a colourless fluid, which is either viscid or limpid. In one of Van Swieten's cases, the taste of the fluid was saltish; and he also, in another case, mentions its coagulation by heat. This *hydrops vesicæ felleæ*, as it is called, was first noticed by Glisson (*Anatomia Hepatis*, Hagæ, 1681, end of cap. xxxix), and by Regnerus de Graaf (*Tract. Anat. Med. de Succi Pancreat. Naturâ et Usu*, Lugd. Bat., 1671), who also noticed the absence of bitterness in the fluid.

There are not many analyses of the colourless fluid found in the gall-bladder or ducts on record. J. C. B. Bernard (Reil's *Archiv*, 1799, Band III, p. 477) seems to have been the first to examine the fluid very attentively. He found the fluid transparent as water, of the consistence of white of egg, and tenacious. Heat, alcohol, and acids did not cause coagulation, but only a flocculent precipitate. The fluid was unaltered by mineral alkali or carbonate of vegetable alkali. Albert Schaefer (*De Hydrope Ductuum Biliarium*, Diss. Inaug., Turici, 1842, p. 9) found in the fluid of the bile-ducts the same chemical and physical characters as in the plasma of the blood. Frerichs (*op. cit.*, p. 449) found the fluid alkaline, transparent, and containing mucous corpuscles. There were no bile-pigments or bile-acids. Nitric acid caused a slight cloudiness; acetic acid made the fluid gelatinous and thick. In another case, he found a great quantity of albumen. Casali (Virchow's *Jahresbericht*, f. 1869, Band I, p. 287) has also lately found much the same state. But Ritter (*Comptes rendus*, 1872, tome lxxiv, p. 813), however, states that certain colourless fluids from the bile-passages gave no reaction of bile-pigment, yet contained the rest of the biliary constituents. This statement needs to be investigated by further observers, as the general experience of physicians is that both bile-pigment and bile-acids are absent. I have recently had the opportunity of examining this colourless fluid in two cases, and could not detect the presence of bile-pigments or bile-acids on the repeated and careful application of Gmelin's and Pettenkofer's tests.

The presence of a colourless fluid in the gall-bladder and the bile-ducts was formerly looked upon as evidence that the liver had ceased to secrete bile. Indeed, a recent writer (W. Moxon, *Transactions of the Pathological Society of London*, 1873, vol. xxiv, p. 129) is still plainly of this opinion. But, to my mind, the evidence seems rather the contrary. It should be remembered that it was the large ducts which were seen to be filled with this colourless fluid, and that nothing is said of the state of the smaller ducts, of the interlobular and capillary ducts. These continue to receive the bile poured into them by the liver-cells, but the bile does not reach the large ducts, because the small ducts are shut off from the large, either by plugs of this tenacious fluid or biliary gravel. In a case which I recently examined at St. Bartholomew's, the large ducts were perfectly colourless; but, by gently pressing the liver, a yellow fluid could be made to issue from the small ducts. Also, by careful dissection, the small ducts could be seen to be stained yellow.

Precisely the same inference may be drawn from Oskar Wyss's experiments (*Archiv der Heilkunde*, 1867, p. 469). He made biliary fistulæ in dogs, and then poisoned them with phosphorus. He found that though very little or no bile flowed out of the fistulæ, the dogs, notwithstanding, became jaundiced. Here, then, seemed to be evidence that the liver ceased to secrete bile. On dissecting the livers of these dogs, the large ducts were found indeed unstained, and containing a colourless mucus, but the openings of the smaller ducts into the large were plugged with a thick mucous secretion which hindered the flow of bile into the larger tubes. Ebstein (*Archiv der Heilkunde*, 1867, p. 506; and 1869, p. 379) has noticed also the same plugging of the fine ducts in patients who became jaundiced after poisoning themselves with phosphorus.

The ducts outside the liver become dilated. It is common to see them as large as, or even larger than, the middle finger. In man, I have never seen them tortuous; in animals, it is not uncommon to see this appearance when the ducts have been tied near the duodenum. The size which these ducts may sometimes attain is enormous; so that at first sight they may be mistaken for tumours connected with the liver. There is an old case of Traffelmann (quoted by Schenk, *Observationes Medicæ*, Lugdun., 1644, lib. III, sect. ii, p. 405) often quoted, and invariably misquoted. In the body of Daniel, Archbishop of Mainz, who died in 1582, the bile-ducts were found filled with gall-stones, and dilated "*instar utriculi*". Morgagni (*De Sedibus et Causis Morborum*, Epist. XXXVII, sect. xlvii), quoting this, changed the *utriculi* into *ventriculi*, and this error has been followed up to the present day by every writer who has mentioned the case.

Of modern instances, the most extreme dilatation seems to have been reached in a case recorded by Halliday Douglas (*Monthly Journal of Medical Science*, Edinburgh, 1852, vol. xiv, p. 97). In a jaundiced girl, aged 17, a fluctuating tumour could be felt on the right side nearly as low as the ilium. Thirty ounces of fluid were taken away by tapping. On examination after death, a sac was found on the right side of the belly, over the front wall of which the duodenum passed as a flat band. The sac contained within a few ounces of half a gallon of a yellow fluid. The walls of the sac were dense and fibrous, one-twelfth to one-eighth of an inch in thickness. At the upper part of the sac, the dilated openings of the hepatic and cystic ducts were seen. The hepatic duct within the liver was much dilated. Todd, also (*Dublin Hospital Reports*, 1817, vol. i, p. 328) found in a girl of 14, the hepatic and common ducts so enormously dilated that they contained more than a quart of bile, and formed a sac which reached from the porta of the liver to the os sacrum. They lay behind the duodenum, pancreas, and root of mesentery, and covered the anterior surface of the right kidney and the greater part of the left. The cause of the dilatation was a scirrhous state of the pancreas. Frerichs (*op. cit.*, Band II, p. 444) also gives a drawing of an immense dilatation of the common ducts.

Within the liver, the ducts also become dilated. But they do not enlarge so greatly as outside. The proper parenchyma of the liver prevents this. In all the cases which I have yet met with, the dilatation has been uniform or cylindrical. Virchow (*Die krankhaften Geschwülste*, Berlin, 1863, Band I, p. 254) has described the saccular or cystic dilatation. The cyst is at first filled with bile; later on, this becomes thick; the bile decomposes and deposits cholestearin, bilifulvin, and hæmatoidin. These dilatations chiefly affect the bile-ducts near the surface of the liver; further, the liver-tissue around them atrophies, so that they lie close under the liver-capsule. These dilatations may be as large as a cherry or walnut; they may closely resemble a small echinococcous cyst, only they have no membranous wall. Leyden (*Beiträge zur Pathologie des Icterus*, Berlin, 1866, p. 119) says that these saccular dilatations usually become separated from the gall-duct by chronic inflammation of the surrounding liver-tissue. Their contents become watery, thin, or tenacious. Their origin is then doubtful. If they dry up, it is, indeed, difficult to distinguish them from dried up echinococci, unless hooklets or laminated membranes be found. Monneret (*Traité élém. de Pathologie interne*, Paris, 1864, tome i, p. 660) describing these dilatations, has compared them to the saccular dilatations which the bronchi undergo, a comparison which can scarcely be approved of, as the causes in the two cases are altogether different; in the liver, a pent up secretion causes the widening; in the lung, it is most commonly caused by disease of the surrounding lung-tissue.

Friedreich (*Archiv für patholog. Anatomie*, Band XI, 1857, p. 466) has described a cyst, which, he inclines to think, resulted from a dilated gall-duct. In the contents, he found well marked ciliated epithelium. I believe no similar case exists on record. The epithelium of the gall-ducts is ciliated in some of the lower animals during fœtal life; and in some it persists even during the whole of life.

I have also not met with any similar case to that of Boisment, which is quoted by Abercrombie (*Diseases of the Stomach, etc.*, London, 1837, third edition, p. 331). The liver had the appearance of a large undulating cyst. The appearance was found to depend upon a remarkable distension of all the biliary vessels with dark coloured bile, and was accompanied by wasting of the proper substance of the liver. The affection seemed to depend upon a singular obstruction of the common duct by a membranous band which passed over it.

It is not uncommon to find large ducts opening into hydatid cysts and abscesses. A large cyst will not, in all probability, be due to a dilatation of the duct. The contents are of little help, because hydatids often hold masses of red hæmatoidin exactly corresponding to those spoken of by Virchow above. The diagnosis will really depend upon the structure of the wall. The laminated structure of the hydatid membrane is diagnostic. The question of diagnosis from abscess is much more difficult. It depends chiefly upon two points: whether any obstruction in, or general dilatation of, the bile-ducts exist; and whether the lining membrane of the gall-duct can be traced around the walls of the abscess. Joffroy (*Comptes rendus des Séances de la Société de Biologie*, année 1869, p. 218) gives the following rules. In abscess, secondary to rupture of the bile-duct, there is often no limiting membrane, or, if there be, it is not lined with columnar epithelium, and the contents of the abscess do not show columnar epithelium, but liver-cells in process of disorganisation. The collections of pus found in saccular dilatations of the bile-ducts, on the other hand, are always bounded by a membrane formed by the dilated bile-duct, which, in some places at least, retains its epithelial covering; and columnar epithelium is also found with the pus: liver-cells are never found.

The amount and extent of the general dilatation of the ducts depend upon the degree of obstruction and the length of time which it has lasted. If the obstruction be complete, of course the dilatation will be great. In some cases, the dilatation does not reach the interlobular ducts. I am doubtful, from my own observations, if the capillary ducts ever become varicose, as Oskar Wyss (*Archiv für Path. Anatomie*, 1866, Band xxxv, p. 553) and H. Meyer (Stricker's *Medicinische Jahrbücher*, Wien, 1872, p. 133) have described. I have never seen such an appearance in man; or in animals whose bile-ducts have been ligatured. The walls of the bile-ducts become thickened, even to the naked eye. Under the microscope, this thickening resolves itself into a great overgrowth of the fibrous coat, in which abundance of new lymphatic elements are to be seen, precisely similar to those observed in ordinary cirrhosis.

Many observers have been unable to find any epithelium lining the walls of these dilated bile-ducts. I doubt if this statement be universally true. In three cases which I have lately examined, in which the large ducts were dilated to the size of a man's little finger—in one case from disease of the head of the pancreas, in the other two from gallstones—I was certainly unable to find any epithelium on the larger ducts, which measured ten millimetres when cut across. In those measuring only four millimetres, I found abundance. One source of fallacy must be guarded against. All washing or wiping of the ducts must be avoided. For, in a case of complete obstruction to the ducts by a hydatid tumour, followed by great dilatation, I found abundance of epithelium in all the preparations taken from the ducts immediately they were opened; but none could be found in the specimens taken after a stream of water had been poured on the ducts or their surface wiped with a sponge.

In those cases which I have hitherto examined, the left branches of the hepatic duct have always been much more dilated than the right. This appearance is probably due to the left lobe of the liver being less bulky than the right, and thus offering less resistance to the dilating tubes.

The catarrh which is set up by the long continued obstruction sometimes goes on to suppuration of the duct; and a mixture of pus and mucus is found in the biliary canals. In another form, the suppuration becomes local and abscesses form. This result of obstruction seems to have been first noticed by Cruveilhier (*Anat. pathologique*, livr. 12, pl. 4 and 5; tom. ii, livr. 40, pl. 1) and Frerichs (*Hannov. Annal.*, 1845, Heft. i and ii, quoted in Canstatt's *Jahresbericht*, 1845, Band i, p. 81). The abscesses are usually multiple, near the surface of the liver, and, when cut across, their contents are seen to be a mixture of pus and bile. They are rarely larger than a hazel-nut in size. They greatly resemble the secondary abscesses seen in pyæmia.

The mode of origin of these little abscesses seems doubtful. Cruveilhier (*Archives générales de Médecine*, 1857, Janvier, p. 54) says that he satisfied himself that they had, in his case, their origin in the dilated bile-ducts. Joffroy (*loc. cit.*) speaks of two kinds: one, a saccular dilatation of the duct, filled with pus; the other, an abscess secondary to rupture of the duct. These two kinds may exist together in the same liver. Both are surrounded by an overgrowth of the connective tissue of the liver, containing nuclear elements. Bamberger also (*Krankheiten der chylopoietischen Systems*, Erlangen, 1864, 2te Aufl. p. 198) makes this division. Leyden, however (*op. cit.*, p. 123) considers that these abscesses may have another mode of origin. In one of his dogs, whose bile-duct had been tied, he found many small and large abscesses in the liver-tissue without any dilatation of the ducts, except of the large ones; and he argues from this that the first beginnings of the abscess must have taken place in the liver-tissue surrounding the abscess. This mode of explanation would seem to exclude rupture of the ducts as a source of abscess. There are some observations by Bristowe (*Transactions of the Pathological Society of London*, 1858, vol. ix, pp. 223 and 286) which support Leyden's view. He found, in a case of obstruction to the bile-ducts, an abscess of the liver, spherical, an inch in diameter, which shaded off into the surrounding tissue. Two considerable branches, somewhat dilated, passed through the substance of the mass. The cause of obstruction was a new growth springing from the inside of the ducts at the junction of the hepatic and cystic. It should also be noticed that there were several ulcers in the duodenum. In another place, speaking of the modes in which hepatic abscesses may be formed, he says that the abscesses were not positive cavities lined by a cyst-wall, but rather indistinctly circumscribed portions of liver-structure in which softening and rarefaction had taken place, and which blended insensibly with the surrounding healthier parts. In this case, the obstruction was a gall-stone.

I have not yet had the opportunity of examining any case of multiple liver-abscess arising from obstruction; and the mode of origin is still very obscure, as so little attention has been as yet paid to the histology of the disease. In the only case of abscess in the liver following obstruction to the ducts which I have seen, the abscess was a solitary one. It clearly did not arise from a saccular dilatation of the duct, for the cylindrically dilated duct opened into the floor of a depression the size of a walnut, near the surface of the left lobe, and one-half of the duct, not more dilated than before its entry into the abscess, formed part of the floor. In this case, I am inclined to think the abscess was formed by rupture of the duct, seeing that so much of the duct was preserved. The abscess afterwards found its way into the pericardium and pleura. The connective tissue throughout both lobes of the liver had undergone an increase, but especially in the neighbourhood of the abscess, where the growth of connective tissue had left only small groups of highly coloured many-sided cells as remains of the proper parenchyma. This case was read last November before the Pathological Society.

[*To be continued.*]

IMMINENT DEATH FROM INHALATION OF CHLOROFORM.

By RICHARD DAVY, F.R.C.S.,
Surgeon to the Westminster Hospital.

JOSEPH HARRISON, aged 20, single, traveller, was admitted into the hospital on February 21st, 1874, the subject of external hæmorrhoids. On February 23rd, chloroform was administered (by Clover's apparatus) in the theatre by Mr. Beer; and there were present the house-surgeon and his assistant, the house-physician, a student, and myself. Mr. Beer noticed, amidst some struggling, that both pupils were dilated; but the respiration was not stertorous. The operation of slicing off the hæmorrhoids and applying the actual cautery was quickly finished by the house-surgeon, when at once respiration ceased, the features became lividly blue, the eyeballs turned upward, and to all appearance the man was moribund. We ripped his shirt open all the way down, and told ourselves off for duty; viz., two at the patient's arms for Silvester's method of artificial respiration (relieving guard); one at the feet (affording counter-resistance); one to admit fresh air; one to turn the face on the left side, hold the tongue forward, and wipe the mouth; one to spank the face and walls of the chest with a cold wet towel. Artificial respiration was kept up at the rate of twenty-six per minute. In five minutes he drew a natural inspiration and opened his eyes, and half a minute afterwards he laughed at the joke of a student labelling his hat "Poison"; *i. e.*, "not to be taken". He had inhaled chloroform in the New York Infirmary in 1870. There was no cardiac lesion.

REMARKS.—1. This is a trifling operation, it may be said, for an operating theatre: yet our being able to readily fall in at work was conducive to success, and economised the distress of fellow-sufferers. 2. The recovery from the effects of chloroform-inhalation was rapid. We worked the pump-handles sharply, that fresh air might quickly replace the vapour of choloroform in the respiratory area. Our time-table records that chloroform-inhalation began at 12 o'clock; the operation began at 12.5 P.M.; it was completed, the man was moribund, and artificial respiration was commenced at 12.8 P.M.; artificial respiration stopped and natural commenced at 12.13 P.M.; consciousness was complete at 12.15 P.M. 3. We are all glad that due exertion has prevented the death of a fine young fellow inhaling chloroform for a slight operation, and are inclined to prefer six reliable assistants to any number of galvanic machines.

MODIFIED SYPHILIS.

By W. S. OLIVER, M.D., F.R.C.S.I., Surgeon-Major, 60th Rifles.

I HAVE seen, in the JOURNAL of March 7th, a short account of a most interesting discussion on syphilis, at a meeting of the Medical Society of London on February 9th, at which Mr. Morgan (Dublin) brought under notice a remarkable series of facts in connection with this disease. The results of his researches help so forcibly to corroborate opinions I have entertained for some years past, that I cannot resist offering them for what they are worth.

After more than sixteen years' experience, I entirely concur with Mr. Morgan in his views as to the "modification of syphilis by descent"; I desire further to assert that it is syphilis in this "modified" form that the Army Medical Officer has to deal with in 70 per cent. of the cases of so-called "primary syphilis" which come under his notice. Or, to express myself in plainer terms, judging from the source of contamination in those cases, the appearances and characters of the sores themselves, and the nature of the secondary symptoms ensuing on what is generally considered "primary" syphilis in the army (at least), I am most firmly convinced that not more than 30 per cent. of those cases, if so many, can be considered true primary syphilitic chancre at all, but are merely the primary local evidences of the transmission of secondary syphilis from one person so infected to another not previously contaminated.

The history of those cases is usually as follows. A soldier, who, according to his own statement, and of course in accordance with the entries in his "medical history sheet", never before had syphilis, cohabits with the usual "soldier's prostitute", who, as a rule, has had time to descend very low in the grade of her calling. Within a week or ten days after connection, or even as early as the third day, should the poison be virulent (phagædenic), one or two, or even three, papules, or abrasions, or an excoriation, perhaps, appear and run rapidly into ulceration, and, in the course of from two to five days, come under the notice of the medical officer as either sloughing unhealthy ulcers, or grey non-granular superficial, or, perhaps, elevated, circumscribed sores with a tenacious muco-purulent discharge on the surface, and resembling in some measure secondary syphilitic ulcers elsewhere. Induration is not usually present in those cases, especially at this period, but it may afterwards appear to a limited extent, especially when the sore or sores are situated on the corona glandis, and are long in healing; but, when present, it is never so early in showing itself, nor so well marked and defined as is the case in a real primary chancre. And, though the presence of induration indicates, I think, an early contamination of the system with secondary syphilis, its absence from the sore altogether is never an authentic sign that the sore is non-infecting. Enlargement of the glands in one groin, and in a line with Poupart's ligament, is an usual accompaniment of the disease, appearing early, with inflammation, if the sore or sores have been concealed, or the parts irritated; or late without inflammation, if the local disease have been treated early, but is slow in disappearing. Enlargement of the glands of the neck and axilla is not an usual concomitant of this stage of the disease. Constitutional secondary symptoms, however, generally soon appear, sometimes showing themselves even before the sore has healed where this process is protracted; generally as a mild erythema of the fauces, or a maculated or papular eruption, or roseola without any accompanying febrile attack. They are easily dispelled, as a rule, by mercurial fumigations and large doses of iodide of potassium and seldom terminate in syphilitic cachexia, unless complicated with anæmia or struma. Rheumatism is often a late result from this form of syphilis, but cachexia seldom ensues unless under the circumstances I mention.

This, I consider, is the most usual species of syphilis met with in the army, and it is in my opinion generated, not from a true primary chancre, but from secondary, or what Mr. Morgan would term modified syphilis in the female. If this view of the subject were more generally accepted, I feel sure there would be less difference of opinion as to the proper treatment (mercurial or non-mercurial) of the disease than exists at present. The treatment for true primary syphilis and its sequelæ, in their early stages, is undoubtedly mercury, with few exceptions; but, for the "modified disease", my belief is, that a modified treatment will be all-sufficient and least injurious to the constitution.

I know that many will be opposed to my statements, and will, doubtless, assert that the sores I have described were not those of infecting syphilis, and did not induce the secondary symptoms which followed, but that those symptoms and sores were preceded by a true and concealed chancre in every instance. To this, I reply that, for such to be a fact, 70 per cent. at least of the men I have treated must not only have concealed this sore, but have denied all knowledge of it when they have subsequently presented themselves voluntarily to me for treatment of the sores I have described.

The more simple and rational explanation of the matter undoubtedly is, that the prostitutes with whom the soldier cohabits are generally of the lowest grade, and cannot possibly impart to him what they have not themselves; that is, true primary syphilis, having previously been sufferers from the secondary affection for months, if not for years.

CASE IN DENTAL PRACTICE.

By ADAMS PARKER, Esq., Birmingham.

THE following case occurred in my practice some time ago; and, as the issue was of such a successful nature, I forward it for insertion in the JOURNAL.

Martha Morley, aged 14, stated that, six weeks previously to my seeing her, she had fearful pain in the first upper molar on the left side, which was followed by an offensive flavour in the mouth. Afterwards, her cheek up to the eye became very hard and lumpy; and next came a bright inflammation over the whole surface, as in erysipelas. This afterwards softened in the centre, when a great quantity of pus formed, which next effected an opening in the skin and discharged itself in great quantities, with an offensive odour. At first, the case was attended to by a druggist, until the pain and the extent of the inflammation and swelling, invading the eye, alarmed the family of her employer, and Dr. Nelson was consulted. He advised fomentations, poulticing, and a cooling aperient. This, with other treatment, was carried on until the swelling and other local symptoms had subsided; and, upon her first visit to me, I recommended the immediate removal of the tooth. This was more than two years ago, and there have been no further symptoms.

Had the tooth in the first instance been removed, the patient would have been spared a long period of suffering, and at the same time what I am afraid will remain a permanent scar in the cheek from the fistulous opening. I quote this case, not as being one of an unusual character, but to show how necessary it is in all such cases that a careful examination of the teeth should be made when symptoms so distressing present themselves.

OBSTETRIC MEMORANDA.

THE TREATMENT OF *POST PARTUM* HÆMORRHAGE.

XX.

I ONLY intended to be a learner in the discussion on *post partum* hæmorrhage, until I read in the *Dublin Journal of Medical Science* that Dr. Atthill is stated to have said that the first occasion in which perchloride of iron was used in Ireland for the arrest of *post partum* hæmorrhage was, on July 11th, 1869, by Dr. Kidd. I think it right to correct this statement. I, for one, have been using it since 1862, carrying the salt in my bag, and, when occasion required (though not very particular as to quantity), dissolving about two table-spoonfuls in a washing-basinful of water (which holds about a gallon), and injecting this solution into the vagina. But it was not until December 1866 that I injected it into the uterus, after the usual reputed remedies had been tried by me, with the concurrence of Dr. White of this city, in the case of a weakly and debilitated lady, aged 36, who had three children, and who had recurring hæmorrhage after an abortion occurring at the end of the eighth week. During a violent spasmodic gush, I introduced my hand into the vagina to explore the uterus, which I found to be large, flabby, and dilatable, and into which I introduced the vaginal tube up to the fundus, directing the nurse-tender—who had the solution of perchloride always ready to inject into the vagina whenever the hæmorrhage recurred—to syringe. After using the solution in this way, there was not the slightest indication of any return of the hæmorrhage; and, had I injected the uterus at first instead of the vagina, I should have saved my patient from long-continued debility and a tardy convalescence. In April 1869, she again aborted at the same epoch, and afterwards had severe and alarming hæmorrhage; but, by the introduction of Barnes's tube into the uterus, and injecting the liquor of the perchloride in the proportion of one part to three of water, I in a very short time succeeded in stopping it. There was no recurrence afterwards.

I rarely meet with a case of hæmorrhage in my midwifery practice, *i.e.*, in the cases I attend myself. The plan I generally adopt with my "flooders" is this: 1. To investigate if there be a depressing cause, and, if possible, remove it; 2. To give small doses of Epsom salts, sulphuric acid, quinine, and iron, in a mixture, occasionally during pregnancy; 3. To leave the window of the sleeping apartment a little open at night, and use the cold bath in the evening or about two hours after breakfast; 4. To rupture the membranes in the first stage of labour; 5. To follow down contraction (Churchill); 6. After the child is born, to lay the patient flat on her back, with a view to keep the uterus in the centre and to give me more power over it (Barnes); 7. To keep the uterus from rising by backward and downward pressure—the *tactus eruditus* of Simpson. I give the uterus time to contract, and am not in a hurry to press off the placenta; and, when it is expelled, I continue pressure over the uterus with my hand for half-an-hour or more before applying the binder (Ramsbotham). Pressing off the placenta a few minutes after the child is born is, in my opinion, a dangerous practice, for I have seen it in several cases induce hæmorrhage.

I am frequently summoned to cases attended by inexperienced and unskilful women, in which the patients are almost at death's door as the result of *post partum* hæmorrhage. My practice in such cases is to introduce my hand into the uterus, clear away the membrane and clots, if any, and inject the solution of perchloride of iron. I invariably have no further trouble, for my patients generally get on well; and I may add, that I never lost a case from uterine hæmorrhage, or after using the perchloride solution. I am now so confident of its harmless effects that, if I could not arrest hæmorrhage by my accustomed mode of using it, I would without the slightest hesitation take a small handful in my left hand and rub it all over the interior of the uterus (Ringland). If my patient died after this, it would be in the highest degree probable that death had resulted from some lurking poison in the blood, called into action either by the loss of blood, or by the various other well known influences.

WALTER BERNARD, L.K.Q.C.P.I., etc., Londonderry.

XXI.

The importance of the subject bearing on the treatment of *post partum* hæmorrhage cannot be estimated lightly, but every legitimate means should be tried towards the arrest of so formidable an adversary. Much, I think, might be urged as to its prevention; and, with regard to the latter, I most cordially endorse the remarks made by Messrs. Kettle, Godrich, and Atthill, and would suggest another plan, which I have invariably adopted, but for which I do not wish to claim singularity. It is simply this: while the shawl or binder is adjusted, to draw the same gently, firmly, but tightly, downwards over the patient's abdomen during the expulsive pains, then follow up with the left hand by grasping the uterus with a steady firm pressure downwards and backwards, until the placenta is expelled and a contracted state of the organ produced. My patient, in most cases, is undressed and in a recumbent posture; and, in suspicious cases, the pillow is removed from under the head. I consider that the regulation of the binder afterwards ought to be imperative on the surgeon, instead of being left to the hands of unskilled women. I feel convinced that, if such means were more generally adopted, less and less uterine hæmorrhage would be met with. It has been my good fortune, in a midwifery practice extending over a period of twenty years, to have seen, comparatively speaking, few cases of *post partum* hæmorrhage. This is mainly attributable, I imagine, to the following out in all cases the plan mentioned, and especially in those cases where it has been ascertained that there had been a previous hæmorrhagic tendency. We have everything to gain; the chances of hæmorrhage are considerably lessened; there is complete power over the uterus; and, should hæmorrhage occur, there is much less excitement of the vessels and unbounded relief to the patient's mind. The plan advocated by Dr. Earle, and lately by Dr. Dabbs, in my opinion, is worthy of an extended trial, as I have found that, where practicable, the application of the child to the breast seemed to exercise wonderful influence in exciting the uterus to action. While on the subject, I may also mention that, in individuals with a predisposition to flooding, small and repeated doses of the liquid extract of ergot, in combination with the tincture of perchloride of iron, have proved beneficial in my hands; and, in severe cases, the injection of iced water in a continuous stream, with an abundant supply of fresh air, seems to be all that is needed to arrested the flow. I submit those few remarks to the profession in the hope that a little more experience may be elicited; for, in the multiplicity of minds, we gain wisdom.

J. R. LEESON, M.R.C.S.Eng., and L.M.D., Blackburn.

XXII.

Not supposing that so much space would be available in the JOURNAL for the subject of *post partum* hæmorrhage, I have hitherto refrained from writing; but, as cases continue to be published, the following remarks may be acceptable.

Many years ago, before I was in independent practice, I had the misfortune to lose a patient from internal hæmorrhage. Since then, I have met with every variety of flooding, and encountered several cases of relaxing and dilating uterus after the expulsion of the placenta, and, when ordinary means have failed to induce permanent contraction, have had recourse—as a *dernier ressort*, which has never failed me—to the injection of the uterus with cold water. The most desperate state of things I ever met with occurred but a few months ago. The patient was pulseless, insensible, sight and hearing gone, extremities all cold, jaw dropped, fingers contracting; deglutition, however, was still possible. Brandy was persistently poured into the pharynx, whilst cold water was pumped into the uterus till it flowed out unstained. Nearly a pint of brandy was got down (afterwards rejected), and the patient did not die; but it was long before she could raise her head from the pillow without fainting, and many weeks before she could walk across the room. In this case, I would have gladly used perchloride of iron had it been at hand. Only in one instance has this been available to me at the right moment. I was sent for by a brother practitioner, and took it with me. I found him with the left hand in the uterus, the right grasping that organ through the abdominal walls; blood was freely flowing past his wrist, and the dilated uterus seemed not to resent in the least the presence of his hand. Hurriedly mixing about one part of liquor ferri perchloridi with five or six of water, I passed a tube into the uterus. Directly the injection reached the cavity, my friend's hand was expelled, and not a drop more blood was lost. The woman's convalescence was as usual. Notwithstanding my adoption of the Dublin plan of following down and grasping the uterus as the child is expelled, the immediate careful application myself of the binder, and its readjustment after the expulsion of the placenta, hæmorrhage from relaxation and dilatation of the uterus will occasionally occur. At a late meeting here of our Medical Society, in narrating our several experiences, one practitioner asserted that he never went to a labour without the perchloride; another, that he had attended upwards of 3,600 labours, and would like to see a case of *post partum* hæmorrhage, having never met with one; moreover, that he never applied a bandage (*vide* BRITISH MEDICAL JOURNAL, March 14th, page 364). How is it that the uterus—that mysterious and incomprehensible organ—comports itself so differently to different accoucheurs? How are we to reconcile these profoundly contradictory statements? I have sometimes been disposed to regard the uterus as a distinct and separate organisation, having sentiments and feelings of its own. Can the creature have likes and dislikes, doing the bidding of this man and rebelling against the endeavours of that? I left the meeting mystified.

EDWARD GARRAWAY, M.R.C.S., Faversham, Kent.

XXIII.

I find the most successful treatment of this form of hæmorrhage to be, grasping the uterus with considerable force, which ought to be kept up while the hæmorrhage continues; kneading, as it were; giving large and frequent doses of ergot; raising the foot of the bed with a box or chair at least two feet, and applying cold to the vulva. An excellent form of ergot may be made thus:—Fresh powder of ergot, ʒviii; water, ℥xxvj; strong acetic acid, ʒvj. Macerate seven days, and strain. Of this preparation, four or six drachms may be given for a dose, to be repeated in fifteen minutes or sooner, if requisite. This preparation I consider very good, for the following reasons. It is astringent; it does not lose value by heat; it is grateful to the patient, on account of its acidity, rarely produces vomiting, and is not expensive.

I have tried all the preparations of ergot, but that now mentioned seems the most valuable. It certainly does appear remarkable that ergot should prove itself inert under certain circumstances. I have used the above preparation for over seven years, and find it the most convenient form, and, although given in such large doses, I have never seen any ill effect from its use.

CHARLES H. WELCH, F.R.C.S., etc., Stoke Newington Rd., N.

PATHOLOGICAL MEMORANDA.

INTERMEDIATE PRODUCTS OF OXIDATION AS MATERIES MORBI.

IN my pamphlet *On Therapeutics and Disease*, published in 1870, I expressed the opinion that a certain group of diseases originated from a deficient oxidation of effete tissue, this group comprehending gout, rheumatism, oxaluria, neuralgia, calculous diseases, diabetes, etc.; and I showed, for the first time, I believe, how these diseases were cured by alkalies, not by the formation of a neutral salt with the abnormal product, but by its being oxidised to the condition of normal excreta. These opinions, particularly as referring to diabetes, were considered by some reviewers as *outre;* and I refer to the subject now to indicate the coincidence between the opinions I then advanced and those expressed by Dr. Murchison in his "Croonian Lectures on Functional Derangements of the Liver", at present appearing in the JOURNAL. With regard to diabetes, the views advanced in my pamphlet have been recently confirmed by Bernard's experiments; and in "Lectures on Bright's Disease" which I delivered to the students at the medical dispensary of the Infirmary here some months ago, and which are being published in the *Medical Press and Circular*, as the students will remember, I hazarded the opinion that, while the *lower* products of the oxidation of protein material were formed in the depths of the tissues, the complete transformation of urea was effected in the liver by a process of oxidation and an appropriation of the nitrogen lost in passing through this organ. On this, of course, I cannot here dilate; but I think it due to myself to state, as the portion of my lectures in which this subject is referred to is not yet published, though in the hands of the printer some time ago, that my opinions have thus been necessarily formed independently of the excellent lectures to which I have referred.

D. CAMPBELL BLACK, M.D., Glasgow.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

ST. MARY'S HOSPITAL.

CASE OF PERFORATION OF THE RECTUM BY FOREIGN BODIES, COMPLICATED WITH STRANGULATED HERNIA: DEATH FROM PERITONITIS.

(Under the care of Mr. JAMES LANE and Mr. OWEN.)

W. G., aged 50, policeman, was admitted into St. Mary's Hospital about 9 P.M. on March 30th, on account of a large strangulated inguino-scrotal hernia on the left side. He was evidently in great distress, suffering from frequent vomiting and intense pain in the region of the tumour and over the abdomen. He stated that the hernia had been present for some years, but he had never worn a truss, and he had never suffered any inconvenience from it till the day before his admission, when it became painful and the sickness commenced.

In the absence of Mr. Lane, Mr. Owen was sent for, and he, after some trouble, succeeded, with the help of chloroform, in reducing the hernia by the taxis; the patient was then placed in bed and an opiate given. Still the vomiting continued throughout the night, and the continual retching forced down the hernia several times, in spite of a thick pad and spica bandage; it was, however, easily returned.

At midday on Tuesday, March 31st, he was seen by Mr. James Lane and Mr. Owen; the vomiting was then of a stercoraceous character, and he was evidently suffering from severe peritonitis; yet the hernia was reducible with ease and the ring perfectly free. Having examined the patient carefully, Mr. Owen found no signs of any other rupture. Mr. Lane inserted his finger into the rectum, and at once came upon a round mass about the size of an apple; this he extracted, and immediately afterwards another similar mass: they proved to be pieces of flannel rolled into balls. Mr. Lane could still just reach with his finger a third harder mass. To remove this, an enema was given, and an oblong piece of hard curd soap was voided; another enema brought away a second piece of soap; each was about three inches long by two inches in width and depth. Soon after this, the patient became suddenly worse, complained of excruciating pain at the lower part of the abdomen, sank rapidly into a state of collapse, and died the same evening.

At the necropsy, the abdominal cavity was found to contain a considerable quantity of sero-purulent fluid, and the intestines were glued together by recent lymph; the peritonitis had been general, but most intense in and near the hernial sac. On looking into the pelvis, a considerable amount of fæcal matter was found extravasated through a round ulcerated opening in the upper part of the rectum, while lower down was another slough just on the point of giving way; the mucous membrane of the rectum was of a very dark colour throughout, almost in a state of gangrene.

We must add that the patient said nothing about the foreign bodies in his rectum till after their extraction, when, on being questioned, he gave the following account. When going out on night duty on the evening of the 28th, he was suffering from an attack of diarrhœa, and, to stop this, he inserted the pieces of soap, being anxious, as he said, not to soil his police clothes; the soap proving ineffectual, he afterwards inserted the two pieces of flannel, and these seem to have had the desired effect and to have enabled him to finish his allotted term of duty. On his return home on the morning of the 29th, he told his wife about the pieces of soap, and asked her to try to get them away, as he thought they must have slipped in too far; she attempted to do so, but failed. He said nothing about the flannel.

During the day (the 29th), he had pain in the lower part of the abdomen and vomited; and it seems probable that the vomiting, excited originally by the presence of the foreign substances in the rectum, caused more intestine than usual to be forced down into the hernial sac and strangulation to ensue. Peritonitis then set in from the double starting-point of the strangulated hernia and the inflamed and distended rectum; but, although the symptoms were urgent and the pain must have been severe, he did not apply at the hospital till the evening of the 30th. The perforation of the intestine, which was found to be about eight inches from the anus, was probably the result of ulceration caused by one of the angles of the pieces of soap. The opening so caused would remain plugged by the soap until the latter was removed by the injection; there was then nothing to prevent fæcal matter from escaping into the peritoneal cavity. This would explain the rapid collapse and death; but, even if there had been no perforation and extravasation of fæces, the existence of such extensive and acute peritonitis would have rendered his recovery more than doubtful.

SAMARITAN FREE HOSPITAL.

CASE OF CARDIAC DEPRESSION FROM SHOCK.

(Under the care of Dr. PERCY BOULTON.)

THE following case is sufficiently unusual to interest many, and to deserve putting upon record.

A. S., aged 69, applied at the Samaritan Hospital on December 8th, 1873, for some antiparasitic, as she was suffering from *pediculi corporis*. She asked to be allowed to have her lotion directly, as she was given to fainting. On examining her pulse, it was found to beat regularly, but only 25 to the minute. She gave the following history.

"I was a lady's outfitter for thirty-three years, and occupied two shops in Regent Street. Eight years ago, I moved to Paris, and was there till the late siege began. I had the option of leaving, and did so, hastily packing my goods in boxes, which were to follow me to England. These I never saw again; and the shock was such that, when I arrived in this country, I was perfectly prostrated, and have been subject to frequent faintings ever since."

The following notes of the case were made.

The heart's sounds were normal. The apex beat directly below the left nipple. The area of cardiac dulness was slightly increased. The pulse was 25 to the minute, corresponding with the systole. There was a slight amount of albumen in the urine, which was passed twice in the night. Respirations 32 per minute. The catamenia ceased at 44, and she had no discharge. She resembled a person under the influence of large doses of Calabar bean. Dr. Percy Boulton considered it a case of vaso-motor neurosis, the vitality of the cardiac ganglia being diminished by shock. The following mixture was ordered: Tinct. belladonnæ ♏x; tinct. digitalis ♏x; tinct. quinæ ʒj—aquæ ad ℥j; ter die.

This was never taken, as she fainted in the street and broke the bottle after the first visit, and attended very irregularly afterwards, declaring that she was unable to undergo the fatigue of the journeys to and from the hospital, and the necessary waiting. Dr. Percy Boulton then proposed seeing her at his own house; and, in order to observe what effect good feeding would have, she was given on several occasions a hearty meal with stimulant, with the result of raising her pulse five to ten beats per minute. She took kindly to this treatment, and seemed desirous of having the dose repeated "ter die"; but, as she objected to medicine proper, she was dismissed, and therefore remains *in statu quo*.

BRISTOL GENERAL HOSPITAL.

DISLOCATION OF SHOULDER AND COLLAR BONE ON THE SAME SIDE.

(Under the care of Mr. LANSDOWN.)

[Reported by CHRISTOPHER ELLIOTT, B.A., M.B., Assistant House-Surgeon.]

JOSEPH PIPE, a labourer, aged 56, was admitted into hospital on August 26th, 1873, with dislocation of the humerus and clavicle on the same side. The injury was caused, he says, by a bull squeezing him against a manger whilst he was stooping under it.

On admission, he was suffering a good deal from shock, and complained of great pain and inability to raise his arm. On examining his shoulder, it presented the usual signs of dislocation, the head of the bone being driven inwards. Reduction was at once easily effected with the heel in the axilla, the head of the bone returning into its socket with an audible snap. The patient here expressed himself much relieved; but, on comparing the shoulder with that of the opposite side, there appeared to be a peculiar prominence in the neck. This proved to be the outer end of the clavicle. It was freely movable, and threatening to protrude through the skin. As there was a great deal of swelling and tenderness, it was impossible to determine its exact nature. No crepitus could be elicited. A pad was put into the axilla, and the arm bandaged to the side. On August 27th, he was rather feverish, and complained of considerable pain and soreness. On the 29th he was better; he said that he felt something moving in his neck when he stirred. On September 3rd, all swelling had subsided. The clavicle could now be distinctly traced, showing its outer end to be displaced above the acromion. A figure-of-eight bandage was applied. On September 7th, he was made an out-patient; and, on the 19th, the shoulder was daily gaining strength, but he was as yet unable to raise his arm.

REMARKS BY MR. ELLIOTT.—In this interesting case the dislocation of the clavicle was, I should think, secondary to that of the shoulder, being due to the force with which the head of the humerus was driven against it. Considering the great force that must have been necessary to do this, it is surprising the clavicle was not broken, especially when the comparatively advanced age of the patient is also taken into consideration.

As regards the future usefulness of the arm, a matter of importance to a labouring man, it must be considerably impaired. In this case, although the man was able to move his arm freely backwards and forwards, the upward movements of the arm were quite lost.

BIRMINGHAM GENERAL HOSPITAL.

DIABETES MELLITUS, SHOWING THE EFFECTS OF DIET, SKIMMED MILK, LACTIC ACID AND OPIUM, ARSENIC AND VALERIAN.

(Under the care of Dr. FOSTER.)

T. G., aged 50, married, labourer, a large-boned, muscular man, with a rather florid complexion and an anxious expression, came to the hospital complaining of great thirst, frequent micturition, and progressive weakness and wasting, in spite of a large appetite. He had never suffered from any serious illness before, and referred his present attack to mental anxiety and worry connected with his work. The first symptom he noticed was weakness in the limbs, often associated with a burning pain in them. Excessive thirst and frequent micturition followed, and the latter symptom compelled him to get up five or six times during the night. His mouth was parched, the skin was dry and harsh, and the bowels were confined. He had lost many pounds in weight during the three months which had elapsed since his illness began. When admitted, his heart and lungs were free from disease; his tongue was dry, furred at the back, but not at the tip and edges; his gums were spongy; sight good. He did not complain of headache. The liver was natural in size, and the spleen also. There was no tenderness over the abdomen, nor in the lumbar regions posteriorly. Temperature, 97⅖; weight, 9 stone 3½lbs. The urine was large in quantity, contained 30 grains of sugar to the ounce, and had a specific gravity of 1042. He was placed on ordinary mixed diet. The progress of the case under the various plans of treatment adopted is tabulated below.

Ounces of urine in 24 hours.	Specific gravity.	Grains of sugar per ounce.	Daily amount of sugar in grains	REMARKS: DIET: TREATMENT.
148	1043	33 4	4943.2	Average of four days on ordinary mixed diet. Infusion of gentian, one ounce three times a day.
119	1038	23.5	2796.5	Average of seven days on diet of meat, skimmed milk, beef-tea, bran-bread, and green vegetables. Infusion of gentian, one ounce three times a day.
99	1033	18	1782	Average of ten days on skimmed milk and curds. Infusion of gentian as before. On the last day of this treatment the sugar fell to 13 grains per ounce. The temperature during the treatment rose to and kept at the normal line. The man refused to continue the treatment beyond the tenth day.
124	1040	25.5	3162	Average of fourteen days on a diet of meat, bran-bread, green vegetables, and three pints of skimmed milk. Treatment: Lactic acid one drachm, and three to five grains of opium daily. Left at end of this period, weighing 9st. 6lbs.—a gain of 2½lbs. since admission.
150	1037	27	4050	Average of seven days living at home on same diet as during last period in hospital. Treatment, 10 to 15 minims of liquor arsenicalis daily.
110	1035	27.5	3025	Average of eleven days' diet of meat, bran-bread, eggs, bacon, and cabbage. Infusion of valerian six ounces, and extract of valerian, 50 grains daily.
116	1034	26	3016	Average of three weeks same diet. Treatment: Infusion of valerian five to six ozs., and extract of valerian, 80 to 90 grains daily. Weight at end of period, 10st. 7½lb.

CLINICAL REMARKS BY DR. FOSTER.—The table gives a by no means sufficiently favourable view of this man's improvement after he left the hospital. It shows how much he improved on a skimmed milk diet, which reduced the amount of sugar on one day to as little as 13 grains per ounce. The man, however, absolutely refused to continue this diet, and finally left the hospital when I again pressed it. During the last fortnight of his stay, the so-called galvanism of the sympathetic nerve in the neck was tried, but produced no appreciable effects on the flow of urine or on the excretion of sugar. He left the hospital, having gained about 2½ lbs. during his stay. The first week at home, where he had a freer diet, considerably increased the amount of sugar, and the arsenic appeared to have no power of checking the excretion of sugar. The arsenic had really a longer trial than appears in the table, having been given altogether for fourteen days. He was afterwards placed on the valerian treatment, and on this he gained no less than 15½ lbs. in weight. The thirst decreased; his strength increased; he was able to do a fair day's work; he felt better and stronger, and improved in appearance, although the diet which he used at home contained more starch than the restricted diet of the hospital. On two or three occasions he was ordered to take liver as part of his animal food: this was done on the hypothesis that the cooked liver offered a ready way of introducing healthy liver-sugar to supply the deficiency of combustible material, which exists in cases in which the liver forms an abnormal liver-sugar (diabetes from abnormal glycogenesis). While taking the liver, there was no increase in the quantity of urine or in the amount of sugar. On two occasions, on the days following a free use of liver, the urine was 115 and 118 ounces, with 25 and 23 grains of sugar to the ounce. During the period of treatment as an out-patient, his urine was examined three times a week—on Tuesdays, Fridays, and Saturdays.

The results recorded in the table show that under the use of the valerian the improvement in general health and the increase in weight were out of proportion to the diminution of the sugar. It was disappointing time after time to find the dosage of sugar so large while the man was manifestly improving. To see how far this might be due to the effect of the valerian in checking the loss of urea, four analyses of the urine were made during the last three weeks the patient was under observation, and the comparison of the results, with an estimate of the urea made shortly after he left the hospital, explained the discrepancy. When the first analysis was made before the valerian treatment was commenced, he was passing daily 907.5 grains of urea. During the last three weeks of the valerian treatment, the amounts found were 732.4 grains, 678 grains, 640.3 grains, 596.8 grains. These figures, although far from conclusive, show that valerian produces its beneficial effects rather by checking tissue-waste than by acting directly on the disordered function of the liver.

REPORTS OF SOCIETIES.

MEDICAL MICROSCOPICAL SOCIETY.

FRIDAY, MARCH 20TH.

JABEZ HOGG, Esq., President, in the Chair.

Mr. **GEORGE GIBBS** read a paper on Staining with Aniline Dyes for Balsam-Mounting. The author stated that alcohol soon extracted the colour of aniline red, so that it was impossible to preserve the specimen in Canada balsam. To obviate this inconvenience, he tried a two per cent. solution of aniline in spirit, and then found that, by staining sections that had been in spirit with this solution for three or four minutes, rinsing in spirit, and placing subsequently in oil of cloves, the colour was perfectly preserved, when the specimen was mounted in Canada balsam. Oil of cloves was preferable to turpentine, the latter at times precipitating the colouring matter; but should this occur, brushing with a camel's hair pencil would remove the deposit.

A paper by Mr. E. C. **BABER**, upon Staining with Picro-Carminate of Ammonia, was read. The following is the method of preparing the fluid: Pure carmine, 1 *gramme;* liquor ammoniæ, 4 *cubic centimètres;* water, 200 *grammes;* mix, and then add, picric acid, 5 *grammes.* Agitate, from time to time, during two days; allow the residue to settle; decant, and evaporate the decanted liquor at the temperature of the air; redissolve the crystals in water (strength, two per cent.); and filter, if necessary.—Dr. **MATTHEWS** remarked that some tissues attracted red rather than purple colours; thus, nuclei generally were more easily stained by the former. He had obtained good results from first staining in carmine, and subsequently in a solution of picric acid. He had found Stevens's writing fluid a ready and useful stain for sections.—Mr. **WHITE** had found that a section of epithelioma, stained with logwood, and then with picric acid, showed the yellow centres of the "birds' nests", while the surrounding parts were tinted by the hæmatoxylon. He had only used carmine and picric acid as separate solutions, but by this means he had seen yellow channels of communication from one "birds' nest" to another.—Mr. **ATKINSON** found that crystallised magenta, when first used for staining sections, became blue, and then after a time disappeared; but mounting in a solution, containing one-third per cent. of corrosive sublimate, prevented this.—Mr. **SCHAFER** had given up carmine, because of its too brilliant colour, and always used logwood. He thought osmic acid better than picro-carmine for nerve-tissues; and remarked that Dr. Sharpey had long ago used magenta for staining the axis-cylinders of nerves.—Mr. **MILLER** had found a solution of carmine, and a four per cent. solution of picric acid, and in alcohol and water, especially good for spleen, and for unstriped muscular fibres. He preferred carmine to logwood.—Mr. **GROVES**, except in the case of nerve-structures, preferred logwood to carmine. The double staining of logwood and gold chloride was good for nerves and nuclei, and especially for such structures as the frog's bladder.—Mr. **GOLDING BIRD** mentioned Dr. Moxon's use of Stevens's writing fluid for staining nerve-structures, and referred to a fact, communicated to him by Dr. Malassez, of Paris, that aniline, dissolved in spirit, was especially good for studying ossification of cartilage; for it stained the cartilage, but not the newly formed bone; while an aqueous solution of aniline stained the canaliculi, and not the bone-substance, but was not permanent.

Mr. W. B. **KESTEVEN** read a paper upon a form of grey degeneration, occurring in the brain and spinal cord, and designated by Drs. Batty Tuke and Rutherford Miliary Sclerosis. The author showed examples of this lesion by sections and drawings. The change, he stated, was associated with a wide range of diseases of the nervous centres. He enumerated twenty morbid conditions, in which he had met with the so-called miliary sclerosis. The essential characters of this lesion, Mr. Kesteven showed to consist in the absence, in circumscribed patches, of the normal nerve-tissue, and its replacement by an altered and degenerate state of the neuroglia. The spots varied in size from $\frac{1}{50}$th of an inch to $\frac{1}{500}$th of an inch in diameter. Their physical characters were described in detail, and the author discussed the question, how this change was connected with previous symptoms, and whether it was possible that it could be the result of mere *post mortem* changes.—Dr. **PAYNE** asked whether Mr. Kesteven had found miliary sclerosis in a spinal cord or brain, otherwise quite healthy, and discussed the question as to whether the changes described might not be the commencement of secondary degeneration of nerves, as from inactivity, or of the wasting of certain nerve-fibres, that might go on to worse changes.—Dr. **MATTHEWS** asked whether coincident disease—as atheroma—of the vessels of the brain had been noticed.—The **PRESIDENT** had seen miliary sclerosis accompanied by calcareous change in the vessels, and in a case where death resulted from cerebral hæmorrhage; also in preparations of brain from the lower animals, hardened in chromic acid.—Mr. **KESTEVEN** considered the term "sclerosis" more applicable to the cases where the disease occured in patches. There was nothing of a fibrous nature in the condition. He did not consider alteration colloid, though at first sight resembling it; nor had he noticed the change in connection with atheromatous vessels, though at times the bodies described were calcareous and gritty (brain-sand). He did not consider the condition as one of nerve-fibre degeneration, and was still seeking an explanation.

SATURDAY, APRIL 18TH.

JABEZ HOGG, Esq., President, in the chair.

Dr. **GREENFIELD** read a paper upon Diphtheria, founded upon the microscopical examination of specimens from five cases, and illustrated by preparations. The author stated his belief that the obscurity and doubt which still seemed to exist upon the origin and structure of the diphtheritic false membrane, arose, in part, from the confusion in the nomenclature in common use, especially the fact that "croupous" and "diphtheritic" were terms used in different senses, clinically and histologically. An examination of his cases showed in all, the larynx and trachea, the mucous membrane, and usually the deeper tissues, in a state of more or less intense inflammation of ordinary character; whilst the false membrane consisted, for the most part, of a stratified network of a substance, giving the reactions of fibrin, in the meshes of which were contained altered epithelial cells. The amount of adhesion to the mucous membrane was various, but in no case did the exudation actually pass into its substance; although, in some cases, it appeared adherent by fibrinous bands to the papillæ. After describing the views of Wagner, and of other German pathologists, the author stated his belief that the false membrane consisted, in part, of a catarrhal process, with modifications in the epithelium, and, in part, of a true fibrinous exudation. These views were supported by the comparative examination of specimens taken from cases in various stages. In the pharynx, the inflammatory process was stated to extend much deeper than in the trachea, and to be accompanied by a more rapid destruction of tissue. The false membrane was believed to consist, in a larger measure, of altered cells. The question of the occurrence and importance of fungous growth in the mucous membrane was then discussed, and the author showed specimens from the pharynx containing numbers of minute fungus-spores, and a delicate mycelium, deeply penetrating the inflamed mucous membrane. He had not, however, been able to find any similar appearance in the larynx or trachea, of the same or other cases; and he considered it, therefore, still an open question, how far the fungus was an accidental occurrence, and what was its relation to the disease.—The **PRESIDENT**, after proposing a vote of thanks to the author of the paper, stated his belief that fungous growths might be always found in the mucous membranes in certain low states of health, and considered a fungus in diphtheria an accidental rather than an essential occurrence. He could not agree with Dr. Oscar, who held that the disease was owing to the presence of fungus. He had examined more than one case of diphtheritic conjunctivitis—in which disease the exudation formed very rapidly—but he had never found any fungus. The position of a vegetable parasite upon the body had much to do with its influence upon the disease it accompanied, or of which it was the cause; hence some importance might be attached to the specimen shown, where the fungus was deep in the inflamed mucous membrane.—Dr. **BRUCE** remarked that croup was generally defined as owing to a false membrane, in the removal of which healthy mucous membrane was left; this, however, the paper would disprove, since Dr. Greenfield had shown that, not only the mucous and submucous tissues were at times reached in croup, but that even the tracheal rings might be in part destroyed. He had also noticed the small cavities, or vacuoles, described in the false membranes, and thought them owing to the exudation from the ducts of mucous glands. These spaces were, at times, filled with exudation-cells. The mucous epithelium was not necessarily destroyed by the false membrane; it might sometimes be seen covered by the latter. Exudation of fibrin would fully account for the false membrane upon the mucous surface, without interfering with the epithelium covering the latter, through which wandering cells might easily pass; and a precedent for fibrinous exudation on a mucous surface might be found in croupous pneumonia.—Mr. **COUPLAND** thought the different layers in the false membrane showed a mixed origin; thus the surface of it was more coarsely fibrillated than the deeper parts, which were much finer, as though there had been first a catarrh, destroying the epithelium, and then fibrinous exudation last of all.—Mr. **STOWERS** asked for a verification of the observation made, that the histological appearances in the anginal form of scarlatina, and in a blistered surface, were those of diphtheria.—Mr. **Miller** referred to Rindfleisch's remark, that the exudation in pharyngeal affections was more cellular, and less fibrillated, than in laryngeal; as well as to the existence of apertures in the basement-membrane of the affected parts.—The **President** thought the non-homogeneity of the false membrane might be explained by the different ages of its component parts, and suggested that the fungi, commonly found in diphtheria, might owe their presence to the open-mouthed mode of respiration in diphtheritic patients. In the two cases of diphtheritic conjunctivitis, already mentioned, the eyes had been kept constantly bandaged, and, as stated, no fungus had been observed. —Dr. **Greenfield**, in reply, quoted German authority for the constant presence of fungus in diphtheria; and, since fungi in the kidney had also been described, they might serve to explain the renal complication so constantly present. The only way to get at a life history of a false membrane was to examine, in the same subject, the patches in all stages of growth. He had done this, but had only found, at first, a catarrhal state, and, later on, pus-globules and fibrillation in the deeper surface of the membrane. The fibrinous exudation in pneumonia was no precedent, for the same process in diphtheria, since the air-cells might be proved, and were by some thought, to be part of the lymphatic system. Epithelium, in place, would not allow fibrin to exude, but once destroy the former, and then exudation was easy. Two theories existed with regard to the part played by fungi in diphtheria—one, that they were its cause; the other, only the cause of the rapid disintegration of the membrane; the subject was still *sub judice*.

PATHOLOGICAL SOCIETY OF DUBLIN.

Saturday, February 21st, 1874.

Robert D. Lyons, M.D., President, in the Chair.

Epithelioma of Bladder and Rectum.—Dr. **James Little** presented the abdominal viscera of a man, as to the nature of whose illness no positive diagnosis had been made. Two prominent symptoms had been observed: frequent desire to micturate, and a similar irritability of the rectum. The motions were frequent, and small in amount of late, but they had previously been dysenteric and very fœtid. The man refrained from food, feverish symptoms supervened, and he died of exhaustion. A mass of epithelioma was found, implicating the bladder on one side and the rectum on the other. The growth was situated immediately above the sigmoid flexure, and had undergone ulceration. The colon was almost quite healthy, but throughout two feet of the ileum the mucous membrane was red, presenting a "sanded" appearance, and the follicles were enlarged. There were evidences of pyelitis in the left kidney, and two small abscesses lay beneath its capsule. The bladder was small and puckered.

Bony Ankylosis of Hip-Joint—Dr. **Bennett** showed an example in a young subject—a lad aged 13 or 14—resulting from ordinary strumous disease of the hip, of six or seven years' standing. After death, a minute examination of the parts showed that firm bony ankylosis had occurred. On the pelvic aspect of the acetabulum a sequestrum of bone lay in an abscess, which discharged externally, through the sciatic notch, into the gluteal region. The contents passed through a tunnel, which seemed to traverse the neck of the femur, but which, in reality, ran through the ossified capsule of the joint. The head and neck of the bone were in great part absorbed.

Morbid Anatomy of Scarlatina.—Dr. A. W. **Foot** exhibited parts of the body of a girl, aged 13, who had died, on the ninth day, of scarlatina anginosa. She had been admitted to the Meath Hospital on the fifth day of illness, with copious livid eruption, and severe throat-symptoms. At this time, there was slight tumefaction of the left side of the neck. This swelling increased daily in amount, extent, and hardness, extending above and behind the ear, and downwards to the clavicle. At the time of her death, the left eyelids were closed, but the pupil of this eye was much larger than the right. Shortly before death, a similar swelling appeared on the right side. She had great restlessness, want of sleep, dysphagia, increasing rapidity and feebleness of pulse, and cyanosis. The temperature never exceeded 103.9 deg. Fahr., while the pulse was never under 140, and reached 160 and 180. The application of twelve leeches to the cervical swelling produced a very transient diminution in its size. The jaws became clenched from low muttering delirium, she passed into unconsciousness, and died quietly. The left tonsil was almost completely destroyed, its position was occupied by a loose ragged slough; the soft palate, fauces, and pharynx were œdematous and congested; the deep lymphatic glands, lying about the bifurcation of the carotid artery, were enlarged, and formed tumours, pressing tightly on the jugular vein, where several of its tributaries—the facial, lingual, pharyngeal, and occipital veins—opened into it. Among the œdematous connective tissue of the neck there was no pus, nor had suppuration occurred in any of the enlarged glands, but their glandular structure was hypertrophied, œdematous, and burst out of their capsules with considerable force upon incision. There was no plugging or inflammation of any of the obstructed veins. The left arytenoid cartilage appeared much larger than the right one, owing to the preponderance of œdema of the submucous tissue of the pharynx on that side. The right cavities of the heart were occupied with a tough white fibrinous coagulum. There was an almost complete absence of enlargement of the solitary glands of the intestines; three or four of the agminated groups were conspicuous at the termination of the ileum, but "psorenterie" was quite absent. The kidneys were normal in colour, shape, and consistence; the amount of increased vascularity was most trivial. The salivary glands were of their usual appearance, with the exception of an increase in size. The specimens showed the inaccuracy of the term "parotid" swelling, at least in this case, and the greater eligibility of that of scarlatinal bubo; that the tumefaction did not depend on cellulitis; that surgical interference would have been injurious, inasmuch as it could not have removed the cause of the œdema. They also showed that this local disturbance of the deep lymphatics, irritated by absorption of putrid matter from the sloughing tonsils, produced more mischief than the essential disease itself.

Malignant Growth implicating Œsophagus.—Dr. **Grimshaw** exhibited the alimentary tract of a man, who had been quite healthy up to two and a half years ago, when, after a voyage to the West Coast of Africa, an attack of dropsy of the feet disabled him. From this and similar attacks he recovered perfectly, but in December 1873, he began to suffer from dysphagia. Swallowing became more and more difficult, and from want of food extreme emaciation took place. The œsophageal tube could be passed down nearly as far as the cardiac orifice of the stomach, where it met with an obstruction. Above the constriction, the œsophagus seemed to be dilated, for the patient could swallow a good deal of fluid, but most of it was vomited again without ever entering the stomach. He suffered much at first from hunger and thirst, but subsequently the sensation of hunger disappeared, although thirst remained. Nutrient enemata were given freely, but the patient sank from inanition. There was a slight narrowing of the calibre of the tube at the upper part of the œsophagus. At its lowest portion, a large mass of disease, extending through the cardiac opening into the stomach, existed. The stomach itself was small, and at one place adherent to the liver, which was healthy. The pancreas was involved in the malignant disease. Cretaceous deposits were found in the lungs, and the kidneys were in a condition of incipient cirrhosis.

DUBLIN OBSTETRICAL SOCIETY.

Saturday, February 14th, 1874.

Evory Kennedy, M.D., President, in the Chair.

Fibrous Tumour of the Uterus.—Dr. **Kidd** exhibited a specimen. It grew from the fundus, and had passed through the os internum, lying in the canal of the cervix, which was expanded over the tumour. The patient, 42 years of age and unmarried, had suffered from pain for two and a half years, and also from severe hæmorrhage. The former symptom was probably due to the presence of two subperitoneal fibrous tumours—one on the left, the other on the right, side of the uterus. The os was as large as a fourpenny piece; its hard thin edge was divided by scissors in three places, and the pedicle was then separated by means of an écraseur.

Specimens of Mole Pregnancy and of so-called Uterine Hydatids.—Dr. T. **More Madden** showed a quantity of so-called hydatids, which had been expelled from the uterus of a woman, aged 25, mother of two children. She supposed herself five months pregnant, when pains and hæmorrhage set in. The os was of the size of a florin; it relaxed, a smart dash of bleeding occurred, and a large mass of hydatids came away, varying from the size of a pea to that of a grape. In another case, a woman, aged nearly 40, mother of eight children, experienced symptoms of pregnancy up to six months. She now ceased to feel "the movements of the child", as she thought; her abdomen became flat, and her breasts smaller. At thirteen months, the uterus was found slightly enlarged; there were hæmorrhage and pain. Ultimately, a thick cast of the interior of the uterus was expelled, and the symptoms vanished. The question arose, "Were these growths the result of conception, or not?" Dr. More Madden thought they were not so, but were probably due to some ovarian disease—at least when they occurred in the unmarried.—The **Chairman**, Dr. **Kidd**, Dr. **McClintock**, and Dr. H. **Kennedy** took part the subsequent discussion.

Case of Hysterical Convulsions.—Mr. F. T. **Porter** narrated the history of an unmarried woman, aged 27, who began to menstruate at 13, and continued well until she was 17, when the sudden death of her father determined the access of repeated convulsive attacks, with other hysterical symptoms. The convulsions recurred sometimes as often as thrice daily. The menses stopped for a year from October 1872 to October 1873. During this time, the fits became less frequent, but more prolonged. Mr. Porter treated his patient with valerianate of zinc and hemlock, and the convulsions had completely ceased. Having considered the analogy of the period of puberty to that of dentition, the author entered into the physiological significance of menstruation, and expressed his opinion as to the influence for evil on the organism of the too early approach of that function. Speaking of the treatment of amenorrhœa, he advocated the use of belladonna where it depended on plethora, and of opium in small doses, or of hemlock, where the patient was anæmic.

Rupture of the Urethra During Labour.—Dr. **Mac Swiney** reported a case. On May 31st, 1873, a lady, aged 24, married for two years, and confined ten months after marriage of twins, still-born, was delivered of a child at full term. The case became one of retained placenta, and Dr. Mac Swiney was sent for. Before he arrived, the placenta had come away; but a constant dribbling of urine led to an examination, with the following result. A very extensive tear was found in the perinæum, the vulvar opening being continuous with the anal. There were, further, a complete transverse rent in the vagina and division of the urethra, which was torn across two inches from the external meatus and projected into the vagina as a small scarlet tumour. A good deal of sloughing of the vaginal mucous membrane occurred, but, in process of time, a very fair recovery took place, the complete division of the urethra apparently permitting an effort at cure by development of muscular fibre, which formed a sphincter for the residual urethro-vaginal opening. The patient regained almost complete power over the rectum, and was able to hold half a tumblerful of urine in the bladder. Dr. Mac Swiney thought the accident had occurred from the access of a powerfully expulsive effort on the part of the uterus while the bladder was distended with urine.—Dr. **Kidd** said that, on the day after delivery, he had been able to pass three fingers into the bladder through the rent, which traversed the whole extent of the urethra. There were no constitutional symptoms at this time. A portion of the sphincter of the bladder must have been left intact, else even the comparative recovery could scarcely have taken place. The lesion had probably been caused in a way analogous to complete separation of the uterus from the vagina—an accident whose mechanism had been explained by Dr. Braxton Hicks. The woman had softened tissues, and the uterus had possibly drawn itself upwards, and so dragged the anterior wall of the vagina asunder.—Dr. **McClintock** regarded the case as almost unique. Generally, it was the posterior and lateral walls of the vagina which gave way.

SURGICAL SOCIETY OF IRELAND.

Friday, January 30th, 1874.

John Denham, M.D., President, in the Chair.

Deformity simulating Luxation of Ankle-Joint.—Dr. **Macnamara** presented the parts removed by Mr. Stokes's supracondyloid operation (see British Medical Journal, September 2nd, 1871, p. 277), in consequence of extreme deformity, the result of a compound fracture of both bones of the leg, in a woman, aged about 60. On the fifth day after the accident, erysipelas appeared, and spread from the seat of injury up the leg and thigh. It was followed by profuse suppuration. After the disappearance of the œdema, great displacement was found, closely resembling dislocation backwards of the ankle-joint. But the joint was uninjured, and the fracture was four inches above it. Muscular action had evidently displaced the fragments subsequently to the setting of the limb.

Gunshot-Wound of Leg.—Dr. **Macnamara** showed the right leg of a girl, aged 11, which he had amputated, by the ordinary circular incision, below the knee, for a compound comminuted fracture, caused by a charge of shot from a gun.

Excision of the Knee-Joint.—Dr. B. F. **McDowell** read a paper on this subject. Having alluded to Mr. Bryant's statistics, as to the comparative mortality of this operation and of amputation, at different ages, he detailed at length the case of W. M'Guinness, aged 30, of healthy constitution, who received an injury of the left knee in 1868. He was admitted to Mercer's Hospital on October 20th, 1871, with disease of the joint, but without much impairment of his general health. Every method was made to check or arrest the disease, but to no purpose, and he was readmitted on February 23rd, 1872. The joint was shortly afterwards excised. The heads of both tibia and femur were eroded, there was no trace of cartilage, and the posterior aspect of the patella had suffered. Complete recovery followed in eight months, and the man was able to undertake duty as a porter, with an extremely serviceable limb. Dr. McDowell believed that, in certain cases, this operation should be undertaken, regard being had to the brilliant results which were sometimes secured by it.—In the discussion which followed, Dr. H. Kennedy, Mr. Richardson, Mr. Morgan, Mr. Stapleton, Mr. Tyrrell, and Dr. Corley, took part.

Aural Vertigo.—Mr. H. R. **Swanzy**, having referred to Trousseau's admirable description of *vertigo à stomacho læso*, and *vertigo ab aure læsâ*, detailed three typical cases of the latter symptom. A sailor, aged 41, shortly after impairment of hearing in both ears had occurred, became subject to repeated attacks of vertigo. These recurred still more frequently, and with increasing severity, *pari passu* with the progress of the deafness. They came on suddenly, often causing him to fall, and were sometimes followed by nausea and vomiting. During the attacks, objects seemed invariably to swing round towards the left side. The hearing improved under treatment, and by practising the experiment of Valsalva, the patient was enabled to avert a threatened attack of vertigo. The second case was in a gentleman, aged 65, who became subject to attacks of giddiness, often followed by nausea, or even severe bilious vomiting. Treatment had been directed to the stomach, a gradually increasing deafness being overlooked. When examined, the patient could not hear the watch in contact with the right ear, nor with the left ear at more than three inches' distance. The aural symptoms had set in six years, and the vertigo five years previously. The deafness was greatly lessened by treatment, and the attacks of giddiness disappeared. The third case was of a butler, very deaf, and complaining greatly of giddiness. He was 60 years of age, sober, and in good health. The vertigo had appeared with the deafness four or five years before, and both were increasing *pari passu.* Treatment was of little or no avail. In none of these cases was there loss of consciousness during the attacks. They were all examples of the most common disease of the ear—namely, chronic simple catarrh of the cavity of the tympanum, the most usual cause of hardness of hearing in old people. So far as was at present known, the pathological alteration in this affection consisted in a sclerosis of the lining membrane of the middle ear, producing thickening, and rendering it stiff or inelastic. The process might go on to ossification of the stapes in the fenestra ovalis, and of the membrane of the fenestra rotunda. Mr. Swanzy spoke of the advance, in diagnosis, of aural affections from "nervous" diseases, and described the method of isolating the chronic simple catarrh, of which he had been speaking. In ninety-five per cent. of the cases of this affection, he believed a correct diagnosis could be made. Chronic catarrh of the middle ear was best treated by the use of the simple air-douche, through the Eustachian catheter. It acted probably as a local tonic to the mucous membrane, but more especially by mechanically restoring the membrana tympani to its normal position, stretching the pathological adhesions, and easing the stapes in its half-ankylosed state. Where the air-douche failed, prognosis should be unfavourable. Allied methods were the experiment of Valsalva, and the proceeding of Politzer—inflation of the middle ear by an air-bag during the act of swallowing. The late Mr. Allen's modification of Politzer's air-bag might be substituted for it. The vertigo was probably due to irritation of the semicircular canals, from increased pressure in the internal ear, owing to the displacement of the membrana tympani and stapes. The occurrence of tinnitus aurium might be similarly explained, and also the relief afforded in these cases by the air-douche. The theory of the function of the semicircular canals, adopted in this view, was that propounded by Flourens more than thirty years ago, and lately controverted by Schiff, and by Boettcher of Dorpat. Mr. Swanzy would adhere to the theory—the very fact that the inflation of the middle ear relieved the vertigo pointing to the local, not central, origin of the symptom.

COLUMN FOR THE CURIOUS.

Supernumerary Fingers.—Mr. Simon's allusion to cases of supernumerary fingers, in his speech at the recent discussion before the Pathological Society, recalls to my mind the following case, which, I believe, has not hitherto been noticed.

"They write from Stockholm, that, in a village in the province of Sunderlandmania, a peasant's wife was lately brought to bed of a girl with six fingers on each hand, besides the thumb, with nails on." (*London Chronicle* for July 23-25, 1765.)

T. N. Brushfield, M.D.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 9TH, 1874.

THE ACTION OF MODERN BULLETS ON THE ANIMAL BODY.

DR. ERNST KUESTER, of the Augusta Hospital, has published in the last number of the *Berliner Klinische Wochenschrift* an interesting paper on this subject. In a paper read last year before the German Surgical Congress, Professor W. Busch of Bonn called attention to the fact that the Chassepot bullet, when shot from a short distance into the human body, made a simple aperture of entrance, but that its aperture of exit was larger than a fist, and that there was very extensive fissuring and crushing of the bones. The same phenomenon had been described by Huy and Sarrazin in 1867; but they did not attempt to explain it. Dr. Busch supposed that the ball became melted and broken up by forcible contact with a hard substance, and acted like a mass of shot on the parts lying behind. Dr. Küster, at the time when Dr. Busch's paper was read, had made a similar observation as to the effect of the bullets, but could not adopt Dr. Busch's explanation. He has since made a number of experiments, which, with the courteous sanction of the ministry of war, who placed at his disposal arms, ammunition, and men, and with the assistance of Major Schenck, were carried out at the Royal Military School in Spandau.

In making the experiments, a large target was placed behind the animals, so as to enable the condition of the bullets to be observed after their passage through the body. The distances were 5, 20, 100, and 800 paces. The arms used were a sporting rifle (muzzle-loader with pointed bullet), the needle-gun, Chassepot, Mauser, and Henry-Martini rifles; the animals used for experiments were horses and wethers. The latter were first killed by a volley from all the weapons; then shots were discharged at the dead body, and after eight days a further series of experiments was made on the carcase, which was at that time undergoing decomposition. The following were the general results of the investigation.

1. There is no essential difference in the action of bullets on the living and on the dead body. With reference to this subject, Dr. Küster calls attention to the fact that, in consequence of the greater toughness and resistance of the skin of animals, the aperture of exit is not so large as in the human body. In one case, the skin was so tough, that the point only of the ball penetrated the skin of the back, and its force was then diminished. On dilating the opening and introducing the finger into the wound, there was found to be just as extensive destruction of the soft parts and bones, as in the human body. It was only in those parts where the skin was thinner and lay close to the bone, as in various parts of the head of the bone, that it was sometimes torn to a greater extent, but never so much as in man. The extent of injury of bones, however, was not less than in the human subject.

2. The extent of the destruction is in inverse ratio to the distance, and in direct relation with the initial velocity of the bullet. At 800 paces, although the characteristic peculiarities of the wounds were still present, they were greatly reduced in intensity. The smallest wounds were produced by the sporting rifle (*Jagdbüchse*); the bullets, although put out of shape, remained entire in the body, even when discharged at short distances. Then followed the needle-gun, the Chassepot, and the Mauser rifle, which produced frightful destruction of the bones and soft parts.

3. The destruction of the tissues is produced by the lead becoming heated by collision against a solid substance, and consequently broken up, but without being melted. The bullet is mechanically divided: it leaves the finest particles of lead in the recesses of the wound, while the fragments of various sizes pass out along with pieces of shattered bone. On this point, Dr. Küster differs from Professor Busch, who supposes a melting of the lead to take place. Busch's view appears to derive confirmation from the fact that, when a lead-bullet is discharged against an iron target, the lead is spread out in the form of a star; and this, it is argued, shows that it becomes melted. But Schädel of Heidelberg hung a small bag of powder before the target; the bag was repeatedly torn by the splinters of the bullet, but without producing an explosion, which must have taken place if the lead had been melted. There must also be a great difference, according to whether the bullet, travelling with full force, is completely arrested, or meets with an obstacle which it can overcome.

At the meeting of German naturalists in Wiesbaden, Professor Busch related some experiments to show that lead loses its cohesion in proportion as it is heated. If two bullets, one cold and the other heated, be allowed to fall on a stone from a height of six feet, no impression will be made on the first, while the second will be distinctly flattened. That a heating of the ball does take place, is an evident result of the physical law, that whenever it meets with resistance a part of the force is changed into heat; and further, when a bullet remains sticking to the target, it is always warm. Again, when a bullet is discharged from a short distance into a heap of moist sand, the edges and the farther end of the channel made by the ball are always warm. By these facts, the manner in which the injury is produced in the animal body is easily explained. The bullet shatters the first bony lamellæ with which it comes into contact, becomes heated, and is consequently broken into several fragments against the projecting portions and angles of the bone. In correspondence with this destruction of the bullet, the wounds made from short distances by the Chassepot and Mauser, which have the greatest initial velocity, were frightful. Most of the bullets passed through the animals' bodies reduced by one half or more, and greatly altered, and made on the target an irregular impression surrounded by a crown of small pieces of lead. Along with these were found fragments of bone, muscle, hair, etc. Dr. Küster does not remember having once seen a simple bullet-opening in the target.

The next point was, to observe whether hardened balls have the same effect. This was *à priori* not improbable, as Pirogoff had noticed the remarkably extensive splintering produced by the copper bullets of the Tscherkesses. Dr. Küster, however, found that—

4. The injuries described are produced only by bullets of soft lead, not by those made of hard lead. Bullets of hard lead are used with one only of the modern weapons—the English Henry-Martini rifle. The hardness is produced by amalgamation of the lead with tin in the proportion of 12 to 1. The initial velocity of this rifle is nearly as great as that of the Mauser, and yet the wound produced by it is very much smaller. While with the latter the aperture of entrance into the bone was irregular and often very extensively splintered, and while the amount of crushing increased in extent in the track of the ball, the Henry-Martini bullet always made a simple and more or less circular opening. If the edge of a rib were hit, the loss of bone formed the segment of a circle corresponding to the circumference of the ball. The aperture of exit was also generally roundish, though larger; there was either no splintering, or it was limited to the immediate circumference of the aperture. The hole in the target was without exception simple; and the ball, when found in the target, was not at all, or only slightly, misshapen. Dr. Küster has never found splinters of lead in the track of the wounds made by these bullets. In one case only did he find a bullet of this kind much misshapen; it had been discharged at a distance of 100 paces, and remained sticking in a bone.

Dr. Küster states, as a fact of importance, that at a distance of a hundred paces the Henry-Martini bullets, with one exception, passed through the greatest diameter of the body of a horse, while the Mauser bullets frequently remained in it. This is explained by the greater resistance which the latter have to overcome in consequence of the greater amount of misshapement which they undergo; it also shows that the passage of a ball right through the body generally indicates much less danger than when it remains in it.

These results, Dr. Küster says, are capable of practical application in several directions. In the first place, they are a gain to forensic medicine. The statement made in text-books, that gunshot wounds are more extensive in the living body than in the dead, and that this affords a means of distinguishing whether the injury has been inflicted during life or after death, can no longer be tenable. No distinction exists in this respect, at least with the arms with which the experiments were made. On the other hand, a careful examination of the wound, especially when it passes through bone, may very well show whether the ball was of soft or of hard lead, and allow some estimate to be made as to whether it came from a distance or was discharged near the part. A still greater gain, however, is to be derived from the investigations by military surgery. The opinions previously entertained as to the action of shot have been shaken by the introduction of the modern weapons, and require reform. In future, in judging of the severity of an injury, it will be important to ascertain at what distance and from what weapon the shot was discharged, and whether it was of hard or of soft lead. The penetration of the bones of an extremity by a Chassepot or a Mauser bullet at short distances will in nearly all cases demand immediate amputation.

Dr. Küster next refers to the bearings of the question on the interests of humanity. The use of explosive bullets of small calibre is forbidden by international agreement; but, if it be shown that bullets of soft lead, at least at short distances, act just like explosive bullets, and that a close combat with such bullets can be nothing but a horrible butchery, the members of the Geneva Convention must use every effort to obtain an international verdict against soft lead bullets.

In some of the actions in the late war, when the combatants fought at short distances, the surgeons were struck with the frequency and severity of the injuries of bones, and the size of the apertures of exit. At that time, the reason of this was not understood, and it was supposed that explosive bullets were used. The researches of Dr. Busch and Dr. Küster have explained the matter; and Dr. Küster says that he owes it to a brave opponent, to state with satisfaction that the French stand thoroughly acquitted of the charge of having committed an act of unworthy and interdicted barbarity.

HOSPITAL SATURDAY.

A LARGE meeting of working men was held in Southwark, on Monday evening last, to form a local committee in aid of the Hospital Saturday Fund. Sir Charles Dilke, M.P., occupied the chair. His remarks on the movement fully bear out the opinion we expressed some weeks ago, that the Hospital Saturday is likely to be productive of much evil both to the hospitals themselves and also to the medical profession. The chairman asserted broadly that—"When working men required hospital assistance, the fact that they had contributed to such a fund took the relief out of the eleemosynary character". To this statement we demur. If the letters of recommendation be given only to those who have subscribed to the fund, still each individual recipient will obtain a great deal more than the value of his donation, and the balance will be purely eleemosynary. If, on the other hand, the letters be given outside the circle of subscribers, of course the relief will be as eleemosynary as it is at present. Again, the medical staff of a hospital are subject to the governors; and it will place the physicians and surgeons in a very false position if some of the governors be working men who have given their money to the hospital, not from charitable motives, but for value which they expect to receive. This would introduce into hospital management one of the worst evils of benefit-clubs; and it could not be expected that the highest class of professional men would consent to serve under such conditions. But perhaps the greatest objection of all is, that the money thus handed over to medical charities is really taken from the pockets of the general practitioners. The upper class of working men, who alone can support a fund of this kind, do, to a great extent, obtain their medical aid from general practitioners, and they ought to be encouraged so to do. We hope that the hospitals and dispensaries will think twice before they consent to accept grants from a fund open to these grave objections. If once such a principle be acknowledged, what is there to prevent curates, bankers' clerks, governesses, or others whose incomes do not exceed those of artisans, from forming a fund, and, in a similar manner, purchasing hospital attendance; in fact, insuring themselves against sickness at the expense of the doctors and by the aid of the charitable public?

THE SOHO HOSPITAL FOR WOMEN.

WE understand that our recent comments on the subject of the constitution of this hospital have had the desired effect, and that the main reforms which we indicated as necessary were resolved upon at a meeting of the governors on Wednesday. The reforms adopted are, we hear, first, that the governing Committee shall cease to be self-electing, but that a certain proportion shall retire annually, and that the right of election to fill the vacancies shall rest with the governors in annual meeting assembled; second, that the election of medical officers shall be by the Committee, but subject to confirmation by the governors; third, that the tenure of office of medical officers shall be permanent, subject to retirement at the age of sixty-five; fourth, that the Medical and General Committees shall meet quarterly in conference. In the main, these reforms are such as must be approved. It only remains that the medical officers, who were forced into resignation for want of them, shall now be invited to resume office under them. Of course, no candidates for the vacant appointments will appear until that act of justice has been completed.

PROFESSOR OWEN will distribute the prizes in the Faculty of Medicine at King's College on Tuesday, May 12th, at 3 P.M.

DR. A. E. SANSOM has been appointed Assistant-Physician to the London Hospital.

THE annual ball in aid of the funds of University College Hospital, of which Her Imperial Highness the Duchess of Edinburgh is the patroness, was held at Willis's Rooms on Thursday last, the 7th instant.

THE Select Committee on the Adulteration of Food Act (1872) met on Monday last to choose their chairman and consider course of proceedings. Mr. Sewell Read, Parliamentary Secretary to the Local Government Board, was appointed to preside.

THE anniversary festival in aid of the funds of the Metropolitan Free Hospital was celebrated on Monday evening at the London Tavern, under the presidency of the Lord Mayor. The Secretary announced subscriptions amounting to about £2,500, including a sixth subscription of £1,000 from E. G.

MR. JOHN R. BEGG, Surgeon, of Dundee, died somewhat suddenly on Thursday, April 30th. He visited his patients on the Wednesday, and, on returning home, fell down insensible. He apparently recovered the following morning, but in the afternoon got worse suddenly, and expired. About two years ago, while sitting in church, a chandelier fell on his head, and he was never well afterwards.

THE annual festival dinner of the National Hospital for the Paralysed and Epileptic was held on Monday evening, at the Freemasons' Tavern, under the presidency of Mr. Forsyth, Q.C. The report showed an estimated expenditure for the present year of £5000; of which

£2500 was provided for, leaving a deficit of £2500. To meet this deficiency, over £800 in donations, and £30 in new annual subscriptions, were subscribed during the evening.

THE President, Vice-President, and Council of the Pharmaceutical Society of Great Britain have issued invitations to a *conversazione* to be held, by permission of the Lords of the Committee of Council on Education, at the South Kensington Museum on the evening of Wednesday, the 20th instant.

THE HOSPITAL-SHIP "NEBRASKA".

IT is satisfactory to know that, owing to the excellent arrangements made with regard to this ship by Sir A. Armstrong, Medical Director-General of the Navy, and Dr. J. W. Reid, Staff-Surgeon R.N., our seamen and marines were cared for with as unsparing liberality during the late war as were our soldiers. The *Nebraska* was fitted out in the most complete and careful manner at Jarrow-on-Tyne and Portsmouth, as a hospital-ship, under the direction of the distinguished naval medical officers above-mentioned, and arrived at her destination, Sierra Leone, on the 7th February, where her services were speedily called into requisition. The officers of her staff comprised Mr. M. Coates, Staff-Surgeon, second class; Dr. C. W. Magrane, Surgeon; Mr. T. J. Baldock, Dispenser (lent from Haslar); four sick-berth stewards, and twelve hospital nurses. As soon as she arrived, she began to receive sick and wounded from the transport fleet and British merchant traders; the invalids began to arrive on the 14th February, and were followed in quick succession by other large batches from the ships of war on the station. During the time the sufferers were on board, the labours of the medical staff were constant and unceasing, and were the means, under Providence, of preserving many valuable lives.

LIMPING CHARITY.

WE have received a copy of some correspondence which has lately passed between Sir Charles Trevelyan and Mr. Jeula of the Surgical Aid Society. The Rev. S. Hansard, the Rector of Bethnal Green, called the attention of the former to the operations of the Society in the following letter.

"I wish you would search into the working of the Surgical Aid Society. The other day, a girl I am interested in had to walk with one leg and a half to *twelve* different subscribers before she could get a sufficient number of 'letters' to cover the expense of an instrument which the Society then gave her for her poor leg. This is cruelty mocking charity. Why, in the name of all that is human, let alone Christian, should not the Society give the instrument upon the presentation of one letter? Think of a poor girl, to whom it is painful labour to walk a hundred yards, being obliged to take a dozen weary walks to as many different parts of London before the money of the charitable public can be applied to its proper destination!"

Thereupon Sir Charles wrote to ask:

"Would there be any objection to every case recommended by a single subscriber being investigated by the Committee, first, as to the nature of the malady, and, second, as to whether the sufferer or his family can provide the whole or any part of the sum, and the selection being made upon a comparison of cases?"

The correspondence is too long for us to follow it in detail. Suffice it to say that it reveals another phase of the "voting charity system" which is worthy of the attention of the Committee which has been formed for the purpose of bringing public opinion to bear upon this question. Translate "charity" into "love", get rid of the technical term, and lay hold of the thing it represents, and then the hollowness of much of our so-called "charity" becomes apparent. Fancy showing our love to a poor lame girl, who only had a leg and a half, by making her limp about to twelve different subscribers to ask the favour of a recommendation! It is easy, in reading this correspondence, to see how the matter stands. On the one side, we have something like the true principles of such a charity set forth; on the other, there is a Committee of kind-hearted and amiable gentlemen trying to make the best of a bad system—a system which they are afraid to alter, for fear of losing that part of their subscribers whose notion of charity is, that they must receive value for their money, and that it is not worth while to give a donation to a benevolent society unless it carries with it the excitement and the self-importance of being canvassed for their petty patronage. We can scarcely doubt that this correspondence will bear good fruit by and bye. Though the Committee defend their present system, and decline to take any action at the suggestion of those who are not "governors of the charity", yet we indulge a hope that they will give the subject their careful consideration, and see whether the evils that are complained of cannot be removed without impairing the efficiency of the Society. As the Committee already suggest to subscribers that they should put their letters at the disposal of the Committee, why not go a step further, and say, by way of experiment, that no letters would be forwarded to subscribers unless they were specially asked for? Thus it would soon be apparent how many subscribed from benevolent motives, and how many from self-interest; and the Committee would be able to estimate exactly what risk they would run if they adopted a better system.

MAD DOGS.

COLONEL HENDERSON has ordered the metropolis to be placarded with bills, giving notice that any person who permits his dog to go at large after having information, or reasonable ground for believing it to be in a rabid state, or to have been bitten by any dog in a rabid state, is liable to a penalty of £5. Strict orders have been given to the police to seize all stray dogs, whether muzzled or unmuzzled, not immediately under the control of some person.

EFFECTS OF OVER-TEACHING.

THE results of the over-teaching of children in the public schools of Massachusetts is declared by a writer in an American paper to be most serious, more than two-fifths dying before they reach twelve years of age. The mortality from diseases of the brain and the nervous system is eleven per cent.; whereas in Nova Scotia, where no child is, it is stated, sent to school before it is seven years old, and then only for six hours a day, the mortality from these causes is only eight per cent.

AN EPIDEMIC OF SMALL-POX IN BORNEO.

MR. CONSUL-GENERAL BULWER, reporting upon the condition of Brunei (Borneo), mentions that the population of the town has been estimated at numbers varying from 20,000 to 50,000 persons; and that, of the two extremes, the larger estimate more closely approximates to the truth. The town is stated to be a remarkably healthy one. By travellers who have visited it, the name of "Water City" has been applied to it; the houses being built on piles driven into the mud on each side of the main stream or channel of the river. The river acts as a very efficient sewer for the whole town; and though, at low tide, an unpleasant effluvium rises from the exposed mud, it is said that no unwholesome effects are experienced. Fever is almost unknown; but, when an epidemic of small-pox or cholera occurs, the result is, that the densely crowded houses, the absence of all medical treatment, the neglect of all sanitary precautions, and the ignorance and apathy of the people, offer an unresisting mass of human beings as victims of the dire malady. In the event of the occurrence of such an epidemic, the consequences arising therefrom may be readily enough imagined. Happily, however, the occurrence of epidemics of this character is very rare; but one happened in 1872, and will be long memorable in the annals of the community for the dreadful misery it occasioned and the many deaths it caused. The circumstances may be briefly narrated, according to the facts furnished by Mr. Consul-General Bulwer. About the end of September or the first days of October, 1872, a person who had recently arrived at Brunei from the east coast of Borneo was attacked with small-pox, doubtless contracted on that coast, where it had long been prevalent. No proper precautions being taken—in fact, nothing of the kind being observed—other inmates of the house where he was residing caught the disease, which was immediately carried thence to some of the adjoining houses. But the infection was at first and for some time confined to one "kampong" or district of the town;

and it is stated that, had proper precautions been taken even at this time, the disease might have been localised, instead of spreading and devastating other neighbourhoods. Such, however, was not the case. The authorities would do nothing, manifesting the most culpable neglect in the matter; communication with the infected houses and their inmates was uninterruptedly carried on; and the disorder, gathering strength, in a few weeks spread over the whole town. It is calculated that, in the course of three months, 12,000 persons were attacked with the disease, and of this number certainly not fewer than 4,000 died. The rest escaped with their lives, but scarred and disfigured—some even with loss of sight, and afflicted with other physical injuries. From the town, the epidemic spread speedily to the country, passing from village to village, leaving its dreadful signs behind. Though it has been impossible to obtain any precise statistics or reliable information as to the extent of the deaths in the country districts, the number is by no means exaggerated when it is put down at 8,000.

THE LEVÉE.

THE following members of the medical profession were presented at the levée held by His Royal Highness the Prince of Wales, on behalf of Her Majesty, on Friday, May 1st: Surgeon-General T. G. Balfour, M.D., F.R.S., Army Medical Department; Surgeon-Major R. Byramjee, Bombay Army; Staff-Surgeon Thomas Colan, M.D., R.N., on promotion and return from the Gold Coast; Surgeon-Major E. J. Franklyn, M.D., Army Medical Department; Staff-Surgeon J. W. Fisher, M.D., R.N., on promotion and return from the Gold Coast; Staff-Surgeon Charles J. Fennell, R.N.; Surgeon-Major A. A. Gore, M.D., Army Medical Department, on return from the West Coast of Africa; Mr. Prescott Hewett; Deputy Inspector-General Ahmuty Irwin, C.B., R.N., on promotion, on appointment as Commander of the Bath, and return from the Gold Coast; Surgeon J. W. Jones, Army Medical Department; Surgeon George R. Lawrenson, R.N.; Surgeon E. O'Sullivan, Army Medical Department; Staff-Surgeon James F. Parr, R.N., on promotion and return from the Gold Coast; Surgeon-Major F. A. Turton, Army Medical Department, on return from the West Coast of Africa; Dr. Lyttleton Forbes Winslow; Surgeon-Major J. Berry White, Bengal Army; Deputy Surgeon-General J. A. Woolfreyes, M.D., on promotion.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following requisition has been presented to Mr. Alfred Baker, Senior Surgeon to the Birmingham General Hospital, and lately President of the British Medical Association: "May 1st, 1874.—Sir,—Feeling that the Provincial Fellows of the College are not proportionately or sufficiently represented upon the Council of the College of Surgeons, we trust that you will permit yourself to be nominated for a seat on the Council at the coming election in July. We believe that, as a Fellow and Member of the College of long standing, as senior surgeon to a large hospital, and as a past president of the British Medical Association, you are eminently qualified for such a position, and that your election would be acceptable to the Fellows of the College in general, and to the Provincial Fellows in particular." It is signed by—

Robert Ceely and J. H. Ceely (Aylesbury); W. E. Crowfoot (Beccles); John Archer, T. H. Bartleet, Samuel Berry, S. A. Bindley, V. W. Blake, Pye H. Chavasse, Dickinson W. Crompton, George H. Evans, W. P. Goodall, Furneaux Jordan, R. Middlemore, John Postgate, Edwin Rickards, Thomas Savage, J. Vose Solomon, Lawson Tait, Thomas Taylor, William Thomas, James F. West, and T. Watkin Williams (Birmingham); William Lockhart (Blackheath); John Cordy Burrows, Knight (Brighton); G. M. Humphry (Cambridge); Edwin Bartleet (Campden); William B. Page (Carlisle); H. W. Rumsey (Cheltenham); John Harrison (Chester); Theodore Davis (Clevedon); David Bolton, Nelson C. Dobson, Augustin Prichard, and Charles Steele (Clifton); W. P. Swain (Devonport); J. Muriel (Ely); John Woodman (Exeter); W. H. Folker (Hanley); Charles Lingen (Hereford); R. Rickman Shillitoe (Hitchin); H. Martin Holman (Hurstpierpoint); William Roden, M.D. (Kidderminster); G. F. Bodington (Kingswinford); J. H. Kimbell (Knowle); R. L. Baker (Leamington); T. R. Jessop, T. Pridgin Teale, and C. G. Wheelhouse (Leeds); Thomas Paget (Leicester); Reginald Harrison and W. Mitchell Banks (Liverpool); T. C. Roden (Llandudno); Thomas Bryant, W. Fairlie Clarke, George Cowell, George Critchett, C. Holthouse, Jonathan Hutchinson, Sydney Jones, W. F. Teevan, Henry Thompson, Knight, W. Domett Stone, and John Wood (London); S. M. Bradley, J. Bower Harrison, George Southam, and Edward Lund (Manchester); Daniel Ball (Newcastle); John Morgan Bryan and Frank Buszard (Northampton); W. Cadge, E. Copeman, and A. Master (Norwich); James Beddard (Nottingham); John Whipple (Plymouth); Robert Oxley (Pontefract); George May (Reading); A. Duke (Rugby); D. Henry Monckton (Rugeley); John Charles Hall (Sheffield); A. G. Brookes and S. Wood (Shrewsbury); John Wiblin (Southampton); Edwin Morris (Spalding); Thomas Heckstall Smith (St. Mary Cray); Thomas Chavasse (Sutton Coldfield); John Cooke (Tettenhall, Wolverhampton); Frederick Ed. Manby (Wolverhampton); Herbert W. Budd and David Everett (Worcester); W. D. Husband and W. H. Jalland (York).

Mr. Baker has returned the following reply.

"3, Waterloo Street, Birmingham, May 1st, 1874.

"Dear Sir,—The requisition signed by so many distinguished Fellows of the Royal College of Surgeons confers a great honour upon, and is very gratifying to, me.

"Under such auspices, I cannot hesitate to become a candidate for a seat on the Council of our College; and I desire to express my thanks to the gentlemen who have signed the requisition, and to assure them, and the Fellows generally, that it will be my effort, if elected, to justify their choice, by regular attendance at the Council meetings, and attention to the duties of the office.

"Believe me to be, dear Sir, yours very faithfully,

"ALFRED BAKER."

KING'S COLLEGE HOSPITAL AND ST. JOHN'S HOUSE.

AT the adjourned meeting of the governors of King's College Hospital held on Saturday last, H.R.H. the Duke of Cambridge in the chair, the report of Lord Selborne and Lord Hatherley, the referees appointed upon the subject matter in dispute between the hospital and the St. John's House, with reference to the nursing arrangements of the former institution, was read. After alluding to the excellence of the manner in which the sisters and nurses of St. John's House discharged their duties of nursing within the hospital, it went on to state that one of the preliminary questions raised by the committee of the hospital was, whether the Act of Parliament by which the hospital was regulated did not require that the Committee of Management should exercise the control which they claimed over the sisters in charge of the nurses. Upon this question, the referees were of opinion that the twenty-seventh section of the Act of Parliament applied only to those persons who were in the proper sense of the words officers, servants, or agents of King's College Hospital; and that the sisters in charge and nurses were officers of St. John's House, and not of the College; nor did they find anything to make it necessary that the committee of the hospital, entering into a contract with another institution for the performance of nursing, should stipulate for an exercise of a direct power of dismissal, removal, or suspension, over the servants or agents of that other institution. After mentioning that some of the most frequent causes of difference between the sisters in charge and the authorities or officers of the hospital, under the operation of the agreement of July 1872, had arisen out of matters of domestic economy within the hospital, and referring to the provisions of the agreement of 1856 and 1872 between the two institutions, the referees recommended, in order to remedy the defects in the present arrangements and organisation of the hospital, "that a matron should be appointed (if possible, upon the nomination or recommendation of St. John's House, as contemplated by the agreement of 1856) to conduct all those departments of domestic economy within the hospital which can properly be placed under female superintendence; and, if it should not be thought practical or convenient to revert, in this respect, to the principle of the agreement of 1856, that the matron should, at all events, be a person on whose ability and disposition to co-operate cordially with the sister in charge and the nursing staff full reliance can be placed." One of the resident medical officers of the hospital should be a permanent officer, of such age and experience, and invested with such authority, as might tend to ensure for him the confidence and deference of the sister in charge, and also of the secretary and matron and junior medical officers. With respect to the question whether the committee of the hospital ought to be made acquainted with the names of the nurses and sisters engaged in the nursing service of the hospital, they thought that the claim of the committee was reasonable, and not inconsistent with the direct responsibility of the sisters and nurses to St. John's House alone, or otherwise calculated to endanger the proper subordination and discipline of the nursing staff. If, however, it should be preferable, in the opinion of the authorities of St. John's House, to identify each sister or nurse by a number rather than by name, they thought such a course should be adopted. The Treasurer, in presenting the report, moved a vote of thanks to the referees, and at the same time a resolution appointing Lord Selborne a vice-president, Lord Hatherley already occupying that position. The resolution having been carried, Canon Barry moved a resolution to the effect that the report of the referees be accepted as the basis of a new agreement between the hospital and St. John's House; and that it be an instruction to the committee to carry it out after a conference with St. John's House, and to report the proceedings to the next quarterly court. A long discussion ensued, which ultimately terminated in the adoption by the meeting of the resolution proposed by Canon Barry.

A NEW CANCER HOSPITAL.

We have been so long afflicted with a cancer hospital in Brompton that we have become in some degree tolerant of the evil; but we are now threatened with a second. The daily papers contain advertisements of a new hospital which has just been opened for the treatment of "cancer and external tumours by the Michel process, without the knife"; and, of course, the public are asked to contribute to the funds, according to the stereotyped method of getting up "a charity". We have just had a great debate on the pathology of cancer, but the staff of the Cancer Hospital were conspicuous only by their absence. They took no part in the discussion, and added nothing to the elucidation of the subject. The Cancer Hospital has been established nearly a quarter of a century; and yet, when the pathology of cancer comes to be discussed, the institution which was founded with the professed object of investigating and treating the disease, can add nothing to the debate. Could there be a better proof of its inutility? It is sincerely to be hoped that the public will not be so misled as to contribute to the support of another such hospital.

THE GERMAN SURGICAL CONGRESS.

Our Berlin correspondent writes to us as follows. The third congress of the German Society of Surgeons was held from the 8th to the 11th day of April, in the Hall of the Royal University of Berlin. Herr von Langenbeck, the President, first gave an account of the Society's progress during the last year. The number of members has increased to about 160. Among those present at the congress were Baum, Bardeleben, Bruns, Bergmann, Esmarch, Hueter, König, Rose, Thiersch, Volkmann, Wilms; and of strangers there were, amongst others, Mr. William Mac Cormac of London, and Surgeon-General Mackinnon, C.B. The principal subjects for discussion were the antiseptic treatment and transfusion of blood. Volkmann and Bardeleben gave an account of the very satisfactory results which they had obtained from the treatment of wounds by Lister's method; and Dr. Reyher of Dorpat showed by statistical notes, which he was kindly permitted to make during his stay in Edinburgh and London, in what points Lister's treatment is superior to others. The general impression was, that Lister's antiseptic method is held in the greatest esteem by the most eminent surgeons of Germany, and is carried out in a large number of the great hospitals of that country. Speeches were made on transfusion by Küster (Berlin), Hasse (Nordhausen), Sander (Barmen), and Berns (Holland). Küster pointed out that the effect of animal blood is not equivalent to that of human blood. He performed direct transfusion from artery to artery as proposed by Schliep in the *Berliner Klinische Wochenschrift*, No. 3, 1874, in thirteen cases from sheep, and in two cases from man. The operation was simple, and never interfered with by accidents, and the wounds healed without any disagreeable occurrence. The general symptoms after transfusion of human blood were rather agreeable to the patient, while after injection of a few ounces of animal blood there followed dyspnœa, cyanosis, pains in the back, and shivering, with rise of temperature. These symptoms, however, disappeared after a few hours; and in all cases he observed better appetite, greater cheerfulness and strength for a short time. All the cases were the subjects of anæmia and chronic diseases. Hasse described the mode of operating with two glass tubes and a piece of India-rubber tube, by connecting the artery of a lamb with the vein of the patient. He had observed good results in about thirty cases in which he had operated. Sander of Barmen operated after the method described by Hasse, but warned against the indiscriminate use of animal blood. He had a case where oliguria and uræmia followed the transfusion of lamb's blood in a patient with incipient consumption, who had not suffered before from disease of the kidneys. The symptoms of uræmia lasted four days. The patient survived; but, instead of being benefited by the transfusion, he was worse than before, and showed a considerable loss of weight a fortnight after the operation. Berns related a series of experiments on transfusion performed on dogs and rabbits, and their influence on fever. Papers were also read by Professor Esmarch on bloodless surgery, by Professor Hueter on the antiphlogistic effect of injection of carbolic acid into the tissues, by Professor Volkmann on soot-cancer, by Dr. Lossen on the mechanism of incarceration, by Dr. Gussenbauer on extirpation of the larynx, etc. Many photographs of cases, and patients with interesting diseases, as well as improved surgical instruments, were demonstrated. It was resolved that Berlin should always be the place of the meeting for the future.

THE ADULTERATION OF TEA.

The Select Committee of the House of Commons appointed to inquire into the working of the Adulteration of Food Act, 1872, held its first sitting on Wednesday, for the purpose of taking evidence; Mr. C. S. Read, Secretary to the Local Government Board, presiding. Mr. Owen, of the Local Government Board, having given a history of the Adulteration Act, Mr. Reeves, who has been connected with the tea trade for nearly half a century, said that gypsum and Prussian blue were used for the purpose of colouring green tea, but he had never heard of any injury resulting from the colouring matter used. It was necessary to mix tea to make it palatable, but there was no natural green tea. He did not believe there was much adulteration of tea going on, because the article would not stand it. He did not think iron-filings were extensively used, but iron and sand were in some cases mixed with tea. Mr. Thorne, a Mark Lane tea-merchant, said that tea was not sent to England as it was grown in China. Black tea was partly fermented before it was roasted. The Americans were now giving the preference to Japanese tea.

THE DWELLINGS OF THE POOR.

We have lately drawn attention to the important memorials upon this subject which were presented to Her Majesty's Government, and we are glad to see by the following parliamentary notices that the subject is not to be allowed to drop.

"House of Commons, Friday, May 8.—Mr. Kay-Shuttleworth, to call the attention of the house to the urgent importance of the problems connected with the present condition and future improvement of the dwellings of working people in London, and to the memorials on this subject lately presented to Her Majesty's Government by the Royal College of Physicians and by the Council and Dwellings Committee of the Charity Organisation Society (Sessional Papers, Nos. 118 and 127), and to move: 'That, in the opinion of this House, a necessity exists for some measure that will provide for improvement of the poorest classes of dwellings in London, and that this question demands the early attention of Her Majesty's Government.'"

"House of Lords, Tuesday, May 12.—Lord Napier and Ettrick, to call the attention of the House to the memorials respecting the dwellings of the London poor presented to Her Majesty's Government by the Royal College of Physicians and by the Council and a Special Committee of the Charity Organisation Society; and to move, 'That in the opinion of this House the present laws have provided no adequate remedy for the evils which result from the existence in London of masses of old, ill-constructed, and unwholesome houses, inhabited by the poorer classes; and that, in order to improve those portions of the metropolis and facilitate the erection of convenient and healthy dwellings for working people, it is expedient that appropriate authorities be invested with enlarged powers analogous to those conferred on the Municipalities of Glasgow and Edinburgh by their respective Local Improvement Acts (1866 and 1867).'"

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

ONLY fourteen years ago this institution was opened; but its growth has been so rapid that the ten beds for in-patients, which it at first provided, have already been increased to one hundred. A festival Dinner, in aid of the funds of the Hospital, took place on Monday last at the Freemasons' Tavern, when Mr. Forsyth, Q.C., M.P. for Marylebone, occupied the chair. About eighty ladies and gentlemen were present, and passed a very pleasant evening. After the usual loyal and patriotic toasts Mr. Forsyth proposed "Success to the National Hospital". He said that against some special hospitals grave objections might be urged, but these could not be pronounced against this institution; because the patients therein treated required special appliances in the way of electricity, baths and douches, not usually provided in general hospitals. A gymnasium and music had also been found to be very serviceable. The admixture of nervous patients with those suffering from all manner of maladies was very detrimental to the former, and delayed their convalesence. In response to Mr. Forsyth's urgent appeal for funds, £800 were given as donations, and new annual subscriptions, amounting to £30, were announced by the secretary in the course of the evening. Dr. Buzzard returned thanks for the medical staff; and Miss Chandler replied for "the Ladies." A military band played several operatic and other pieces during dinner. Mr. J. Hayler, from the Museum, St. Bartholomew's Hospital, acted as an efficient toast-master.

RECENT DEATH-RETURNS.

THE mortality in London has lately been far below the average; in the week ending Saturday last, the death-rate in the metropolis was only 19 per 1,000. Scarlet fever has been fatally prevalent in Leeds and Sheffield, and measles in Wolverhampton. An epidemic of small-pox has been present in Birmingham. In the sixteen weeks ending Saturday, April 25th, 169 fatal cases of the disease occurred there; and last week as many as 25 deaths from the same cause were registered, the highest number which has been returned in any week since the commencement of the epidemic. A period of warm weather set in on April 18th, and continued for ten days, during which the mean daily temperature was no less than 10.23 deg. F. above the average; the general direction of the wind at the time was W.S.W., and there was no fall of rain. Under the influence of the unusual warmth, vegetation in all directions became very forward. On the 28th of April, however, a period of cold weather succeeded, by which it has already been greatly checked.

VOTING CHARITIES.

THE Charity Voting Reform Committee, which was formed after the conference on voting charities at the Mansion House last year, has now been reconstituted under the title of the Charity Voting Reform Association, with the Duke of Northumberland as president. The committee has resolved upon the issue of a series of suggestions for improving the mode of admission to the benefits of charitable institutions.

The committee, in the first place, meet the cases in which the subscribers prefer to retain the power of voting for candidates, and, in order to obviate the worst evils of the system, they propose to regulate the practice by the following provisions. First, that candidates' claims shall be investigated by the committee of each institution, with special reference to their urgency and to their prior right over others to support from public charity. Secondly, that all eligible candidates shall be arranged in order according to the strength and urgency of their claims, but that only such a number shall be included in the lists sent out to the subscribers as are likely to be provided for in a reasonable time. Thirdly, that these lists shall be sent to all subscribers and marked by them to show the candidates they prefer, their lists being handed to the scrutineers and the result declared by advertisement. Fourthly, that trafficking in votes and the use of canvassing cards and circulars shall be prohibited, under pain of forfeiture of the candidate's claim. Fifthly, that any subscriber shall be at liberty to give his proxy to the committee, but only to be used by them in the order of the candidates already determined on their respective merits. This system, it will be seen, allows subscribers to recommend candidates, then gives the committee the duty of investigating claims and preparing a list, and finally leaves the subscribers themselves to decide on the merits of the candidates as set forth on the committee's list. This system has already been adopted in principle at the Royal Albert Orphan Asylum, the National Hospital for the Paralysed and Epileptic, and the Royal Naval School. It is, however, only recommended where the subscribers refuse to give up the voting system. The real recommendation of the association is that the managing committees of each institution shall be elected by means of voting papers, by the whole body of subscribers (not, as at present is the rule, mainly by London subscribers, and often by only a limited number of these), and that then this committee shall have the power of selecting candidates after investigating and comparing the claims of all recommended by the subscribers.

MEDICAL SOCIETY OF LONDON.

THE annual oration of this Society was delivered on Monday last, May 4th, at the rooms, 11, Chandos Street, Cavendish Square, by Mr. Brudenell Carter. He chose for his subject "The Waste of Life by Preventable Disease". Mr. Carter narrated, with vigour and intelligence, the history of recent sanitary legislation, freely censuring the Local Government Board and the appointment of barristers as inspectors, and referring to the treatment of medical men by the authorities, and other points. After the oration, the entire suite of rooms was thrown open, and a *conversazione* followed, at which an interesting collection of objects were shown. Ashantee, Abyssinian, Arctic, and Indian curiosities were contributed by Mr. Royes Bell, and by Drs. Haden, Rae, and Fayrer. Some pictures were exhibited by Sir Henry Thompson, Drs. Hare, Wynn Williams, and Ambler; a cardiograph by Dr. Sibson; and other specimens by Drs. Brunton, Sansom, and Theodore Williams. etc.

GUY'S HOSPITAL.

THE biennial festival of the past and present students of this institution, was held at Willis's Rooms, King Street, St. James's, on Tuesday evening, May 5th, under the presidency of Mr. Cooper Forster. About 270 sat down to dinner, the chairman being supported, on his right and left, by Sir G. Burrows, President of the College of Physicians of London, T. B. Curling, Esq., President of the Royal College of Surgeons, the Treasurer of Guy's Hospital, P. Cazenove, Esq., and the consulting and acting medical and surgical staff of the hospital. The large hall was full from end to end, and the meeting passed off in a most pleasant manner. The speeches were all delightfully short, and the proceedings throughout had much of the aspect of a family gathering, so empty were they of cold formality. That any one medical school should be able to rejoice in such a gathering as this, says much for the brotherly spirit which animates its children. But no amount of *esprit de corps* would bring men from long distances to a dinner, at which they were not sure of being comfortably seated. In a meeting such as this, arrangement is everything; and it is not too much to say that to Mr. Arthur Durham, the Honorary Secretary, Guy's men owe the success of these grand *réunions*. The exertions of that gentleman are always unceasing, to procure comfort and enjoyment to everyone present, and he always succeeds in his endeavours. The Guy's Glee Club sang a choice selection of glees after dinner, and enhanced considerably the cultured pleasures of the evening. On Wednesday evening, May 6th, the Treasurer of Guy's Hospital (T. Turner, Esq.), received a large number of visitors at a *conversazione*, held at the hospital. A suite of rooms, running the whole length of the new buildings, were utilised for the occasion, and formed an airy and spacious promenade. About 1500 guests, ladies and gentlemen, accepted the Treasurer's invitation, and for two hours the rooms were thronged with a distinguished assemblage. Under the able superintendence of Dr. Steele, many objects of interest had been arranged for exhibition—scientific, artistic, sensational, and practical. Amongst other things, we specially noticed some beautiful porcelain, by Messrs. Copeland; Wedgwood medallions, by Dr. Braxton Hicks; some very ancient (and withal ugly, in some cases), works of art in porcelain, by the Rev. Mr. Mayhew; Dice's new Channel twin-ship; the gold spoil from Ashantee, by the kind permission of Sir R. Wallace, exhibited by Messrs. Garrard and Co.; and numerous philosophical instruments, electrical and other. All the visitors appeared to be thoroughly interested; and, on leaving, many were the expressions of satisfaction at the evening's entertainment.

THE ADDITIONS TO THE "PHARMACOPŒIA" AND THE PHARMACEUTICAL SOCIETY.

The discussion on the paper upon the Additions to the *Pharmacopœia*, read by Mr. Umney at a recent evening meeting of the Pharmaceutical Society, was resumed on Wednesday evening by the reading of a somewhat free and trenchant criticism of some of the new formulæ, in a note written by Mr. Smith of Torquay. The main spirit of the paper was in accordance with the opinion recently expressed in these columns. Mr. Smith thinks that the time has long since passed when any Council composed solely of medical men should have the framing of the *Pharmacopœia*. In his opinion, all future works of this kind can only be successfully accomplished by a medical council deciding of what preparations and medicines the *Pharmacopœia* shall consist, whilst the method of compounding and preparing is left to a council of practical pharmacists well versed in such matters. The discussion was continued by Mr. M. Carteighe, who said that he considered it waste of time to criticise a book which now had the force of law; he was of opinion that the Additions did not reach the standard of the *Pharmacopœia* of 1867, and this he attributed to the fact that the editor, as a pharmacist, was overweighted by the medical element in the Pharmacopœia Committee. He thought that pharmacists ought to be invited to co-operate in the compilation of any future *Pharmacopœia* or Additions in a way similar to that adopted in France, Germany, and the United States. Several other speakers expressed more or less conflicting opinions respecting the formulæ; Mr. Martindale, in particular, stating that he had made a personal experiment with the phosphorus-pills, which had proved to be insoluble, and passed through the system with scarcely any perceptible change. Professor Redwood wound up the discussion in a vigorous speech, in which he referred to the articles in the Additions *seriatim*. It amounted to nothing more, however, than a statement of opinion that the Additions were well timed and appropriate; and although, in this respect, he brought forward letters of Dr. Quain in support of this view, he did not in reality at all deal with the question whether pharmacy ought not to be more largely represented in the Pharmacopœia Committee of the Medical Council.

SCOTLAND.

THE LATE DR. JOHN MURRAY.

We understand that at a meeting of the General Committee appointed in November last to promote the establishment of a medical foundation in the University of Aberdeen in memory of the late Dr. John Murray, held in Marischal College, on Saturday, May 2nd, Dr. Macrobin in the chair, it was resolved that the funds, amounting to about £600, should be invested, and that the annual revenue should be applied, in the first place, for the purchase of a gold medal, and the balance (probably £20) paid over to a medical graduate of the University; and every third year the medal and scholarship go to a student connected with the Middlesex Hospital, London. The conditions on which the medal and scholarship are to be awarded in Aberdeen are to be fixed by the University medical professors and the medical officers of the Royal Infirmary, and the qualifications of the holder of the London Scholarship by the medical staff of the Middlesex Hospital. The concession of the scholarship to the Middlesex Hospital every third year was agreed to, in consideration of the large amount of subscriptions to the foundation received from friends in London, and the important and valuable condition sanctioned by the governors and medical staff of the Middlesex Hospital of a resident clinical appointment in the hospital to the holder of the Murray Scholarship. It was resolved that the foundation should be called "The John Murray Medal and Scholarship".

THE ASSOCIATION AND THE ARMY MEDICAL OFFICERS.

Deputation to the Secretary of State for War.

A deputation, from the Parliamentary Bills Committee of the Association, had an interview with the War Minister, Mr. Gathorne Hardy, at the War Office, on Tuesday last, respecting the necessity for changes to be made in the conditions of service for medical officers in the army. With Mr. Hardy was Sir William Muir, K.C.B., Director-General of the Army Medical Department. There were present, on the deputation, Sir William Fergusson, President of the Association, Dr. Quain, F.R.S., President of the Metropolitan Branch, Dr. A. P. Stewart, Dr. George Johnson, F.R.S., Mr. Ernest Hart, Chairman of the Parliamentary Committee, Dr. J. H. Paul, Dr. Joseph Seaton, Dr. Ramsay, Dr. Farquharson, and Mr. F. Fowke, the General Secretary.

Sir William Fergusson introduced the deputation by observing that, although the British Medical Association was a civilian one, yet that it took cognisance of all matters relating to medicine, and regarded the interests of all who followed the profession as the interest of the Association. The subject of the status of the medical officers in Her Majesty's service was one which had taken up much attention, for it came before the Association as one which arose in the schools of medicine, and was regarded with peculiar interest by those who were qualifying for the profession. Mr. Ernest Hart, who had devoted much time and distinguished abilities to the study of the question, would explain the views of the Parliamentary Committee of the Association.

Mr. Ernest Hart said the Association had the honour of addressing the late Minister for War (now Lord Cardwell), and then laid before him a good many of the details relating to the matter upon which they had come to speak. He had forwarded these documents to Mr. Hardy by request. Perhaps it would not be necessary to enter fully into those details.

Mr. Hardy said that he had read the report of the proceedings of that deputation, so that he was well acquainted with the details.

Mr. Hart said this would save the necessity of going over some of those details again. Perhaps he might explain that the deputation had attended there that day in small numbers, for it had been felt unnecessary to bring members from all parts of the country to attend, as it was felt that they had Mr. Hardy's sympathies in advance, in their object, at least; and the purpose of the day was to make such a general statement, as would lead to a full inquiry by the Minister into the details. The Association had heard and seen so much about the Army Medical service, since the last Warrant, as showed that there was a very wide dissatisfaction existing, not in a sense injurious to discipline, but in the sense of disappointment, among those who felt they were not generously, or even justly, dealt with. Although this was especially the case in the junior ranks, yet it pervaded the whole service; but, owing to the good feeling of the profession generally, that feeling had not yet been encouraged to find expression in the schools. The Association would rather deal with it as between the department and the senior members of the profession, who would discuss the question on behalf of those who would go into the service. The first subject of complaint was, that there was now a complete stagnation of promotion; and this retardation of promotion was not accidental and abnormal, but had arisen gradually. In 1859, for instance, the average general service in the junior rank, without promotion, was 7 years; in 1860, it was 8 years; then, in 1862, it had risen to 9 years; in 1864, it had risen to 10 years; in 1866, it had come to 12 years; in 1868, it had come to 13 years; and from 1870 to 1874, it had been 15 years. There was a contrast to this in the Indian service, where it was established that, after twelve years' service, the medical officer was to receive promotion. It was to be remembered that this long service in the junior rank, of which complaint was made, was not felt to the same degree by the senior officers, with whom the Secretary of State was most likely to come into contact, but by the junior officers only. Their position, at the present time, compared with the position of some of the senior officers at the present time, illustrated the great grievance to which he was drawing attention. The present Director-General, Sir William Muir, whom he had the pleasure of seeing present, and whom he heartily congratulated on his well-earned distinction, was promoted to be Deputy Inspector-General after sixteen years of service; but, under the present state of things, he would have had to serve for sixteen years before he was promoted out of the junior rank; and it would now take a man as long to reach the rank of surgeon-major, as it took Sir William Muir to reach to the position of Deputy Inspector-General. Something should therefore be done for the profession in the service, as a rule of promotion after twelve years' service. The right hon. gentleman had the abstract of suggestions proposed by the Association, and he would touch on them shortly.

1. It is proposed that, on the completion of twenty years' full-pay service in any rank, a medical officer should be permitted to retire on 18s. 6d. *per diem*; but, should this be necessitated by the state of his health, the amount should be increased to 20s. *per diem*. This scale to apply to a surgeon or surgeon-major. For a deputy surgeon-general, or surgeon-general, the retiring pension should equal three-fourths of the pay. The clause compelling retirement at fifty-five for surgeon-major, and sixty-five for administrative service ranks, to be compulsory. In case of promotion to the administrative ranks, surgeons-general should retire after five years in rank, unless promoted to higher rank. Total service in administrative ranks should be limited to twelve years.

2. That a bonus retirement for a certain number of each rank, somewhat similar to what has been done in the Navy, and particularly in the Royal Artillery, should be granted; and it has been suggested that two surgeons-general should be permitted to retire on £150 a year additional to the amount to which they would be entitled by the Warrant of 1873. At present, the maximum of retiring pay for a deputy surgeon-general is only £465. It is therefore proposed that, as a surgeon-general has £680, although the duties are practically the same, the deputy surgeon-general compulsorily retired might be allowed to go on full pay (37s. *per diem*), which would make it equal to that of surgeon-general. Officers retired under this clause might still be eligible up to sixty-five years of age for the appointment of Director-General. Twenty-five surgeons-major should have £100 a year additional; fifty surgeons, £50 a year additional.

3. That medical officers attached to regiments ought to be honorary members of the mess; or, if this be not conceded, they should pay no more than the current subscriptions, at the same rate as combatant officers of relative rank.

4. The question of forage to be settled by the granting of a consolidated allowance *de jure*, as in the case of the Royal Engineers.

5. It has been thought advisable that, whilst the 2s. 6d. extra pay granted after fifteen years' service should be retained, some approach to guarantee of promotion before that period should be laid down.

6. Precedence in relative rank, as regulating choice of quarters, should be more distinctly recognised than in paragraph No. 5 of the Warrant of March 1873. Precedence on mixed board, courts of inquiry, etc., ought to be restored to medical officers.

7. The circular regarding the duties of principal medical officers in general hospitals and the like, requires modification in some ways. The military element should be eliminated. The medical officer should have the power and authority, as well as the responsibility; the hospital and every one in it being under his sole command. If he is to be held responsible for stores, material, etc., a liberal charge-pay may be granted.

8. It is suggested that the Army Hospital Corps should be officered by the medical officers, as in the case of the Royal Engineers and the Control Department.

In making a definite suggestion for improved promotion, it was especially necessary to arrange for more rapid retirement. The suggestions the deputation had to submit, were made after consultation with experienced officers in the service, for the deputation would not have come with merely their own views, but the suggestions were arranged, after listening to representations from all quarters, from men who were discreet and well-advised, as well as largely experienced in the service. They thought that, after twenty years' full-pay service, medical officers should have the option of retiring on 18s. 6d. *per diem*; and if they should be forced to retire by ill-health, then that they should receive 20s. *per diem*. This would apply to a surgeon, or surgeon-major; but for a deputy surgeon-general, or surgeon-general, the retiring pension should equal three-fourths of the pay.

Mr. HARDY asked if the deputation had made any calculation as to the cost.

Mr. HART replied, that no definite calculation was really possible, without knowing how many would retire; but they knew it would result in an increase of expenditure. It was believed that no great number would avail themselves of it, and the deputation were not prepared to say that it would not be an ultimate economy, all things considered.

Mr. HARDY asked Mr. Hart if he did not think this offer, if made, would be a great inducement to retire.

Mr. HART replied that the inducement to retire would be according to the medical officers' position in the army, and to the temptations to remain. If a man passed twenty years in the public service, he would have spent the best years of his life in one groove; and very few men would, if they had a fair prospect of advancing in that groove, desire to retire, so as to commence life over again on what would really, in civil life, be a very small pittance. This sum of 18s. 6d. would not induce an efficient man to retire, or anyone who had a fair prospect of promotion. The deputation also desired to urge that, for foreign service, there were no rewards and prizes, such as were in the possession of combatant officers, such as governorships, and commands, and the like, and that, therefore, there should be a bonus retirement for a certain number of each rank.

Mr. HARDY said he should like to know if this bonus, on retirement, was to be a sum in addition to the sum *per diem* already spoken of; because, if it was, it would bring the retired pay up to full-pay.

Mr. HART replied, that it would be thought this bonus might to some extent take the form of good-service pensions. The fact had been indicated to the Association, that such bonus retirement was granted in the Royal Navy, and partially in the Royal Artillery. (He read the Warrant.) The suggestion had before been made, that two surgeons-general should be permitted to retire on £150 a year additional to the amount to which they would be entitled by the Warrant of 1873. This would be in accordance with a scheme which provided for the retirement of seventy captains and one hundred commanders—a warrant bearing date August 4, 1873; and they were to have £100 a year additional to the amount to which they were entitled on retirement, as permanent annuities, varying according to years of service. In respect to these bonus retirements, the deputation had to add that, in selecting those who should retire, due regard should be had for those medical officers who had suffered pecuniarily from abrupt divorce, under the last warrant, from their regiments. These medical officers were as much entitled to compensation for their losses as the combatant officers were entitled to compensation for over-regulation money. One of the minor yet important points which had to be urged was with respect to the mess and the band-fund. This might seem of little moment; but the fact that the medical officers had to pay as much as or more than was paid by their relative rank to both the mess and the band-fund, even though they were not attached to a regiment, was felt to be a hardship. The best plan would be to make medical officers honorary members of the mess. In such matters as payment for band, they paid more than any other officer, and practically had no voice or power in any way with regard either to the mess or to the band. Another matter affecting the position of the medical officer was one which appeared to have arisen only from an omission to carry out General Peel's Warrant with respect to the Mixed Boards. Now, military officers were formed into mixed boards to deal with matters of which they were technically ignorant, and the only men who knew anything were summoned as witnesses only.

Mr. HARDY asked if the medical officers were not really in attendance as advisers rather than witnesses.

Mr. HART replied, that practically they only attended as experts, and when summoned.

Mr. HARDY thought the position of an adviser differed from that of a witness; but it was, after all, a question of words.

Mr. HART replied that, unless the officer were made an assessor, he was only a witness; and it had happened that sanitary boards had been formed at some stations without a single medical officer being connected with them. Another point the deputation had to urge was, that the circular regarding the duties of the medical officers in general hospitals and the like, required modification in several ways. The medical officers by this circular had great responsibilities imposed upon them; and where there was responsibility, there should be power and authority. Where the medical officer was, as he was in this particular, responsible for the conduct of the hospital, for the stores and material, he should have the command; he should not only have the command, but, as in the case of the combatant officer in a like case, he should have charge-pay to cover losses. This question of a medical officer being in charge of his hospital—"in command"—was not now for the first time before this department; and the question was a key to more than appeared on the surface. Netley Hospital was commanded by a military officer with a military secretary, with salaries of £1,000 and £500; but it was proved that these were superfluous officers by the fact that Haslar, Melville, and at present Woolwich Hospital, were carried on without a commandant; and these salaries could be saved, to be applied to making the suggested additions to the general expenditure on the service. The present system did not work well. Lookers on, as Mr. Henty, the *Standard* correspondent at Ashantee, had shown how other stores were mixed up with the medical stores, and beef and blacking came up with drugs—facts which proved that the medical stores and material in that war were not so well controlled as if the medical officer, who had the responsibility, had also the real control. Another point—and this was a cognate subject to the other—to which importance was attached, was, that the Army Hospital Corps should be officered by the medical officers, who should command their own men, as in the case of the Royal Engineers. He had discussed the matter with officers who had seen not only our own wars, but the recent continental and other wars; and they agreed that disastrous complications would be certain to arise in action from the system we now have. It was objected that, unless the Army Medical Corps was under the command of military officers, "discipline could not be maintained"; but he understood that the present captains of orderlies were the old apothecaries, and he suggested that the present non-commissioned officers might act as lieutenants under the command of medical officers. Another point, to which importance was attached, was the question of forage-allowance; and they had to urge that there should be a consolidation of pay for forage-allowance. The Minister would remember the absurd question which was recently raised in the House of Commons about the medical officer who was found riding to duty in a dog-cart; and this was an instance which showed how the position in which the medical officer was placed tended to lower his status in the eyes of the men. It was part of the system against which the deputation was protesting, that the medical officer should be called upon to proceed at once on horseback to duty in a battery, and that yet he should be an unmounted officer, without horse, and without allowance for forage. In the Prussian and other armies, increasing importance was attached to the mounting of the medical officer; and there should be a return to the old system.

Mr. HARDY said the question of forage allowance did not touch the medical officers only, as there was a similar change in respect to others.

Mr. HART rejoined that the medical officers had it formerly; but it was taken from them, and it was necessary they should have it because changes were so frequently made in their duties—they were taken from one duty and put to another—sometimes to duty which required a horse, at another time to a duty which required none. If they had a horse when they were sent on foot duty, they had to sell it, and this was always at a loss. There were several minor points, and he (Mr. Hart) would call attention to some. One was, with regard to the position of the surgeon-major of twenty years' standing. It was thought by the deputation that an officer of this standing should rank with the lieutenant-colonels, and not as junior of that rank when he was senior by date of commission. There was now no regimental reason, however fanciful, to the contrary. [Sir W. MUIR said there never had been any substantial reason.] As things stood, the surgeon-major ranking as major was incapable of promotion, except by making him a deputy inspector-general, and it was, therefore, asked that he should be capable of promotion for good service to the grades of surgeon-major ranking as lieutenant-colonel. These changes were necessary to ensure a supply of good officers for the army, and the deputation had to urge that, unless something were done in the direction they had urged, there would be such a depletion of the army medical list as unfortunately there was at the present time in the navy list. The deputation had also to ask that, if any Warrant were issued on the subject, it should be couched in terms so clear that it should not be capable of misinterpretation, for in previous Warrants there had been misinterpretations arising from the ambiguity of the language in which the Warrants were couched, which had led to great hardship and much heartburning.

Dr. QUAIN said that, as a civilian, he was really quite unacquainted with the technical details which had been so clearly and ably discussed by Mr. Hart, and which had for their object to secure greater encouragement for men to enter the army; but, for his own part, though he was unacquainted with these details, he could say that, owing to the higher class of education which was now required before a man could enter the medical profession, more time was involved and more expense. From these causes, fewer men were entering the profession; and, if there were not that encouragement for men to enter the army which was now sought, there would be, in a short time, a great deficiency in the supply from the schools. Of course, there would always be the competition for medical men which arose in civil life; and the premiums in civil life, unless changes were made in the military service as to the terms now existing, would be such that civil life would have the best educated men, leaving the army to have the lesser talents. It seemed to him that, as the army medical officer was called upon to perform all the duties of a physician and surgeon—and that, too, under great emergencies and great difficulties, as well as under great dangers—in distant colonies, on battle-fields, and with no resources but his own, with valuable lives committed to his responsible charge, he ought to be a man of the highest possible education, and abundantly rewarded for those services.

Dr. STEWART asked that, if any Warrant were issued, it should not only be unambiguously worded, but that it should be acted upon, and not left, as other Warrants had been, to be thrown aside by a memorandum addressed to the officers commanding regiments, by which they were permitted not to act upon the Warrant. This led to the idea on the part of many that there was a want of faith in the carrying out of Warrants, and this had given a want of confidence in the service to the best men in the profession. He had known that, in consequence of the block in promotion, the army had been obliged to take any men it could get at times; and, without amendment in some particulars of the regulations. the best men in the schools would not look at the army any more than they would look at the navy, and the effect of the regulations existing in that service was such that ships had to put to sea with men who had no qualification at all. In regard to some of the points urged by Mr. Hart, it might be said that it was most important for the health of the army that, in matters involving questions relating to that health, as the sanitary board, the medical officer should form part of such boards. As the matter stood at present, the medical officer might be called before the board, and then, when he had given his opinion, might be desired to walk out. Then, with regard to the hospitals, the men who could be trusted with the charge of the lives of the patients, and with the charge of the stores, should have the whole charge, and not placed under the nominal command of a non-technical officer. There was, as Dr. Quain had said, a decreasing number of men entering the profession, and not only was this a fact, but there had been this decrease for several years.

Mr. HARDY inquired if it was asked that the medical officer should have charge of the stores.

Mr. HART replied that the medical officer had this charge under the circular issued by the Department.

Mr. HARDY said he supposed the decrease of which mention had been made was what affected the navy in regard to the numbers applying for medical officerships.

Mr. HART said this had, to some extent, affected the navy; but the depletion in that service was owing to the regulations. This decrease had not yet reached the army, because the matter had been kept quiet in the schools; and, though the deputation did not wish to prove themselves prophets by making what they had said in regard to diminished numbers come true, yet they were perfectly certain they had the means of realising this, directly it was ascertained that the condition of the army medical officer would not be improved, and from that moment the army supply would be depleted. The Irish medical schools, which formerly gave large supplies, were now entirely with their English brethren in this matter.

Mr. HARDY said, with respect to the best men not entering the army, what was the loss of the army was the gain of the public. What the deputation was asking for, the whole of the services were asking for—a better system of promotion, better arrangements for retiring, and increased allowances. These questions affected more and more the whole army, and were to be very carefully considered; for, though the sum given to each might seem a very small one when given to one person, yet, when it was applied to a large number, it became a very large one. The medical officers of the army were very fortunate in having a civil power of magnitude and influence like this Association to represent their interests in deputations, and this was what other parts of the army had not.

Mr. HART remarked that the army generally was well represented in Parliament.

Mr. HARDY, continuing, said that the advantage of being thus represented was very great. When he said he would give consideration to the questions they had brought before him, he was only saying what he had done, what he was doing, and what he would do with regard to the whole question; and he was as anxious as anyone that the medical officers should receive the consideration which their education and position demanded. But it would have to be remembered that the combatant officers had to be considered as well; and they did not urge for themselves anything like the rank which was asked for medical officers; and the rank which the medical officer got quickly, the other got but slowly. With respect to the question of the higher rank, he had not looked at that at all until this moment—that one which asked, he meant, that the surgeon-major should rank with the lieutenant-colonel; but as to the question of retirement and the rate of pay, that was one of enormous magnitude, greater than Mr. Hart could imagine. With about one-tenth of the number of the combatant officers, the proposed retirement would amount to more than the retirement of the whole of the combatant officers, who were ten times the number. This indicated the reason why he had put the question to Mr. Hart, as to the calculation of the cost. He could only add that he would give the subject his earnest attention.

The deputation thanked the minister, and withdrew.

APPOINTMENTS OF MEDICAL OFFICERS OF HEALTH.

A PARLIAMENTARY return, moved for last session by Dr. Lush, has been issued, showing the appointments of medical officers of health (1) for separate districts, and (2) for two or more districts; and in each case the name of the medical officer of health, whether or not he is a Poor-law medical officer, the area and population of the district, the salary of the officer, the date and term of appointment, under what Act the appointment is made, whether the officer is debarred from private practice, and whether the sanitary authorities are to receive part payment of the salary from the Parliamentary grant.

The inspectors of the Local Government Board endeavoured to secure arrangements for the combination of the authorities for making these appointments. The particulars of the combinations, as shown by the return, are as follows.

Bedford.—Luton urban and rural districts: Edward Woakes. Salary £80.

Berks.—Abingdon, Bradfield, Cookham, Easthampstead, Hungerford, Newbury, Wallingford, and Windsor rural, and Abingdon, Maidenhead, Newbury, Speenhamland, and Wallingford urban districts: W. T. G. Woodforde. Salary £750. Appointed for three years, and debarred from private practice.

Bucks.—Buckingham urban and rural District: R. De'ath. Salary £100.—Eton urban and rural district: A. J. Southey. Salary £120.

Cambridge.—Linton, Newmarket, Dunmow, Saffron Walden, and Risbridge rural, and Newmarket and Saffron Walden urban districts: Dr. Armistead. Salary £700. Appointed for three years, and debarred from private practice.

Chester.—Tarvin, Chester, and Wirral rural, and Chester Neston and Parkgate, and Tarporley urban districts: G. A. Kenyon. Salary £600. Appointed for two years, and debarred from private practice.—Macclesfield rural and Yeardsley-cum-Whaley urban districts: Dr. Rushton.

Cornwall.—St. Austell rural and urban districts: R. F. Stevens. Salary £150.—St. Colomb Major rural, and Padstow and Newquay urban districts: William Moorman. Salary £120.

Cumberland.—Cockermouth rural, and Cockermouth, Keswick, and Workington urban districts: J. M. Fox. Salary £400. Appointed for one year, and debarred from private practice.—Penrith rural and urban districts: J. D. Robertson. Salary £300.

Derby.—Bakewell rural, and Bakewell, Baslow, Matlock, Matlock Bath, North Darley, and South Darley urban districts: P. S. Fentem and John Knox. Salary £75 each.—Chapel-en-le-Frith, Glossop, and Hayfield rural, and Glossop and Fairfield urban districts: C. J. Bennett. Salary £300.—Chesterfield rural, and Dronfield and Whittington urban districts: Angus Mackintosh. Salary £550. Appointed until April 15th, 1876, and debarred from private practice.

Devon.—Bideford, Okehampton, South Molton, Torrington, and Dulverton (Somerset) rural districts: A. W. Blyth. Salary £550. Appointed until December 25th, 1876, and debarred from private practice.—Newton Abbot rural, and Dawlish and Wolborough urban districts: Leonard Armstrong. Salary £400. Appointed for two years, and debarred from private practice.—Tormoham and St. Mary Church urban districts: Samuel Rhind. Salary £400. Appointed for three years, and debarred from private practice.

Essex.—Billericay, Maldon, and Chelmsford rural districts: C. B. Fox. Salary £800. Appointed for three years, and debarred from private practice.—Halstead urban and part of Halstead rural districts: James Hinds. Salary £60.

Gloucester.—Cirencester, Awre, Kingsholme, St. Catherine, Newnham, Tetbury, and Westbury-on-Severn urban, and Cirencester, Chipping Sodbury, Dursley, Gloucester, Tetbury, Thornbury, Westbury-on-Severn, and Chepstow (Monmouth) rural districts: F. T. Bond. Salary £800. Appointed for five years, and debarred from private practice.

Hereford.—Bromyard, Hereford, Ledbury, Leominster, and Weobley rural districts: H. V. Sandford. Salary £500. Appointed for three years, and debarred from private practice.

Herts.—Barnet, Berkhampstead, Hemel Hempstead, Watford, Welwyn, and Hendon rural, and Barnet and Tring urban districts: C. E. Saunders. Salary £750. Appointed for three years, and debarred from private practice.—Bishop Stortford, Hertford, Ware, Royston, and Buntingford rural and Bishop Stortford urban districts: William Ogle. Salary £700. Appointed for five years, and debarred from private practice.

Hunts.—Godmanchester, Huntingdon, and St. Neots urban, and Caxton and Arrington, Whittlesey, Stamford, Peterborough, Huntingdon and St. Neot's rural districts: E. J. Syson. Salary £800. Appointed for one year, and debarred from private practice.

Kent.—Blean, Dover, Isle of Thanet, Eastry, Bridge, Elham, East Ashford, and West Ashford rural, and Dover urban districts: K. Robinson. Salary £800. Appointed for five years, and debarred from private practice.—Bromley, Cranbrook, Maidstone, Malling, Sevenoaks, Tenterden, and Tonbridge rural, and Bromley, Sevenoaks, Tenterden, and Tonbridge urban districts: C. O. Baylis. Salary £800. Appointed for three years, and debarred from private practice.

Lancaster.—Cornholme, Hebden Bridge, and Todmorden urban, and Todmorden rural districts: S. T. Steele. Salary £400. Appointed for three years, and debarred from private practice.—Fylde rural, and Blackpool, Lytham, Kirkham, and Fleetwood urban districts: P. H. Bird. Salary £500. Appointed for two years, and debarred from private practice.—Atherton, Bedford, Tyldesley with Shakerley, Westleigh, and Pennington urban, and Leigh rural districts: John Hall. Salary £400. Appointed for three years, and debarred from private practice.

Leicester.—Billesdon, Blaby, Hinckley, and Lutterworth rural and Melton Mowbray urban districts: W. E. Buck. Salary £450. Appointed for three years, and debarred from private practice.

Lincoln.—Boston urban and rural districts: Walter Clegg. Salary £350. Appointed for three years, and debarred from private practice. Grantham, Little Gonerby, Sleaford, Ruskinton, and Newark (Notts) urban, and Newark (Notts), Grantham, and Sleaford rural districts: Alfred Ashby. Salary £650. Appointed for three years, and debarred from private practice.—Louth urban and rural districts: Richard Dominechetti. Salary £500. Appointed for five years, and debarred from private practice.

Northampton.—Northampton, Towcester, Oundle, Wellingborough, Potterspury, Brackley, Thrapston, Daventry, Hardingstone, Newport Pagnell, Market Harborough, and Uppingham (Rutland) rural, and Northampton, Oundle, Daventry, and Hardingstone urban districts: Alfred Haviland. Salary £800. Appointed for three years, and debarred from private practice.

Nottingham.—Radford and Lenton urban districts: H. R. Hatherly. Salary £150.

Oxford.—Banbury, Woodstock, Chipping Norton, Henley, Bicester, Thame, and Witney rural, and Chipping Norton, Henley, Bicester Market End, Thame, Witney, and Wheatley urban districts: G. W. Child. Salary £760. Appointed for three years, and debarred from private practice.

Salop.—Atcham, Bridgnorth, Church Stretton, Cleobury Mortimer, Clun, Ludlow, Madeley, Newport, Shifnal, Tenbury (Worcester), and Forden rural, and Tenbury Wells (Worcester) urban districts: W. N. Thursfield. Salary £800. Appointed for two years, and debarred from private practice.—Bridgnorth and Astley Abbotts urban districts: Alfred Mathias. Salary £40.

Somerset.—Bath and Bradford (Wilts) urban districts: C. S. Barter. Salary £30.—Bridgwater urban and rural districts: F. J. C. Parsons. Salary £150.—Frome urban and rural districts: Joshua Parsons. Salary £200.—Shepton Mallet urban and rural districts: F. P. Smith. Salary £105.—Taunton urban and rural districts: H. J. Alford. Salary £600. Appointed for five years, and debarred from private practice.

Southampton.—Christchurch and Ringwood rural, and Bournemouth urban districts: R. S. J. Stevens. Salary £225.

Surrey.—Chertsey, Dorking, Epsom, and Reigate rural, and Epsom and Reigate urban districts: E. L. Jacob. Salary £600. Appointed for three years, and debarred from private practice.

Sussex.—Cuckfield, Eastbourne, East Grinstead, Hailsham, Newhaven, Ticehurst, and Uckfield rural, and Cuckfield, Eastbourne, Lindfield, and St. Wilfred's urban districts: E. F. Fussell. Salary £800. Appointed until December 25th, 1876, and debarred from private practice.

Warwick.—Alcester, Stratford-on-Avon, and Evesham (Worcester) rural, and Stratford-on-Avon and Evesham urban districts: G. H. Fosbroke, jun. Salary £600. Appointed for three years, and debarred from private practice.—Warwick, Solihull, Rugby, and Meriden rural, and Milverton, Lillington, Warwick, and Rugby urban districts: George Wilson. Salary £800. Appointed for three years, and debarred from private practice.

Westmoreland.—Kendal, Bowness, Windermere, Grasmere, and Kirkby Lonsdale urban, and East Ward, West Ward, Ulverstone (Lancashire), Sedbergh (Yorkshire), and Kendal rural districts: David Page. Salary £600. Appointed for three years, and debarred from private practice.

Worcester.—Bromsgrove town and country urban districts: Charle Davenport. Salary £60.

York (North Riding).—Malton urban and rural districts: Will

Young. Salary £300.—Pickering urban and rural districts: J. H. Walker. Salary £80.

York (West Riding).—Halifax rural, and Barkisland, Brighouse, Elland, Hipperholme, Luddenden Foot, Midgley, Northowram, Queensbury, Rastrick, Rishworth, Shelf, Southowram, Sowerby Bridge, Soyland, Sowerby, and Warley urban districts: Thomas Britton. Salary £600. Appointed for three years, and debarred from private practice.—Kirkburton, Cumberworth and Cumberworth Half, Skelmanthorpe, Shelley, Shepley, Farnley Tyas, and Thurstonland urban districts: Joseph Lockwood. Salary £50.—Austonley, Cartworth, Holme, Hepworth, Honley, Fulstone, Netherthong, Scholes, Upperthong, and Wooldale urban districts: William Berry. Salary £100.—Marsden in Almondbury, Marsden in Huddersfield, Slaithwaite, Linthwaite, Golcar, Longwood, and Scammonden urban districts: Joseph Hesslegrave. Salary £96.—Keighley rural, and Bingley, Haworth, Oakworth, and Oxenhope urban districts: John Milligan. Salary £200. Appointed for one year, and debarred from private practice.—Penistone (part of rural, and Clayton West and Gunthwaite and Ingbirchworth urban districts: J. S. Brookfield. Salary £21.—Penistone (part of) rural and Penistone and Thurlstone urban districts: G. F. Leigh. Salary £42.—Skipton and Settle rural, and Silsden and Skipton urban districts: E. W. Symes. Salary £400. Appointed for three years, and debarred from private practice.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

M. Roger on Croup.—L'Homme à la fourchette.—The French Medical Association.

THE summer course of lectures, which was interrupted during the Easter holidays, has been resumed at the school of medicine and at the different hospitals. I attended last week at the Children's Hospital, where I heard a most edifying lecture by Dr. Roger, familiarly known by the *soubriquet* of "le petit Roger," on Croup—about the commonest and most fatal disease amongst children in Paris. There are, he said, two species of croup; the true and the false. False croup is not so commonly seen in the hospital as true croup, as the former is comparatively milder, and occurs in infants under two years, before which age they are not admitted. Croup, the lecturer said, is much more prevalent now than when he began the study of medicine thirty or forty years ago; he could not, however, give the reason. In the Hôpital Sainte Eugénie, situated in one of the most populous districts of Paris, there are at least 500 cases annually. The mortality from this affection is in the proportion of four out of every five cases; and in the hospital just named, tracheotomy is performed on two hundred or three hundred subjects annually, most of whom die soon after the operation. In the face of such unfavourable results, the question naturally suggests itself, whether the operation is justifiable. To this, M. Roger replied that, even if we cannot save life, we can always afford temporary relief. But tracheotomy, to be successful in croup, must be performed early; that is, before the disease extends to the bronchial tubes, and before the patient is exhausted. The etiology of croup differs in different cases; and M. Roger believes the disease to be of a specific and contagious character, and that, like all contagious or epidemic affections, it spares neither age nor sex. But why it should principally attack children between the ages of two and four is inexplicable. It is rarely met with after seven, and still more rarely in adult age. When the disease occurs in adults ("angine couenneuse," or diphtheria) the patients die or recover; but the disease does not extend to the larynx. Tracheotomy rarely succeeds in adults affected with croup. M. Roger does not believe that cold has anything to do in the causation of croup, as it is met with in all seasons; but it is an undoubted fact that the disease is considerably influenced by cold, and this would account for the greater mortality in winter than in summer. As to the nature of the disease, there is much difference of opinion, even among medical men in the same hospital. M. Bouchut, one of the physicians of the Hôpital des Enfants, believes that the disease is purely local at first, and that, if not checked by treatment, it soon affects the entire system, and the patient is carried off, not only from suffocation and its consequences, but from poisoning of the blood. For M. Roger, also of the same hospital, the reverse takes place; that is to say, the general system is first affected by the specific poison, the throat-symptoms being simply the local manifestation. M. Roger then went through the differential diagnosis between this and false croup, and the affections with which each may be confounded. In referring to the treatment, he condemned the practice of administering tartar emetic, particularly in the doses prescribed by M. Bouchut, who does not hesitate to give about five grains of the salt to a child two or three years old. We have, he said, in ipecacuanha sufficient material to produce emesis without the prostration caused by tartar emetic. Tracheotomy, which was formerly but very rarely practised, is now an every-day operation; and the cures thus effected are estimated at twenty to twenty-five per cent.

You have doubtless heard of the "homme à la fourchette", who is just now creating such a sensation in Paris. About a month ago, M. Labbé, Surgeon to the Hôpital de la Pitié, was called to see a young *employé* in a linendraper's shop, who had accidentally, or rather unintentionally, swallowed a table-fork made of white metal. It appears this young man was in the habit of putting hard substances down his throat simply for amusement. On the present occasion, he was attempting to do the same with a fork, handle downwards, not, however, with the intention of swallowing it; but, having accidentally let it go, it was drawn, by a sort of suction, into the stomach, where it still remains. By external palpation combined with the introduction of the œsophageal sound, it was found that the fork lay obliquely across the stomach, with the prongs towards its cardiac extremity. I have just learned from M. Labbé that there is no great alteration in the position of the fork; and, as the patient suffers no inconvenience from its presence in the stomach, he has been, at his own urgent request, permitted to return to his work in the shop, which is in the neighbourhood of M. Labbé's residence, with strict injunctions that, on the appearance of the slightest symptom, that gentleman is to be called for. No attempt has been made to extract the fork, and M. Labbé does not consider it necessary to interfere for the present.

This is not the first instance of a fork having been swallowed by a human being. In 1716, an account was given in the *Journal des Savants* of a fork that traversed the intestinal canal, and was rejected at its anal extremity without any accident. Other cases have been related in which the fork did not go beyond the stomach, and the bearers of the foreign body suffered little or no inconvenience from its presence.

In the *Annales Médico-psychologiques* of 1843, Dr. Ramon reports the history of a lunatic who lived six years with a tin fork in his stomach; it caused him no inconvenience except pain on making any violent movement. After his death, from another cause, the fork was found completely blackened and enveloped by food in the stomach; in this instance, also, the fork had been swallowed with the handle downwards. In the majority of cases, the fork has escaped through an abscess in the abdominal parietes. Thus, a case is related of a young girl, aged 18, who had swallowed two iron forks, which were expelled ten months afterwards through an abscess in the skin in the epigastric region. In each case, the expulsion of the fork, whether spontaneously or otherwise, was followed by no inconvenience, and the opening healed kindly. In some cases, again, the patients, suffering from great pain, applied to a surgeon before the formation of an abscess, and the fork was removed by opening into the stomach; but, notwithstanding the gravity of this operation, the patients all recovered.

M. Labbé is waiting for an opportunity when, by an innate movement of the stomach, the fork may be placed in a position favourable for its extraction by means of a forceps manufactured for the purpose by M. Mathieu. This was done some twelve years ago at the School of Medicine, by a surgeon who was called to a case where the man, a mountebank, was in the habit of putting different objects down his throat. A fork slipped from his hand into the stomach, and was immediately removed by the above-named forceps.

Since writing the above, I have learned that the man has been obliged to give up work, owing to a certain degree of pain in the left hypochondrium, which is the seat of an inflammatory adhesive process, evidently caused by the fork, which will doubtless sooner or later make its exit through an abscess in this situation. Whether it will do so without compromising the life of the young man is another question, as peritonitis, which is always a serious complication in these cases, is much to be dreaded. The poor young man, who at first thought lightly of his imprudence, is now alive to the gravity of his position. He has taken a bed at a maison de santé, whither he went to avoid the importunities of the curious. He is obliged to lay up, and M. Labbé is still following the case, and has very properly resolved to abstain from untimely or undue interference.

The annual meeting of the French Medical Association took place on April 19th, under the presidency of Dr. Tardieu, and was followed by a banquet in the evening, to which the presidents of the branch societies or their delegates from the provinces were invited. This Association is purely a benevolent one, intended for the relief of distressed medical men and their widows and children; and, although it professes to guard the interests of the profession, it has no real power to be of service to its members in any other way. The funds of the Association being in a flourishing state, it has just been decided that pensions be granted to infirm members, whether by disease or old age; and, although much cannot be done in that way for the present, the pensions will be looked upon as a great boon.

GLASGOW.

[FROM OUR OWN CORRESPONDENT.]

Close of Session.—Chairs of Clinical Medicine and Surgery in Glasgow University.—Proposal of Royal Infirmary Medical School.

THE medical sessions in the two medical schools of Glasgow came to a close at the end of last month; and the public closing of the session and graduation at Glasgow University took place on the first of the present month. On the 30th ultimo, the usual address to the graduands was given by Dr. G. H. B. Macleod, Professor of Surgery. At the close of the graduation ceremonial, the Rev. Principal Caird delivered an eloquent address, in which he congratulated the medical faculty of the University on the near approach to completion of the new Western Infirmary. He took occasion to dwell on the advantages of this institution to the medical school, and prophesied a most prosperous future for it.

There is, at present, a good deal of stir in the medical faculty of the University; and it seems likely that, before another session opens, there will be at least three, and possibly four, new professors in that faculty. The resignation of Dr. Thomas Anderson, who has long been more or less invalided, was announced a week or two ago. Then there is a scheme for the foundation and endowment of two chairs—one of clinical surgery, and the other of clinical medicine—in connection with the University and the new Infirmary. It is also rumoured that the oldest of the professors in the medical faculty is about to resign his chair, although no formal intimation of this has as yet been made public. With regard to the new chairs of clinical medicine and surgery, it is generally believed that two well known teachers in the Andersonian University will be the first incumbents. It may be remarked, in passing, that the withdrawal of these two gentlemen from the teaching staff must be a most serious blow to the Andersonian. The present professor of anatomy is well known as one of the chief attractions of the school; and we believe that the professor of the practice of medicine is also very popular with the students. It will be difficult to fill their places satisfactorily; and the school, as a whole, is likely to suffer.

It may be allowed us to suggest, whether the present is not a time when the medical staff at the Andersonian might reconsider their relations to that institution. It is well known that the name of University, held by virtue of the will of its founder, is the main difficulty in the way of the recognition of any of the medical classes of the University; and if now the medical staff, as a body, were to resolve to attempt an arrangement with the Royal Infirmary, and there to found an Infirmary Medical School, it seems likely that it would be to the advantage of all concerned. Next session, the new Western Infirmary will be open, and the connection of the University with the Infirmary will be virtually at an end; this hospital would then be free to come to any arrangement which would best utilise the splendid opportunities for teaching which it possesses. A hospital of 600 beds, with a thorough organisation such as that possessed by the Infirmary, should form no mean attraction to medical students, and should also be one of the best nurseries of practical teachers. Such a school would combine numerous advantages which cannot be possessed where there is no such union between the school and the hospital. We commend this suggestion to the serious consideration of the medical staff of the Andersonian. There is another aspect in which such a movement might be of advantage. It is known that, at present, there is practically no competition in medical teaching in Glasgow. The Andersonian is ignored by the University, chiefly because the former is considered by the latter to make an unwarrantable use of the name University. But if a school were formed in connection with the Infirmary, the University could hardly refuse to recognise their classes; and so a healthy competition might arise between them. Such a competition, we humbly believe, is much called for. A monopoly of teaching is good neither for teachers nor for students.

MR. JOHN TYNDALL, LL.D., F.R.S., has been re-elected Professor of Natural Philosophy at the Royal Institution. The Managers have also announced that they have appointed Mr. John Hall Gladstone, Ph.D., F.R.S., Fullerian Professor of Chemistry.

ASSOCIATION INTELLIGENCE.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: MICROSCOPICAL SECTION.

THE next meeting will be held on Tuesday, May 12th, at 7.30 P.M., in the Council Room, Queen's College.

The demonstrators will display the Anatomy of the Kidney; and members possessing specimens illustrating the Pathology of the Gland are requested to bring them.

WILLIAM HINDS, } *Hon. Secs.*
LAWSON TAIT, }

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEETINGS.

THE next meeting will be held on Thursday, May 14th, at the Crystal Palace Hotel, Norwood. The Chair will be taken at 4 P.M.

Dr. Lanchester having resigned, a new Honorary Secretary will be appointed.

Papers, etc., are promised by Mr. Howard Marsh, "On Recto-pharyngeal Abscess", Mr. Sidney Turner, Dr. Galton, etc.

The dinner will take place at 6 P.M.

HENRY T. LANCHESTER, M.D., *Honorary Secretary.*

Croydon, April 27th, 1874.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

THE annual meeting of the above Branch will be held in the Corn Exchange, St. Ives, on Wednesday, May 27th, at 3 P.M.; W. R. GROVE, M.D., President.

Gentlemen intending to read papers, or be present at the dinner, are requested to communicate with the Secretary without delay.

The dinner will take place at the Lion Hotel, at 6 P.M. Tickets, 10s. 6d. each. J. B. BRADBURY, M.D., *Honorary Secretary.*

Corpus Buildings, Cambridge, May 4th, 1874.

YORKSHIRE BRANCH.

THE annual meeting of this Branch will be held in the Cutlers' Hall, Sheffield, on Wednesday, May 27th, at 2.30 P.M.

The members will dine together at the Royal Hotel. Tickets (exclusive of wine) 6s. 6d. each.

Gentlemen desirous of bringing forward communications, or attending the dinner, are requested to communicate with the Secretary.

W. PROCTER, M.D., *Local Secretary.*

York, May 4th, 1874.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THERE will be only one meeting this spring, which will be held at Gravesend, on Friday, May 29th (D.V.); A. SHEWEN, M.B.Lond., in the Chair.

FREDERICK JAMES BROWN, M.D., *Hon. Sec.*

Rochester, March 30th, 1874.

CUMBERLAND AND WESTMORLAND BRANCH.

THE spring meeting of the above Branch will be held at the Keswick Hotel, Keswick, on Thursday, June 4th, at 12.30 P.M.; ROBERT TIFFEN, M.D., President, in the Chair.

Gentlemen intending to read papers, or be present at the dinner, are requested to give early notice to the Secretary.

HENRY BARNES, M.D., *Honorary Secretary.*

Carlisle, May 5th, 1874.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE fifth ordinary meeting of the session was held at the York House, Bath, on Thursday, April 16th; E. LONG FOX, M.D., President, in the chair. There were also present thirty-eight members and three visitors.

Papers.—1. Dr. THOS. COLE read a case of rare Renal Tumour: upon which remarks were made by Drs. Goodridge and Davy. 2. Dr. J. K. SPENDER gave notes on some points in the Treatment of *post partum* Hæmorrhage, which excited a lively discussion, in which Drs. Swayne, Davy, and Brabazon, and Messrs. Stone, W. M. Clark Collins, Concannon, Waugh, Leonard, Stockwell, and Joseph Parsons took part.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: GENERAL MEETING.

THE SEVENTH meeting of this Branch was held at the Midland Institute, Birmingham, on Thursday, April 9th, at 3.30 P.M. Present: FURNEAUX JORDAN, Esq., President, in the chair, and over fifty members and visitors.

New Member.—Dr. Harding of Market Drayton was elected a member of the Branch.

The Late Mr. Ebbage.—The following resolution was unanimously passed:—"That this Branch desires to express its sincere sympathy with Mrs. Ebbage in the loss she has sustained by the death of her husband, the late Thomas Ebbage, Esq., F.R.C.S. The Branch fully recognises the services rendered to the Association by Mr. Ebbage during the annual meeting of the Association at Leamington, and also warmly appreciate the energy, ability, and courtesy with which he fulfilled the duties of President of this Branch during the past year."

Communications.—Dr. CARTER exhibited a specimen of Secondary Cancerous Deposit in the Lungs and Heart, occurring eighteen months after a pulsating encephaloid cancerous tumour of the head of the right tibia, under the care of Mr. Bartleet, who, in the first instance, tied the femoral artery of the same side, with temporary improvement in the condition of the growth. Subsequently, however, the rapid return of all the symptoms necessitated amputation of the thigh in its lower third. Two months ago, the patient returned to the General Hospital with all the symptoms of cancer of the lung and pericarditis, from which he died about seven weeks after. The artery, which had been ligatured, was reduced to an impervious cord only for about one inch; above and below this, the vessel was quite patent. The seat of ligature was about three inches below the profunda branch.—Dr. MACKEY showed an Embolism of the Right Brachial Artery from a patient admitted, in a moribund condition, with extensive pleuritic effusion on the right side, secondary to pneumonic phthisis. The right radial pulse was not to be felt, and the plugging had probably occurred three days before death. There was ascites, and in the abdominal aorta a clot extending its whole length. The case was of interest, especially when considered with Dr. Foster's recent case of embolism of the iliac arteries immediately subsequent to thoracentesis for pleuritic effusion. The left ovary of the same patient contained solid fat and hair.

Medical Education.—The report of the Committee on Medical Education, having been printed and circulated, was taken as read. The Branch resolved itself into committee, Mr. Jordan in the chair, for the consideration of the report. Mr. Gamgee, Mr. Solomon, and Dr. Bassett having spoken, on the motion of Mr. Tait, seconded by Mr. Sainsbury, the discussion was adjourned until the next special meeting.

At this meeting, the officers, Council, and representatives in the General Council for the ensuing year were nominated for election.

NORTHERN BRANCH: SPRING MEETING.

THE spring meeting of this Branch was held at Bishop Cosin's Library, Durham, on Thursday, April 30th, 1874; Dr. HEATH, President, in the Chair. There were also present thirty-seven members and two visitors.

President's Address.—The PRESIDENT, in opening the meeting, gave, in interesting and graphic language, an address interspersed with numerous anecdotes, entitled "Reminiscences of a Visit to Vienna and Zurich". At Zurich, he saw a young woman with her head and throat tied up, and asked why, in sultry weather, she wore such a covering. She replied that the heat of the sun made her sweat, and then the cold air from the lakes and the mountains gave her a sore throat and produced goître. He visited a hospital at Zurich, and ascertained that the windows were kept open in winter and summer, and there was a singular absence of hospital diseases. At Zurich, he found many lady students, who underwent the same training as the male students. He learnt that this system was disapproved of, for the same reasons as a mixed education was objected to in England. A mixed education meant the bringing together of young persons of both sexes, at the time of life when they were the most susceptible, in places where they held communion one with another under circumstances strangely peculiar. It was for these reasons, and not from any unworthy jealousy on the part of the doctors, that the profession in this country objected to a mixed medical education. He next spoke of his visit to the International Exhibition of Vienna, and described some of the wonders of that stupendous collection of treasures. The hospital was one of the chief features of Vienna. The diseases generally were grouped together in separate parts of the building; each court was under the special care of its own medical officers. The medical attendants were paid by, though little under the control of, the Government; and they had the privilege of taking private patients. In the eye-clinic, he saw many cases of disease of the cornea and a large number of cases of cataract. He saw a number of cases of plastic operation. Cases of vesical calculus appeared to be rare. In the wards generally, there was great care used, and great cleanliness. The beds were very close together. The basins used in dressing were kidney-shaped, which enabled them to be applied to any part of the body; and he was so convinced of their convenient character, that he had introduced them since into the Newcastle-upon-Tyne Infirmary. Although there were many things he could learn at this great hospital, he had the gratification of finding that, on the whole, English surgery would not lose anything by being placed in comparison with Viennese.

Dr. CHARLTON, Vice-President of the Association, spoke of the condition of the Vienna Hospital in 1837, when he was a student there; and proposed a vote of thanks to Dr. Heath.—Mr. JOHN JOBSON (Bishop Auckland) seconded the vote, which was carried by acclamation.

Papers.—The following papers were read.

1. Notes of a Case of Injury to the Knee-joint. By W. L. Emmerson, Esq.
2. Report of a Case of Paracentesis Thoracis. By Dr. Philipson.
3. Report of an Unusual Case of Twin Birth. By Dr. Umpleby.
4. On a Case of Dislocation of the Hip-joint, in which the Head of the Femur was thrown on to the Spine of the Ischium. By Dr. Heath.

Specimens.—The following specimens were shown.

1. Cancerous Ulceration and Perforation of the Stomach. By W. L. Emmerson, Esq.
2. Vesical Calculi. By Dr. Heath. Two stones, equal to a hazelnut in size, passed by a female *per urethram* without operative treatment.
3. Dr. Macdonald exhibited some Photographs of Microscopical Drawings, illustrating Catarrhal Pneumonia.
4. Dr. Foss showed some recently hatched Salmon, illustrating the Circulation of the Blood in Fishes.

The members were also afforded an opportunity of inspecting the Gold Medal of the London Annual International Exhibition of Arts, Industries, and Inventions, 1873, presented to Mr. Christopher Jeaffreson, of Newcastle-upon-Tyne, for his Perimeter, shown and described at the spring meeting of the Branch, held at Sunderland, April 24th, 1873.

Vote of Thanks.—It was moved by the PRESIDENT, seconded by Mr. J. W. BROADBENT, and carried by acclamation—"That the best thanks of the meeting be given to the Trustees of Bishop Cosin's Library, Durham, for their kindness in granting the use of the Library for the purposes of the meeting."

Dinner.—Upon the conclusion of the meeting, the members and their friends dined together at the County Hotel, the President in the Chair.

CORRESPONDENCE.

THE MAINTENANCE OF LUNATICS.

SIR,—I am anxious, with your permission, to make a few remarks on your article on this subject in the current number of the JOURNAL.

No asylum superintendent in England can be more alive than I am to the importance of the early treatment of insanity; and, so lately as my annual report for 1874, I urged on the local authorities, in the strongest language I could use, the importance of sending recent cases of insanity to the asylum. If, therefore, the provisions of the budget tend to this end, the benefit will, without doubt, be great.

So far, you will see I am in accord with your article. But, when you write, "It need not be feared that the aid given by the Government will empty the lunatic wards of workhouses of those imbeciles and chronic lunatics, for the accommodation of whom they are properly adapted, and will thus entail an immense outlay on the county rates for the enlargement of existing asylums and the erection of new ones", I beg respectfully to differ from you. I can only speak from experience for this county. When, in 1861, the maintenance of lunatics was removed from the parish to the common fund of the union, the influx of lunatics into the asylums was admittedly very great. Now that the partial cost is to be removed from the unions to the consolidated fund, the same phenomenon will occur. I am convinced that such will be the case in this county. Your theory, that the guardians will scarcely care "to curtail the sphere of their official activity by handing over one whole class of their pauper subjects to the jurisdiction of the county magistrates", may be all very well, but I doubt the guardians caring to keep up their dignity at the expense of their pockets. And that in many unions their pockets will be materially touched, there can be no doubt.

Take, for instance, Brighton. In the lunatic wards of the Brighton Workhouse, there are one hundred chronic lunatics; each of these lunatics costs for maintenance 7*s.* a week. That represents £1820 a year. At Hayward's Heath Asylum, the rate charged being 9*s.* 6*d.*, they would cost £2470; deduct £1820 from £2470, and we leave £650, which is the sum Brighton has hitherto saved by retaining these hundred lunatics in the workhouse. But the provisions of the budget will entirely alter this, and, as long as the Brighton authorities retain these cases in their union house, they will lose £390 a year. Can their desire for a "little brief authority" reconcile them to this loss? I fear not. It is doubtless true that, in many of the country unions, the maintenance rate in the union houses is somewhat below that of Brighton, and the amount (5*s.*) at which the Chancellor of the Exchequer put it is, doubtless, in those unions so far correct; but it must be remembered that this rate is struck on the total number of paupers in the house, not on the lunatic inmates alone. The majority of these lunatics (at least in Sussex) are not, as you state, "industrious and useful", but rather imbecile, bedridden, and useless. They require extra diet and attendance, and must cost more than the average 5*s.* of the rest of the house. Again, another item, evidently not taken into consideration, is the lodging. At least 1*s.* 6*d.* a week per lunatic must be allowed for that. But, if the lunatic be sent to the asylum, the cost for lodging falls on the county, not on the union.

I confess I feel somewhat deeply on this matter, because, during the four years I have had charge of this asylum, I have prided myself on having here (almost alone amongst the asylums of England) kept the numbers from increase by a careful discharge of chronic and harmless lunatics either to the workhouses or to the care of relatives; thus endeavouring to retain it as a hospital for recent cases, and to restrain the numbers within reasonable limits. This plan will, I fear, in future, be useless. You state, however, that you foresee a further consideration of the subject. The lunacy laws, without doubt, require careful revision. If that time come, could you not lend your authority to the insertion of some clauses such as the following?

1. That the amount to be allowed out of the consolidated fund be paid to the asylum, not to the unions.
2. That it be compulsory on the local authorities to send all cases of recent insanity at once to the asylum.
3. That the names of all lunatics be retained on the books of the asylum.
4. That the visiting justices have power to grant unlimited leave of absence from the asylum to chronic lunatics, paying the workhouse authorities, or relatives to whom the lunatic is sent, a certain weekly allowance.
5. That these lunatics be visited from time to time by a medical officer from the asylum, and that this medical officer has power at once to order the case back to the asylum, if he see fit.

If, sir, some such clauses as these were added to the next edition of the lunacy laws, your desire for the early treatment of recent insanity would be effected, and at the same time means would be provided for the asylum authorities to draft off the chronic lunatics, imbeciles, and idiots who now crowd our county hospitals for the treatment of insanity. Furthermore, instead of guardians being tempted by the bait of the Chancellor's 4*s.*, they would be relieved of the temptation, by the power to will what cases shall be retained in the asylums being taken out of their hands, and vested in the central magisterial and medical authorities at the asylum. Surely there cannot be two opinions as to the desirability of such an arrangement.

I am, etc., S. W. D. Williams, M.D.

County Asylum, Hayward's Heath, May 3, 1874.

⁂ Whatever may have been the case in the county of Sussex, Dr. Williams will have some difficulty in proving that, throughout the country at large, the effect of an Act of 1861, by which pauper lunatics were made chargeable to unions, was to cause "a very great influx" of patients into asylums. The total number of patients admitted into asylums, registered hospitals, etc., in 1860 was 9512; in 1861, it was 9329, and in 1862 it was 9078. The total number of pauper lunatics, idiots, etc., in workhouses on January 1st, 1860, was 8219; on the same day in 1861 it was 8543, and on the same day in 1862 it was 8603. The most cursory examination of our lunacy statistics must show that the rate of increase of pauper lunacy has been remarkably steady, and that the distribution of pauper lunatics has not been materially influenced by legislation in recent years. On January 1st, 1860, there were of all lunatics in England and Wales 56.96 per cent. in asylums, 24.91 per cent. in workhouses, and 18.13 per cent. with relatives or others. On January 1st, 1873, there were of all pauper lunatics in England and Wales 59.81 per cent. in asylums, 26.92 per cent. in workhouses, and 13.27 per cent. with relatives or others. It is thus seen that, notwithstanding union chargeability, the tendency has been to increase the proportion of lunatics detained in workhouses. If, therefore, Dr. Williams's apprehensions be founded upon the operation of the Act of 1861, he may set his mind at rest. The "phenomenon" which he dreads—workhouses void of lunatics—is yet, we fear, a great way off. It is possible that there may be cases of hardship under the provisions of the budget, but Brighton does not seem to be one of these. It may not share so largely as some other places in the benefits of the Government grant, but it will still draw no small advantage therefrom. Dr. Williams will find several of his difficulties dealt with in the reply of the President of the Local Government Board to the deputation of managers of the Leavesden and Caterham Asylums. Holding, as we do, that the ultimate saving derived from the detention of lunatics in workhouses is a very doubtful quantity, we cannot fully enter into Dr. Williams's feeling of pride at having at Hayward's Heath, "almost alone amongst the asylums of England", kept the numbers from increase by a careful discharge of harmless and chronic lunatics either to the workhouses or to the care of relatives. We must remind him that many of his brethren who preside over asylums have no faith in the expedient from which he expects so much benefit to result, that the percentage of pauper lunatics in workhouses, or boarded out with relatives or others, is much greater in some other counties than it is in Sussex, and that he has not yet altogether checked the growth of lunacy in Sussex, as, on January 1st, 1873, there were 1088 pauper lunatics chargeable to unions in that county, whereas, on January 1st, 1867, there were 1007. The number of pauper lunatics has, therefore, increased by 81, or 8 per cent., in a period of four years—a ratio of increase quite equal to that in several other counties. It is quite clear that no removal of pauper lunatics into workhouses or private dwellings will arrest the increase of insanity in this county, or will permanently lighten the burdens of our taxpayers. The public cannot rest satisfied with any such expedient, but will insist that our asylums should become more and more hospitals; that mental diseases should be scientifically investigated, with a view to their prevention and cure; and that even harmless chronic cases should have the benefit of treatment. Dr. Williams has brought out of his treasure-house things new and old in the form of clauses, which ought, he thinks, to be added to any future editions of the Lunacy Acts, but which we have not here space to discuss.

WOODHALL SPA.

Sir,—Dr. J. Thompson, in the Journal of April 11th, called attention to a new method of administering the mineral water of Leamington spa. It may interest your readers to know that for some time the same method has been adopted with the water at Woodhall Spa, which makes the bromo-iodine water certainly more palatable; but the public prefer the natural water to any admixture of gases, however innocent a few additional volumes of carbonic acid may be.

It will not be out of place to notice here a little about Woodhall Spa at this time, when many are glad to know all they can of various spas, before they decide where to recommend their patients this coming season.

Before a course of treatment by mineral water is decided on, care should be taken to select the one best suited for the particular case to be treated, or a total failure, if not an injury, may be the result. Dr. Thompson says that Dr. Granville, in his work on the *Spas of England and Germany*, disregarded English mineral waters, and drove many to the Continent. Certainly more attention may have been paid to the continental bath establishments; but the superiority of the water at particular spas, containing iodine and bromine, cannot be boasted of. In fact, Dr. Granville says that Woodhall "can boast of holding in solution the largest quantity of iodine hitherto known to belong to any mineral water in England". He might have added "in the world", for no water yet known has as much.

Woodhall is becoming a rising place. Great alterations are made from year to year; and soon, no doubt, a town will spring up to accommodate the large number who now flock hither during the season. Independently of its valuable spring, it is situated on a bed of sand of great depth, and well protected by extensive woods from the north-east winds; hence the air is both dry and bracing.

Dr. Granville shows that Kreuznach contains less than one-eighth of a grain of iodide of sodium and two and a half grains of bromide of sodium in one gallon of water, whilst Woodhall contains more than half a grain of iodide of sodium and over eight grains of bromide of sodium in the same quantity of water; so that it is four times as strong as the strongest of its kind yet known. Leamington contains only one grain of iodide in ten gallons, one grain of bromide of sodium in ten quarts.

Professor Frankland has recently analysed the Woodhall water, and his analysis will be published by the Geological Survey Department of England and Wales in their report of this district. There is every reason to believe that the new analysis will be favourably compared with that of the late Mr. West, since the increasing demand for the water has induced the proprietors to draw their supply nearer the source of the spring, which is over 500 feet deep.

I have to apologise for intruding on your space; but I know, from the numerous inquiries made, that the profession will feel a little interest in the above information.

I am, etc., ROBERT CUFFE, M.R.C.S.Eng.

Woodhall Spa Villa, April 1874.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

RETURNS TO MEDICAL OFFICERS OF HEALTH.

THE Local Government Board has called the attention of the Rural Sanitary Authority to Subsections 14 and 15 of Section 4 of their General Order of November 11th, 1872, which require that every medical officer of health, whose appointment has been approved by the Board, shall prepare an annual report, comprising, amongst other things, tabular statements of the sickness and mortality in his district; and shall also transmit to the Board, on forms to be provided by them, a quarterly return of the sickness and death within such district.

In order to enable medical officers of health to discharge this duty efficiently, the Board consider it essential that they should be supplied by the registrars of births and deaths with returns of the deaths registered within their respective districts; and the Board trust that the Rural Sanitary Authority will make the necessary arrangements for that purpose. These returns should be made weekly as regards all deaths registered as having occurred within the registrar's district during the preceding week; but an immediate notice should be given of all deaths from infectious disease in fresh localities, and of all groups of deaths from such disease, or from diarrhœa, in any localities.

With regard to the amount of compensation for the additional labour thus imposed upon the medical officers of health, the Board suggest that, in accordance with a proposal made in the Registration of Births and Deaths Bill of the last session, and which passed the House of Lords, it should be fixed at the rate of twopence for each death entered in the return.

The Board further point out that, when the medical officers of health are not also the Poor-law medical officers, they will require information from the books of the latter with respect to all new cases of sickness within their respective districts; and the Board therefore "*consider it desirable that the guardians should* instruct their clerk to copy from the district medical officer's relief-lists the new cases which are reported at each meeting of the guardians, and forward the same promptly and regularly to the medical officer or officers of health *within the Union*." It is considered very important that this information should reach the medical officer of health without delay, and the Board trust that arrangements will be made for the regular transmission of the copies referred to as early as practicable after each meeting.

The Board also recommend that the guardians should request the Poor-law medical officers to give to the medical officer of health, or inspector of nuisances, acting within their respective districts, the earliest possible information of dangerous cases of infectious disease under their charge.

⁂ Thus it will be seen that the promised concession of which Mr. Stansfeld afforded hope has been negatived. The returns of Poor-law medical officers are made for a merely formal purpose; and it is considered by experienced medical officers of health that these returns are not of much value to them for health cases. The Poor-law medical officer has no direct relations with the medical health-officer, and thus has no responsibility to bear for the accuracy of his returns; nor is the latter in a position, under this arrangement, to write to the Poor-law medical officer, or otherwise call upon him for accessory information and details which manifestly will often be of the highest value. It should obviously be the object of the Local Government Board to make the two organisations work harmoniously together and be mutually helpful. By the present cheeseparing arrangement they are doing their utmost to bring them into collision. Meantime the clerks are complaining of having additional work imposed upon them without remuneration, and this will not tend to make the machinery work more smoothly, or to ensure the regularity and efficiency of the returns. Many of the local authorities were within our knowledge willing to pay for the returns required from Poor-law medical officers, and this minute has acted disastrously.

ADULTERATION OF FOOD ACT: PROSECUTIONS.

AT the Thames Police-court, Thomas Peat, the keeper of a general shop, at Brook Street, Ratcliff, was summoned, at the instance of the Board of Works for the Limehouse District, for selling adulterated cocoa. Dr. Rogers, the analyst for the district, found the samples to consist of cocoa, starch, and sugar. The mixture was not at all deleterious to health, and the cocoa being mixed with sugar and starch, would make it more wholesome to some persons than if it was not so mixed. Mr. Lushington said he did not think there was an element of fraud or detriment to health shown in this case, but that cocoa was more fitted for ordinary consumption, by being mixed with other ingredients, than when sold in its pure state. He, therefore, dismissed the summons.

At the Southwark Police-court, Mary Ann Merritt, a dealer in milk, carrying on business in Emily Street, Bermondsey, was summoned before Mr. Partridge, by order of the vestry, for selling milk and water as pure milk. Mr. Harrison prosecuted, on behalf of the vestry. William Henry Doman, an inspector in the service of the vestry, said that, on the 10th ult., he went to the defendant's shop with his assistant, and directed him to purchase a pennyworth of milk. The defendant served him, and witness, having poured it into a bottle, told Mrs. Merritt that it would be analysed. She said that the milk was pure, and was sold as she received it. He left a portion of the milk with Dr. Muter, whose certificate showed that the milk was adulterated with 20 per cent. of water. Mr. Partridge fined the defendant 40s., and 12s. 6d. costs.

At the Manchester City Police-court, a milk-dealer was fined £5, and costs, for mixing his milk with water; and a firm of jam and pickle-makers were fined 20s., and costs, for selling, as black currant jam, a compound of which more than 25 per cent. consisted of parsnips, and which, in the opinion of the analyst, did not contain more than 25 per cent. of the genuine fruit.

At the Sittingbourne Local Petty Sessions, Mr. Benjamin Nutt Rayner, grocer, was summoned for selling butter which, according to the analysis of Dr. Tidy, one of the county analysts, was adulterated with about 21.5 per cent. of water, and a large admixture of fats other than butter. The defendant complained that a period of fourteen weeks had elapsed between the taking of the sample and his being served with the summons, showing the result of the analysis. The butter was Lepellitier's Normandy butter, of the third quality. He had a sample from the same firkin, from which the inspector took the butter complained of, analysed by Mr. Wanklyn, and the result of his analysis was that the butter was not adulterated. Besides, if a pound of butter contained three and a half ounces of water, as alleged, it could not be kept together. Under these circumstances, the Bench ordered a further analysis of the butter in question.

THE MEDICAL PROFESSION AND SANITARY MEASURES.

ON Monday, the 4th instant, the first meeting of the newly elected Rural Sanitary Authority for the Darlington Union was held at Darlington, and Dr. Eastwood, of Dinsdale Park, was elected Chairman of the Board. After acknowledging the compliment, Dr. Eastwood said that he had long taken great interest in sanitary matters, and had brought them under the notice of the Northern Branch of the British Medical Association. He said it was not known to the public generally, how largely the medical profession had taken up sanitary measures. The British Medical Association, numbering above five thousand members, had appointed a Parliamentary Committee to attend to the Public Health Act of 1872; and, had their recommendations been carried out, some of the anomalies and difficulties with which the Board has to contend would not have existed. It was their duty to carry out this Act, and they would do it, as far as they were able, notwithstanding the difficulties.

VACCINATION.—Dr. Ellis, of Crowle, Lincolnshire, has been awarded, by the Local Government Board, a gratuity of £14 : 17 : for efficient vaccination; and his brother, Mr. P. S. Ellis, of the same place, the sum o £2 : 17 : 4.

MILITARY AND NAVAL MEDICAL SERVICES.

Dr. T. R. Pickthorn, Deputy Inspector-General of Hospitals and Fleets, who has recently returned from a tour of duty at Port Royal, Jamaica, has been appointed to Haslar Hospital, vice Dr. Donnet, whose term of service has expired.

The whole of the medical officers who went out to the West Coast of Africa, for service with the Ashantee Expedition, will do duty at home stations for a time. Deputy Surgeons-General Mackinnon, C.B., and Woolfreyes, are to assume charge of districts in the United Kingdom; and Surgeon-Major M'Nalty, also promoted for distinguished service, is to be attached to the head-quarters of the Army Medical Department in Whitehall Yard.

It has been suggested in some quarters that Sir William Muir should recommend Surgeon-Major Rowe for promotion, in reward for his services with Captain Glover in the Ashantee War. It is, however, objected to this course that Surgeon-Major Rowe has only very recently completed his fourteenth year in the army, and is already a surgeon-major of four years' standing.

The promotion of Deputy Surgeon-General Rutherford, M.D., C.B., has been made in increase of the establishment of surgeon-generals in the Army Medical Department, consequent upon Gibraltar being placed under a surgeon-general. The advancement of Dr. Gordon and Dr. Rutherford will give no further steps, as it is proposed to take advantage of the present opportunity of taking the officers lately promoted for distinguished service on to the establishment.

NAVAL MEDICAL SERVICE.

Sir,—In thanking you for your advocacy, it is not for myself alone, but for all around me at a naval port; and I hope you will allow me to remark on some points you have touched, because most objects may be seen from different points of view.

Many consider that the amalgamation of the Indian Army and Navy "alumni" at Netley School is a great leverage for us. The education or training obtained there fits the young medical officer for any and every sanitary position, and consequently teaches him to look for equal consideration. Inexperienced young men are there brought together; they discuss freely their aspirations and prospects, and they learn at the starting-post the differentials in the race of life to be met on the courses of the three services they are about to enter. The certain final result of this must be to raise the level of the inferior service.

Once started on active service, they realise what they have learned at Netley as to these differentials; thus, in the Ashantee expedition, they have witnessed that, serving on board the same hospital-ship—the *Victor Emmanuel*—the surgeon wearing the red jacket has had extra allowances, while his brother in blue has had none. Those in Indian troopers soon find that the emoluments of Indian service are threefold their own, cooped up as they are in ships. If they go farther away, to China and Japan, they discover that the Naval Deputy Inspector-General receives about as much as the surgeon of a regiment ashore, who has permission to practise, which is forbidden to the naval medical man. If ambitious and of inquiring minds, they contrast the grand prizes of the sister services, they learn the fortunate few, the *rari nantes in gurgite vasto*, who reach the highest inspectorial rank, must be content with £900 a year for three years, and then retire on half-pay, while their red-coated brother will take his turn of service of five years in India on £2,600 *per annum*.

From the first step of the ladder to the last, they witness but an uniform inequality; and these are the hard facts that tell on the popularity of the navy, causing its junior list to stand at about forty below its very moderate establishment of 250.

Is it not well, then, that young gentlemen should become acquainted with all this early in life, with the chance before them of withdrawing from a career that will fix them to serve, if able, until 55 years of age in "a prison with a chance of being drowned"? So much, then, for the advantages to us of early association with other services at Netley.

Another point—retirement-pay—needs elucidation. You have fixed fair extremes for staff-surgeons on "half-pay earned" at twenty years, and in "full pay last worked for" at thirty years' service; but, for intervening periods, it must not be in strict accordance with the scheme of 1870, which has disgusted all old surgeons. That scheme is based on the principle that an officer begins to count his scale of retired pay at 20 years of age, whereas we do not enter the navy until beyond 22 years, and thus that difference is due to us as a base to count from; and, further, as our army brethren are always counting every day towards retired pay, so in equalisation with them we have a claim that, so long as we are fit and ready to serve, our time shall count for retired pay whether it suit the convenience of the Admiralty, or not, to employ us. It is a grievance to be losing full-pay while fit and ready to serve, carrying with it also a still greater sacrifice of retired pay in old age.

Until within the last five years, we have looked on the staff-appointments at home as the reward of long as well as good service; but, since then, many officers possessing both have seen that which they hoped for given to younger men, leaving to us the hard alternatives of sea-service or retirement; this needs reform.

Finally, it is proverbially "the last straw that breaks the camel's back", and for ourselves, as having endured much, the climax was reached by taking from the department its grade of high rank. In the army, the Director-General is the highest officer on the active list; in the navy, he is disconnected from the active service, being a retired officer, who is retained that he may gain Civil Service pension in addition to the retired pay of his rank. In the army, the appointment terminates at seven years, giving a periodical promotion; in the navy, this late renewal, nominally for five years, is virtually for as long as ability to serve lasts, and then all hope must be abandoned by those who enter the navy, as it was at the gates of Dante's lower regions. At any cost, all these will have to be remedied to restore any confidence towards the service; and, when they are remedied, I will gladly cease to subscribe myself Yours, etc., A Discontented Staff Surgeon.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Monday, May 4th.

Polluted Water.—Mr. Brown asked the President of the Local Government Board whether there was any power in the hands of any rural sanitary authority to prevent the inhabitants of a sanitary district from using the water from any wells or streams when they were found by the medical officers of health or inspector of nuisances to be polluted by sewage or other deleterious matter.—Mr. Sclater-Booth: In the case of wells or water-supplies of a public character, it is in the power of the sanitary authority to prevent the use of polluted water; but, in the case of private wells, there is no such power. This, with many other points arising under the Sanitary Acts, has been recently under my consideration, with a view to some amendment of the law, and I hope shortly to be able to make some proposals on the subject.

Admiralty Surgeons.—Mr. Alderman M'Arthur asked the First Lord of the Admiralty whether he was prepared to take any steps to remedy the reduced state of the Medical Officers' List, which is being daily diminished by resignations.—Mr. Hunt replied that the matter to which the question related was being very carefully considered at the Admiralty.

Vaccine Lymph.—In answer to Mr. Meldon, Sir M. Beach said:—It is true vaccine lymph is supplied gratuitously to registered medical practitioners in Great Britain by the medical officer of the Privy Council. It was supplied gratuitously in the same way to registered medical practitoners in Ireland until August 1871, but the main source of supply had been the Dublin Cow-pock Institution, which received an annual grant of £400 for Ireland alone, and supplemented this fund by the sale of the lymph to persons applying first, and by getting subscriptions from unions and dispensing districts. Since January 1864, when the Compulsory Vaccination Act came into operation, the medical officers of dispensaries, who are the public vaccinators throughout Ireland, have for the most part derived their supplies from other sources; that is to say, they have vaccinated, as far as practicable, from arm to arm, and have stored lymph for future use in Husband's capillary tubes, which are provided for them by the Guardians. The change was made in August 1871. An epidemic of small-pox prevailed to a considerable extent at that time; and, although it increased subsequently, yet it decreased in 1873 to the extent of one-sixth of the cases of the previous year, and it is still decreasing. I will undertake carefully to consider whether it be possible to allow Irish medical practitioners the same facilities for obtaining a gratuitous supply of vaccine lymph as are enjoyed in England.

Tuesday, May 5th.

Apothecaries' Act Amendment Bill.—This Bill was read a second time.

Births and Deaths Registration Bill.—Dr. Lyon Playfair has given notice that, on the second reading of this Bill, he will move its rejection.

OBITUARY.

FRANCIS WALKER BARNES, M.R.C.S.Eng.

Mr. F. W. Barnes received his medical education in Liverpool and at St. Bartholomew's Hospital, London, and was admitted a member of the Royal College of Surgeons of England in 1845. He practised in Great Crosby, near Liverpool, for upwards of twenty-eight years. He was medical officer of health for the district of Great Crosby, and represented the township at the West Derby Board of Guardians. He died at his residence, The Allands, Great Crosby, on April 15th, aged 55. He leaves a widow and three children.

THOMAS INGLIS, M.D., F.R.C.S.Edin.

Dr. Thomas Inglis was the eldest son of Dr. Andrew Inglis. He was born at Edinburgh on March 31st, 1796, and died at Eastbourne on March 21st, 1874. He was educated at the High School and University of Edinburgh. After taking his degree, he went to India (Bengal Presidency) in 1818, and, the first twelve months after his arrival, served with an European regiment. Afterwards, he was with the native army. He served during the first Burmese War with Colonel Morrison's Brigade at Arrican. He retired on January 1st, 1839. He was married, and leaves a widow and three sons, all under age.

MEDICAL NEWS.

Royal College of Physicians of London.—The following gentlemen were admitted members on April 30th, 1874.

Jagielski, Apollinaris Victor, M.D. Berlin, 8, Weymouth Street
Smith, Gilbert, M.D. Dublin, 68, Harley Street

Admitted as Fellow.

Dickson, Sir Joseph Ritchie Lyon, M.D. Malta, Teheran, Persia

Admitted as Licentiates.

Bark, Ernest Onesimus, Leicester
Beach, Fletcher, 49, Great Ormond Street
Beadles, Hubert, New Southgate
Bower, Reginald, Knowle, Warwickshire
Brash, Edward Alexander, Buckingham
Brayn, Richard, Market Drayton
Coke, William Harriott, Tottenham
Crowther, Arthur Bingham, Hobart Town
Comins, Dennis Wood Deane, Witheridge
Douglas, Claude, 3, Halfmoon Street
Duran, Carlos, Costa Rica
Fry, John Farrant, Guy's Hospital
Houghton, Walter Benoni, 114, Tottenham Court Road
Keer, George Edwardes, Wickham Market
Lambert, William Osborne, M.D., Sunderland
Lupton, Harry, Thame, Oxfordshire
Nunez, Daniel, Costa Rica
Owen, Charles William, 66, Kennington Road
Paley, William Edmund, Guy's Hospital
Redmond, William, Chatham Dockyard
Simmonds, William Allason, Gravesend
Stowers, James Herbert, St. Bartholomew's Hospital
Thompson, Henry, Infirmary, Hull
Wear, Arthur Taylor, Newcastle upon-Tyne
Webber, William Littleton, West London Hospital
Whittle, Edward George, Whitehaven

The following candidate, having passed in Medicine and Midwifery, will receive the College Licence on obtaining a qualification in Surgery recognised by the College.

Smith, Herbert Neale, Richmond Villa, Brighton

Royal College of Surgeons of England.—At the Primary or Anatomical and Physiological Examination, on April 7th, 8th, 9th, 10th, 13th, and 14th, 195 candidates presented themselves, of whom the following passed :

On April 7th and 8th—F. J. Shepherd, M'Gill College, Montreal ; J. A. M'Creevy, New York ; R. H. A. Hunter, Edinburgh ; C. P. G. Townsend, J. Brett, J. Spofforth, and C. J. Devis, Birmingham ; A. F. Parker and J. R. Guy, Bristol ; H. Farbestein, T. Sanctuary, C. P. Gibson, C. Dawson, C. H. Cattle, J. Hollingsworth, and C. H. Higgens, Leeds ; S. Harris, H. Tomkins, and J. Chadwick, Manchester ; H. Gorst, W. H. Wright, J. T. Smith, J. Twinem, J. H. R. W. Lucas, W. Latham, and F. C. Gresham, Liverpool ; R. W. Barnes, F. J. Davies, H. A. Hodson, W. M. Lory, D. G. Lewis, F. F. Perry, J. Ryley, and J. H. Kyan, University College ; F. S. Eve, W. A. Shoolbred, J. A Ormerod, and H. A. Glyn, St. Bartholomew's Hospital ; J. Waterhouse, B. W. Gathergood, and C. J. Symonds, Guy's Hospital ; G. C. Harding, L. E. Kay Shuttleworth, J. J. M. Dunbar, and E. L. Robinson, St. George's Hospital ; E. A. Snell, W. K. Hatch, and A. R. W. Sedgefield, King's College ; R. Atkinson and S. H. Fisher, London Hospital ; A. T. T Wise, St. Mary's Hospital ; W. H. Page and T. Fisher, St. Thomas's Hospital ; D. S. E. Bain, W. H. Packer, and W. J. Brookes, Charing Cross Hospital ; M. V. Stace and J. H. L. Macintire, Middlesex Hospital ; R. D. Hodson, St. Mary's and Guy's Hospitals.

On April 9th, 10th, 13th, and 14th—H. J. M'C. Todd, S. J. Sharkey, G. H. Wilkins, F. H. Peck, W. Tyrrell, A. D. Davidson, J. S. Lush, C. E. Pronger, A. R. Isles, J. A. Hunt, J. F Nicholson. C. H. White, and P. H. E. Fround, St. Thomas's Hospital ; C. W. M. Moullin, L. B. Calcott, W. R. Pearless, J. H. Simpson, F. S Edwards, A. Upton, F. E. Woodward, A. G. Williams, T. J. Verrall, J. W. Roughton, W. Pye, A. Edwards, R. Clapp, H. P. Dunn, H. Sloman, and H. F. Weiss, St. Bartholomew's Hospital ; H. L. Champneys, R. Bevan, W. P. Reynolds, J. Davies, G P. Mallam, G. E. Miles, G. R. Chadwick, C. F. Pickering, J. Mackern, T R. Judson, H. W. Roberts, W. M. Evans, and A. F. Wilson, Guy's Hospital ; E. A. Saunders, A. James, W. A. Stephenson, J. S. Pearse, S. H. Burton, H. L. Crocker, G. H. B. Fisk, A. G. Don, T. C. Mugliston, J. Moore, A. Rees, D. Jones, J. S. Bury, J. B. Blarney, S. Cook, J. W. Hunt, T. M. Pinnell, and A. Aplin, University College ; C. M. Poole, E. D. Farmer, E. V. Perry, J. R. W. Webb, and E. B. Turner, St. George's Hospital ; A. Chawner, J. A. Brown, W. R. Harrhy, S. Stanley, J. J. Mackay, J. Symons, W. S Roberts, G. J. Kellie, A. W. May, A. P. Green, and N. J. C. Tirard, King's College : G. A. Hunt, Aberdeen and Guy's Hospital ; D. V. Rees, H. T. Batchelor, J. Neylen, T. Chant, W. R. Stewart, L. F. Mahony, and W. P. Mears, London Hospital ; W. G. Clements, A. Lucas, and E. Harrison, Middlesex Hospital ; P. B. Conolly, E. M. Rodwell, and J. G. B. Blackman, Charing Cross Hospital ; J. G. Garbutt, H. Mandets, A. S. Brown, and M. H. Smith, St. Mary's Hospital ; T. Duke, Charing Cross and Guy's Hospitals ; R. Clarke and W. J. Quicke, Westminster Hospital.

The following gentlemen, having passed the required examinations for the diploma, were duly admitted members of the College at meetings of the Court of Examiners, on April 20th and 21st.

Bates, William, L.S.A., Birmingham
Bellamy, Charles P . Alfred Place, Bedford Square
Bingham, Samuel, Kirton Lindsey, Lincolnshire
Blake, George F , Birmingham
Brown George. L.S.A., Callington, Cornwall
Casson, Harwood, Hull
Cooke, Edward M., Alverstoke, Hants
Crossman, John, L S A., Bideford, North Devon
Etheridge, George D., Torquay, Devon
French, Alexander M., L S.A., Falmouth Road
Fry, John F., L.R C.P.Lond., Taunton, Somerset
Geraty, Thomas, Nottingham
Granger, F. Marsden, Leeds
Griffiths, John, Llandyssul, Cardiganshire
Hawkins, William, Dorchester
James, Henry, L.R.C.P.Edin., Ridgeway, Southampton
Kyngdon, Frederick H , Croydon, Surrey
Lea, Julian A., L.R.C P.Edin., Toronto, Canada
Lightoller, Harry M., Chorley, Lancashire
Llewellyn, Rees R., L.S.A., Whitechapel Road
Morley Thomas S., Barton-on-Humber
Nash, William G., L S A., Farnham, Surrey.
Newington, Alexander S. L., Ticehurst, Sussex
Nunez, Daniel, L.R.C.P.Lond., Costa Rica
Perkins, John, Notting Hill
Rendall, John, L.S.A., Maiden Newton, Dorsetshire
Ring, John, M.D., St. John's Wood
Rudduck, John B., L.S.A., Epping, Essex
Rugg, Harold, Grove Road, St. John's Wood
Simmonds, William A., L.R.C P.Lond., Overcliff, Gravesend
Symons, John G. R., Saltash, Cornwall
Tipple, Edwin, L.R.C.P.Edin., Erith, Kent
Weatherley, Lionel A., Portishead, Somerset
Williams, Philip Henry, Monmouth, South Wales
Williamson, George E., North Shields

The following were admitted members on April 23rd.

Alden, John Horatio, Ely, Cambridgeshire
Alsop, Thomas O. F., Birmingham
Birch, Philip, Lichfield
Crespin, Edgar R. S., Torrington Square
Collins, Charles E., Ware, Herts
Dalton, Charles Bernard, L.S.A., Whitehaven
De Brent, Mortimer John, Greenwich
Evans, Thomas D. F., Birmingham
Garland, Albert I., L.R.C.P.Edin., Glasgow
Jameson, Hampden G., Clapham
Moir, Gerald C. A., Bayswater
Moorhead, Thomas R. H., M.B., Westbourne Park
Owen, Charles William, Kennington
Roots, William Henry, Kingston-on-Thames
Tyson, William Joseph, Folkestone
Utting, John, Hockering, Norfolk
Williams, Frederick Mann, Newcross

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, April 30th, 1874.

Jones, James Thomas, Tredegar, Monmouth
Perkins, John, Notting Hill
Potts, Edward, Edinburgh
Romano, Frederick William Richard, Albany Road, Camberwell
Schlésinger, Maurice Martin, Chichester Street, Hyde Park
Sincock, John Bain, Manor Hall, Forest Hill

The following gentleman also on the same day passed his primary professional examination.

Ford, Robert Giles, London Hospital

MEDICAL VACANCIES.

The following vacancies are announced :—

BATH INSTITUTE FOR DISEASES OF THE CHEST AND CANCER— Physician.

BIRKENHEAD BOROUGH HOSPITAL—Junior House-Surgeon: £40 per annum, board, and residence. Applications, 18th instant, to the Chairman of the Weekly Board.

BIRMINGHAM GENERAL HOSPITAL—Resident Registrar and Pathologist: £100 per annum, board, and residence.

CANCER HOSPITAL—Surgeon.

CORK UNION—Medical Officer for the Cork No. 7 Dispensary District: £100 per annum.

COVENTRY URBAN SANITARY DISTRICT—Medical Officer of Health: £100 per annum. Applications, 18th instant, to Thomas Browett, Town Clerk.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodgings, etc., and the privilege of taking two apprentices. Applications, 2nd June, to H. Howells, Secretary.

DUNDEE INSTITUTION for the DEAF, DUMB, and BLIND—Surgeon.

DURHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £209 per annum.

GATESHEAD DISPENSARY—Resident Medical Officer: £200 per annum, with furnished apartments. Applications to Joseph Jordan, Honorary Secretary.

GLASGOW ROYAL LUNATIC ASYLUM—Resident Physician-Superintendent: £600 per annum, house partly furnished, coal, etc. Applications, 12th June, to J. Roxburgh Strong, Secretary, 110, West George Street, Glasgow.

GRAY'S HOSPITAL, Elgin—House-Surgeon: £55 per annum, board and lodging. Applications, 20th instant, to David Forsyth, Secretary.

HOSPITAL FOR WOMEN—House-Physician Applications, 16th instant, to the Medical Committee.

KILBURN DISPENSARY—Assistant Resident Medical Officers: £80 per annum, coal and gas. Applications, 12th instant, to the Honorary Secretary, 33, Boundary Road, Finchley Road.

LITTLEMORE PAUPER LUNATIC ASYLUM—Assistant Medical Officer: £100 first year, £110 second year, and £120 third and succeeding years, furnished apartments, and board. Applications, 13th instant, to J. M. Davenport, Esq., County Hall, Oxford.

LONDON HOSPITAL—Surgeon-Dentist. Applications, 11th instant, to W. J. Nixon, House Governor and Secretary.

MARGATE URBAN SANITARY DISTRICT—Medical Officer of Health.

MOHILL UNION, co. Leitrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rynn Dispensary District: £100 per annum, and fees. Applications, 11th instant, to Francis Gearty, Honorary Secretary, Finnaloughta, Dromod.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney Road—House-Surgeon.

OXFORDSHIRE—Public Analyst.

QUEEN'S HOSPITAL, Birmingham—Pathologist. Applications, 16th instant, to W. Young, Secretary.

ROYAL INFIRMARY, Aberdeen—Surgeon.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

ST. THOMAS'S HOSPITAL—Resident Assistant Physician: £100 per annum, furnished rooms, and commons.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

STOCKTON-ON-TEES FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Surgeon: £100 per annum to commence, £30 per annum for rent and taxes, and Midwifery and Vaccination Fees. Applications to S. Gordon, 14, Sydney Street, Stockton-on-Tees.

SURREY COUNTY LUNATIC ASYLUM, Wandsworth Common—Junior Assistant Medical Officer: £170 per annum, furnished apartments, etc. Applications, 23rd instant, to Dr. Biggs, Superintendent.

THINGOE UNION, Suffolk—Medical Officers for Districts Nos. 4 and 5: £50 and £42 per annum, respectively.

THORNTON and CLAYTON URBAN SANITARY DISTRICTS—Medical Officer of Health. Applications, 14th instant, to W. Cockrem, Clerk to the Thornton Urban Sanitary Authority.

UNIVERSITY COLLEGE—Professor of Physiology.

UNIVERSITY COLLEGE HOSPITAL—Resident Medical Officer. Applications, 23rd instant, to John Robson, B.A., Secretary to Council.

UNIVERSITY OF GLASGOW—Professor of Chemistry.

WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £80 per annum, board, lodging, and washing.

WELLINGTON (Salop) UNION—Medical Officer for the Workhouse and Northern No. 2 District: £80 per annum.

WESTERN INFIRMARY, Glasgow—Superintendent: £250 per annum, with board and lodging. Applications, 15th June, to W. H. Hill, Honorary Secretary, 106, Ingram Street, Glasgow.

WESTMINSTER HOSPITAL—Physician.

WESTMINSTER HOSPITAL MEDICAL COLLEGE—Lecturer on Midwifery and the Diseases of Women

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, furnished apartments, etc. Applications, 1st June, to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

SAUNDBY, Robert, L.R.C.P E., appointed Resident Physician in the Edinburgh Royal Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

ROWLAND—JONES.—On May 6th, at St. Augustine's Church, Queen's Gate, Hugh Mortimer Rowland, M.D., M.R.C.S., of Malvern Wells, to Maria Antoinette, daughter of Captain W. Foxcroft Jones, Adjutant Oxford University Volunteers.

DEATHS.

FOWLER, William, M.R.C.S., at Clifton Cottage, Weymouth, on April 14th.

TABUTEAU, Augustus Elliott, J.P., M.D., F.R.C.S.I., at Portarlington, aged 77, on April 20th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M. — Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Barwell "On Septic Disease in and out of Hospitals"; Mr. Higgens, "On Two Cases of Hæmorrhagis Diathesis".

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

ISLINGTON.—We should be disposed to answer both questions in the negative.

RUFUS (Hexham).—Yes.

SHROPSHIRE.—The doctor of No. 2 District was wrong in going to the workhouse to examine the patient. After a patient is once admitted, the medical officer of the workhouse is solely responsible for him. Consequently, the medical officer of No. 1 District should have certified. A medical officer has no right to attend a pauper out of his district, nor when admitted into a workhouse under the charge of another medical officer.

MR. E. B. MORGAN.—The groups were photographed by Messrs. Fradelle and Marshall of Regent Street.

ALPHA.—1. Hart's *Manual of Public Health.* 2. Dr. Tuke's *Psychological Medicine..* 3. Fowne's *Chemistry.*

CREMATION.

DR. LITHGOW writes, in answer to Mr. Liddell on the subject of cremation, that "it is neither a modern institution, nor yet peculiarly associated with barbarous times and customs. The Greeks and Romans burned the bodies of those who died, preserving their ashes in urns, and yet no nations were more particular in bestowing every honour upon the departed, or cherished their dead with more respect. Even now in the cities of the Punjaub—in fact, throughout India—cremation is practised, and, for the most part, under the superintendence of Englishmen, who speak of it in the highest terms". . . . He goes on to say, that "it has been incontestably proved that overcrowding amongst the living is one of the greatest factors of disease and death, especially in large towns. What, then, must be the influence of numberless dead bodies rankly decomposing in almost every town and hamlet throughout the country, amid all the hygrometric changes of our veritable climate? . . . Decomposition in the grave is such a tardy process that the surrounding atmosphere becomes tainted, impure, and unhealthy; and the poisonous gases which are always generated during the decomposition of animal matter are exhaled so rapidly that their absorption into the earth cannot be effected; and who can doubt that this poisoned atmosphere is a powerful agent in developing the causes which lead to diarrhœa, cholera, and zymotic diseases generally? Cremation seeks to do away with all this danger, by burning the bodies of the dead instead of interring them. There may be something repulsive in the idea at first; but, however opposed to popular sentiment, there is nothing antagonistic to Holy Writ in the process, nothing dishonourable to the living, nothing degrading to the dead". In conclusion, Dr. Lithgow contends that "to have the ashes of one's dead relations carefully preserved in suitable urns is less revolting than to leave them a prey for worms in the earth, a source of disease to the living"; and that "cremation is emphatically superior to the present system of burial, æsthetically and hygienically".

Correspondents are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

Hydrophobia.

Sir,—In the Manchester report which appeared in the Journal of April 25th, it is stated that there have been two cases of hydrophobia in the Manchester Royal Infirmary in the last few weeks. Will you kindly correct the statement, as the first case was one only of acute mania, with delusion?

Manchester, April 27th, 1874. I am, etc., Chirurgien.

Hydrophobia, and its Cure.

Mr. Prince, of Tunbridge Wells, writes to the *Sussex Journal* that, in order to prevent the possibility of his letter, inserted in a contemporary of the 14th April, being misconstrued, his object in sending to be informed of cases of rabies and hydrophobia is, that he may gratuitously superintend a few trials of the reputed remedy, so as to be perfectly satisfied that it is in all respects properly made and duly administered. Should the results prove successful, the recipe, and all needful information respecting it, will be published, as a matter of course, in the medical journals.

Hydrophobia.

Sir,—As this fatal disease seems alarmingly prevalent, allow me to suggest, as remedies, either carbolic acid or sulphurous acid internally. Neither of these, so far as I am aware, has yet been tried, although they would seem theoretically indicated. In the Journal for December 7th, 18th, some cases are said to have been cured by small doses of arsenic, or of arseniate of soda, every four hours; and in that for October 19th of the same year, a receipt is given of liverwort (*lichen cinereus terrestris*), garlic, and rue. I am, etc.,

Herbert L. Snow, M.D.Lond.

Norfolk Terrace, Bayswater, May 2nd, 1874.

P.S. Sulphurous acid in drachm-doses, with a little water and syrup, forms a very pleasant and effective medicine, which I am accustomed to administer in all the exanthemata.

The Junior Members of London Hospital Staffs.

Sir,—The improvement of our profession is a subject which the members of the British Medical Association are always interested in and anxious to advance. For a long time I have been expecting that some remarks would have been made in the columns of our Journal on the present condition of one particular class of the medical profession, who, I think, are being exposed to hardships and injustice of such a character as seriously to affect the welfare of every branch of it. The class to which I refer, and in whose behalf I venture to address you, are the younger members of the medical and surgical staffs of our London hospitals. It is probably the feeling of pain at having lost friends whom I have valued for professional and personal attainments, who have fallen victims to the strain of excessive daily duties, that induces me to press this subject on your attention. There is another reason—namely, that I see year by year the most promising of our students withdrawing from careers of eminence and usefulness under pressure of circumstances, which prevent them from commencing a life the best part of which must be spent in painful uncertainty of future success and the anxiety of present necessity.

I do not believe that the intentions of the charitable who have founded our hospitals, or of those who contribute annually to their support, are properly carried out where their charity is bestowed at the expense of those who can ill afford to give the time that is required of them and undergo such fatigues as their labours demand. Those who form the principal part of our hospital staffs have been so far favoured by circumstances that they can afford to outbid men of better parts, and the control of a certain amount of capital places them in positions to which their talents by no means always entitle them. If I express myself strongly, it is that the case requires a strong statement, and because I know well that it is not likely to find expression from those who are chiefly the victims of the system. Allow me to leave the subject to the consideration of our members without entering into further details at present, in order that we may perceive to what extent it is likely to find favour with them. I am, etc.,

April 1874. Supplex.

Mr. Mulvany.—You can get the books you mention by ordering them through Messrs. Williams and Norgate, Henrietta Street, Covent Garden.

The Finances of the British Medical Association.

Sir,—The independent motives which prompted the course I have pursued for some years, as a member of the Council of the Association and as a speaker at its annual meetings, in criticising its administration, now induce me to express a sense of the great pleasure with which I have examined the audited statement and balance-sheet in the current number of the Journal.

Without expressing any opinion on the manner in which the large income is raised and expended, it is very satisfactory to see the accounts rendered so promptly and fully, with a balance on the right side, and a proposal to make substantial grants for scientific research. These results cannot have been attained without faithful and very hard work; and all the officers of our executive who have been instrumental in planning and carrying it out are entitled to the best thanks of the well-wishers of the Association, and to the very hearty congratulations of their old critics. I am, etc., Sampson Gamgee.

Birmingham, May 2nd, 1874.

The Age of a Superintendent.

Sir,—The Committee of the Glasgow Royal Lunatic Asylum having advertised for a Physician Superintendent of "professional ability and experience", expressly state that the gentleman appointed must not be more than forty-five years of age. We confess we are unable to see the reason of this. It may be true, in the words of the old farce, that—

"At sixty-three,
Between you and me,
A man grows worse for wear."

Yet it seems too much of a farce to fix the limits of a physician's usefulness at forty-five. When the public read advertisements of this kind, they are apt to conclude either that the Board wish to appoint the friend or relation of one of their number who happens to be below that age, or else that the Board consider that when a gentleman is turned forty-five, he is not so easily snubbed as a younger man.

May 1874. I am, etc., A Resident Medical Officer.

Cremation *versus* Inhumation.

Sir,—I quite agree with your correspondent Mr. J. Liddell in his statement, that "respect for the dead is one of the most beautiful traits of our" (English) "character"; but I am far from agreeing with him when he says "there is something very horrible and revolting in the idea of burning to ashes the dead bodies of our nearest and dearest friends and relations". There is, to my mind, something infinitely more revolting in the nameless horrors of the grave, to attempt to depict which, Sir H. Thompson justly remarks, would stain his pages too deeply for publication. On the score of sentiment, therefore, independently of the still more important sanitary consideration, I should prefer cremation to inhumation.

Rotherham, April 1874. I am, etc., J. B. Lyth.

Mr. Golding Bird.—We must ask Mr. Golding Bird to condense his subsequent report to a much greater extent.

Hay-Fever.

Sir,—Seeing an account in your Journal of Hay-Fever, I hope I may be forgiven in troubling you with my personal experience of that disease.

I have for many years suffered from hay-fever; and, on one occasion, I had a violent attack when travelling, and having nothing I could take, it occurred to me to try sniffing up some lavender water, which I had in my portmanteau, which immediately arrested the sneezing and affection of the eyes; and now, for many years, whenever I feel the attack is coming on, I apply the same remedy, with the like beneficial effect, which seems to confirm the view taken by the writer in your periodical. I am, etc.,

May 1874. Medico-Clericus, F.R.C.P.

Corbyn's Improved Double-Valve Inhaler.

Sir,—In an article on Corbyn's Improved Double-Valve Inhaler, contained in the British Medical Journal for April 25th, 1874, it is stated that the appliance under notice possesses four special features that render it superior to the inhalers at present in use. The value of the improvements we do not for a moment deny; we only demur to the statements that they are novelties.

Three years ago, we introduced the thermometer, water level, box lined with green baize; and, two years ago, added the nasal-piece. So, if these points merit any editorial commendation, we feel justified in claiming it for the "Eclectic Inhaler", in connection with which they were first introduced.

In the "Eclectic Inhaler", the arrangement is such that the air passes readily through a number of openings, and becomes thoroughly saturated with the active medicinal agent. In Corbyn's inhaler, all the air has to pass in at the side of the thermometer, where of necessity it causes fluctuation in the level of the mercury, and increases the labour of inspiration.

The only real novelty in Corbyn's improved inhaler is, that it can be used in a lined case; but we doubt whether under this condition the vapour can be kept at the uniform temperature which is secured by the use of a spirit lamp, such as that in our "Eclectic Inhaler". We are, etc., Bullock and Reynolds.

3, Hanover Street, Hanover Square, April 27th, 1874.

Catching Cold.

Dr. Brodie will find the information he desires by consulting the following works. Rosenthal, *Zur Kenntniss der Wärmeregulirung bei den Warm blütigen Thieren.* Erlangen, 1873. Liebermeister, *Zur Lehre von der Wärmeregulirung*; Virchow's *Archiv*, vol. lii. Roehrig und Zuntz, *Zur Theorie der Wärmeregulation und der Balneotherapie*; Pflüger's *Archiv*, vol. iv. Winternitz, *Beiträge zur Lehre von der Wärmeregulirung*; Virchow's *Archiv*, 1872. Senator, *Untersuchungen über die Wärmebildung und den Stoffwechsel.* Reichart und Du Bois Reymond's *Archiv*, 1872.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, May 2nd; The Ayr Advertiser, April 30th; The West County Lantern, April 25th; The Scotsman, April 30th; The Brighton Examiner, April 28th; The Leicester Advertiser, May 2nd; The Blackburn Standard, May 6th; The Hull Evening News, May 2nd; The Sunderland Times, May 2nd; The Auckland Chronicle, April 24th; The Blyth and Bedlington Star, May 2nd; The Northern Daily Express, April 28th; The Sussex Advertiser, April 29th; The Newcastle Daily Journal, April 29th; The Bridgwater Mercury, April 29th; The Richmond and Twickenham Times, May 2nd; The Brighton Daily News, May 4th; The Sussex Advertiser; The Bradford Observer: The Naval and Military Gazette; The Dorset County Chronicle; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Payne, London; Dr. Rumsey, Cheltenham; Dr. Britton, Halifax; Dr. George Johnson, London; Medico-Clericus; M.D.; Mr. Hall, Lymington; Mr. Spencer Watson, London; Dr. Jukes Styrap, Shrewsbury; Dr. J. R. Wardell, Tunbridge Wells; Mr. W. W. Reeves, London; Mr. T. Holmes, London; Dr. J. Crichton Browne, Wakefield; Dr. Edis, London; Dr. Bradbury, Cambridge; Dr. Joseph Rogers, London; Mr. Eassie, London; Dr. Oxley, Liverpool; Dr. W. Fairlie Clarke, London; Dr. Domenichetti, Louth; Dr. Alford, Taunton: Our Paris Correspondent; Dr. Farquharson, London; Dr. G. H. Philipson, Newcastle-upon-Tyne: Dr. Williams, Hayward's Heath; Dr. Roe, Bridgnorth; Mr. George Bacon, Lewes; Mr. Heckstall Smith, St. Mary Cray; Dr. H. L. Snow, London; Dr. R. L. Lithon, Henfield; Mr. Sampson Gamgee, Birmingham; The Secretary of the Manchester Medical Society; Dr. J. Wickham Legg, London; Our Dublin Correspondent; Dr. Laidlaw Purves, London; Dr. E. Bewley, Clara; Dr. Henry Barnes, Carlisle; Dr. Lanchester, Croydon; Mr. Eyton Jones, Wrexham; Our Glasgow Correspondent; M.D.; The Secretary of the Pharmaceutical Society; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Bartleet, Birmingham; Dr. Duncan Bulkley, New York; Mr. George Street, London; The Director-General of the Medical Department of the Navy; Dr. Eastwood, Darlington; Dr. Ellis, Crowle; The Secretary of the Epidemiological Society; Dr. E. Scott Jones, Weston super-Mare; Mr. John Lascelles, London; Mr. H. Taylor, Guildford; Dr. J. Cross, London; Dr. Thomas Anderson, Dumfries; Mr. C. M. Bedford, Sleaford; Dr. Shewen, Gravesend; Dr. Squire, London; Mr. W. Hinds, Birmingham; Dr. Hill, Birmingham; Professor Bentley, London; Mr. T. J. Dyke, Methyr Tydfil; Dr. W. C. Hills, Thorpe; A. P. Y.; J. H. P.; Dr. Smart, Haslar; etc.

INTRODUCTORY LECTURE

TO THE COURSE ON

MATERIA MEDICA AND THERAPEUTICS.

Delivered at Guy's Hospital.

BY W. MOXON, M.D., F.R.C.P.,
Physician to the Hospital.

GENTLEMEN,—A suitable introduction seems so important, that it is almost dangerous to give one's mind to it, for fear the thing to be introduced should prove not equal to the preceding flourish. Knowing this, I have looked around me at the beginnings of things, to try to get a general notion of the process of introduction; to follow, if possible, its proper rules on this occasion. But I soon found that, if I gave myself to this inquiry, I might never get to the materia medica at all: things begin so vastly differently, according to their nature and circumstances. Still, before giving up, I came to apprehend, in a vague sort of way, a track of broad distinction running between the two great groups of things—the productions of Art and the productions of Nature. One could not help observing that artistic products come in with much prelude; so that, for instance, in an oratorio or opera, the composer leads into his overture the choicest staves of his best movements, to sharpen expectation of its various excellences, and he enlivens these pet staves in his most enticing manner. But it struck me that it is quite otherwise in the works of Nature: her developments appear so unobtrusively, that the promise is never greater than the performance; for instance, when she is introducing her materia medica, how dry are the bracts in which she enwraps the rhubarb that is about to be. Such a dry beginning I would especially desire to make, knowing as I do that many students of taste would prefer swallowing materia medica to hearing about it, and chilled as I thus am by my sense of the unpopularity of my subject.

The subject of materia medica comprises pharmacognosy, pharmacy, and pharmacodynamics, or therapeutics. I well remember the sigh with which I learnt that bewildering truth, and the rebellion I felt rise within when I found that "pharmacognosy" (derived from φάρμακον, a medicine, and γινώσκω, I know) treats of the origin, properties, varieties, quality, and purity of unprepared medicines or simples. This, I said, must be very important, if you want to trade in drugs—to be a drysalter or colonial broker, for instance. Then, pharmacy (from φάρμακον, a medicine) treats of the collection, preparation, and preservation of medicines. This, surely, it seemed to me, must be very much to the point between wholesale and retail chemists, who ought not to cheat each other and the public; and if they cannot be trusted, then the Home Office should look to their behaviour: put a tax on and keep analysts, as they do with tobacco and beer.

Then, pharmacodynamics or therapeutics (from φάρμακον, a medicine, and δύναμις, power; and from θεραπεύω, I cure) treats of the effects, uses, and administration of medicines in the cure of diseases. Reading this, I was soothed; and it seemed to me that this is so valuable a branch of knowledge, that I could even wade through the pharmacognosy and the pharmacy to get at the pharmacodynamics or therapeutics. For at that time it was my first year: I was like other first-year's men, rather fresh from the nursery, and my notions were much what I had been brought up in at home. How should it be otherwise with a first-year's man? His medical experience is of the measles and cutting his teeth; and he remembers, doubtless, that then mamma or nurse would say, "Here comes Mr. Johnson, dear, to make you well"; so he thinks doctors send things to make you well, and hence the powers of remedies appear to his young mind as the chief object of a doctor's study: indeed, I remember a glow of satisfaction at the size of my Pereira—three big volumes. This appeared to me to foreshow the greatness of the armoury I must learn to wield. True, I saw that the pathology was a big one, too, and contained a terrrible list of obscure and insidious diseases; but my ardour fancied it might be that diseases had grown so numerous and so sly in their onset by reason of the many and great remedies that had been brought by the doctors to bear on them, leaving them no chance but to come like thieves. That view has undergone large modification in the years, full of experience, which have separated me from the innocence of first year's manhood, and made it competent for me to address you as one of the aged and much knowing. But I have so much love for that old childish notion, that I will not slight it; for one thing I believe sincerely, that the phases of faith in remedies should be developmentally successive, without abrupt breaks, that you may continuously grow into that masterly doctor I wish you to become. If there be any sense in which the child is father of the man, it is surely to infer that the man should hold in filial respect all that was good in his earlier stages. When the elder regard the value of their former lives, they are safe guides; but when they conceive that their own lives were wasted by comparison with some new thing that they scarcely more than half appreciated, then they are the most insecure of guides, for with the inflexibility of age they unite the unappeased desire for something new, which makes youth unstable. Let us mark this truth, for the old fault of medicine is, that its age is not honoured within itself; hence it cannot form heart-wood, and rots periodically, like an annual plant. Physicians and surgeons, themselves somewhat in years, and too conscious that they often failed, hear of the wonders of the recent school of scopes, and graphs, and ometers, and, not sufficiently honouring their own sound clinical knowledge, they lend the weight of their position and character to force laws upon students, compelling them to pass hours and days in poring over microscopic details which are, to all intents and purposes, just as useful as the science of butterflies or of quantics for practically benefiting the sick. Meantime those students learn next to nothing of clinical medicine, and so, for want of valuing its older acquirements, medicine behaves like the little ones, who let go one handful to grasp another, as if in second childhood.

To maintain a reverential and respectful bearing towards what is good in preceding stages is essential to sound progress: I say to maintain, not always to use, reverence, for we have to be practical actors in a world which subsists by changes, as well as correct in those feelings which give character to our own part in those changes. Not only must individual persons be thus reverential, but likewise trades, crafts, and professions must deal in a similar spirit with the earlier history of their own development. In thinking, as therapeutists, of the history of therapeutics, we must (1) deal fairly with our predecessors, and (2) not think too much of ourselves. Some day, you know, we shall be historic ourselves; that is, the louder ones amongst us—a chastening thought, when you reflect what sort make the most noise. It would puzzle Max Müller to say into what form of solar myth Holloway's pills and lunatic asylum will enter. In those far future times our very best may seem strange. Cannot you fancy the lecturer in 2874, of the threatening era of Panteutonic Buddhism, beginning somehow thus: "The earliest age is known as the Scopes-age, from the name of the many kinds of instruments worn by physicians. Thus they had on their eyes things called microscope, the nature of which is now unknown, as the records of the period were printed on bad paper, and were worse bound; but they could make the smallest trifles come to sight. To spy through these at the excretions was supposed by the ignorant patients to have a magical healing virtue. These instruments were said to magnify, a word meaning to make great; but it was afterwards found out that the things put under were really made no greater than they were before. How this strange error prevailed we cannot now understand, but it has been suggested that the constant wearing of microscopes prevented the physicians from being able to see the real relative size and importance of things. At the same early period, doctors were not considered full dressed unless they wore on their ears pipes of wood of ornamental design, called stethoscope; and it is said they would crowd in dozens to hear an unusual squeak or whiz, which had in itself no real relation to the patients' suffering and danger; but the poor patients thought all the while that they received great benefit from this. Besides these, there were many other scopes; but for mention of them I must refer you to the historical lectures, in which you will find it shown clearly that these delusions were but part of the universal trust in machinery which led to the downfal and decay of the primitive and almost unknown form of civilisation, to which I must apologise for so long directing your attention." Of course, all this will do scant justice to Laennec or Dr. Beale; but the abuses of our time will appear in forms we little expect when our successors have the sun with them and we are in the shade, viewed by the best antiquarian perspicacity of the time; and when they cannot clearly see us, withal the sun is there to help them, they will say we are in the dark ages, and the forms will be a few outlines, and the colours purple. But let us turn to past history.

Therapeutics is the oldest of the branches of medicine, and it is perhaps also the least respected; at any rate, I find that Garrod says it is the most backward department of a possibly scientific pursuit, which medicine is always becoming. But it, nevertheless, is clearly traceable in history that pathology and the other properly scientific parts of medicine arose as the servants of therapeutics. There were two stages of pathological inquiry. In the first, the immediate aim of the study of disease was the cure of the pathological state; the pathology was commonly invented to suit the therapeutics. In the second stage, which is of very recent origin, the object is so different that the science deserves to be called by a new name; for it is all the way off that other old pathology that astronomy is off astrology, so that you might call it pathonomy if you liked. This is the study of diseases directed towards the knowledge of the pathonomical state as a pure matter of knowledge. It is a noble study. It is good for society rather than for individuals. It lights up the darkness where -opathies fungate. It is communicable, and will endure the full light of inquiry; it grows in society—in the Pathological Society, for instance. I say, it is the noblest branch of medical science. It is noble enough not to fear the truth. And this is the truth, that it is not of much good for healing the sick; I mean, for the individual doctor healing the individual patient, for the direct service of the one in serving the other. Suppose old Hippocrates woke up and went to the Pathological Society. I can think what he might say with some force. He might say, "All this is very interesting; it goes beyond my time in its way. I used to think a little in the same direction. But in all this you are but showing the truth of what then kept me from carrying the matter farther—that it does not help you with synocha and pneumonia. I advise you to watch what management and medicine are good, as we did in the old Asclepias by the sea".

However ill it may sound, you must bear to be told not to be too scientific. And this is why. Because you will have to deal more with the unknown than with the known. And science is extremely bad at dealing with the unknown. Science teaches you to walk firmly on solid grounds, with contemplative front and eye sublime, etc. But therapeutics require you to swim or fly, as it were.

It is because you must deal with the unknown that you must not be over-scientific. You must possess a quick invention, like an artist's invention, which shall follow inspirations where science declares the footing uncertain. There is no doubt that Trousseau is quite right when he urges that the ultimate aim of the doctor is to become an artist. Let me quote from his lecture on "What is Clinical Medicine?" He says: "Every science touches art at some points. The worst man of science is he who is never an artist, and the worst artist is he who is never a man of science. In early times, medicine was an art which took its place at the side of poetry and painting. To-day, they make a science of it, placing it beside mathematics, astronomy, and physics." Again: "In medicine, do not confound art and science. All cannot become artists, but persons of the most ordinary intelligence can make acquisitions in science." And again: "But we will never exact more than scientific knowledge, for the rest is a natural gift. Take care not to fancy that you are physicians as soon as you have mastered scientific facts. They only afford to your understandings an opportunity of bringing forth fruit, and of elevating you to the high position of a man of art."

I think nothing can be more vital to our interests than the just apprehension of the great truth thus stated by the great artist Trousseau, from his point of view. I would only diverge from his lead when he goes on to indicate that our aim is to become artists, and that because art is lofty. I have nothing to say against the motto "Excelsior" in its proper poetic sphere; but we must come out of poetry in real life, and we must be artists, as he calls it, not because art is high, but simply to try to cure sick people. Understand, please, that I am not going to doubt that our art is high. How not? Are we not artists in jalap and calomel, skilled, too, to form designs upon our patients in Epsom salts, senna, and rhubarb—a high art, of course!—and ever advancing, freshened by the brilliant productions of that august body, the General Council of Medical Education and Registration for the United Kingdom. If you doubt it, look at the appendix to their Pharmacopœia, and see there the suppositoria acidi carbolici cum sapone, or that last triumph of the Council, aqua chloroformi, which, as I shall probably not allude to it again, I will discharge my duty by describing at once. "Take of chloroform ʒi, distilled water twenty-five fluid ounces. Put them into a two pint stoppered bottle, and shake them together." Who can doubt the art here? and, this being art, who can doubt that Trousseau is right in speaking of elevating you to the high position of a man of art? But, perhaps, if we were spared a little such art as this, we should more directly feel our way towards that which, I cannot help thinking Trousseau fails somewhat to rightly touch when he calls it art: I mean, feel our way towards that mastery of a constructive plan in our management of the sick and his attendants and circumstances, which is needed to make us accomplished and efficient medical men. For this, you want sympathy with the sufferer, energy of character, and fertility of resource. You may call it art if you like. All great artists have sympathy, energy, and fertility; but you see a deal of art without these, and for instances I need not again go to the Appendix of the British Pharmacopœia. I say, a constructive plan in the management of the sick, a clear perception of the proper aim, or at least of its direction, and power to bring all the attendant conditions of the patient, as well as his frame, bodily and mental, into movement in the desired direction; doing all that is humanly possible, and meaning earnestly to do a great deal more—for this end, the pathology of the Pathological Society and of the *post mortem* room will afford you very little direct help. I lectured on pathology not long ago, and then it was my duty and pleasure to recommend pathology in my introductory remarks. Among the recommendations I gave it, this was the greatest, if not the sum, of all. Pathology creates the doctor as distinct from the nurse. Now I shall tell you that therapeutics should make the doctor a greater nurse than the nurses; so that all that is done by the nurses the doctor does by means of them. No doubt, without nursing talent, you may be a very good pathologist, and no doubt without pathology you may be a very good nurse. I do not bate a jot of the recommendation I gave pathology. I hope my able successor Dr. Fagge will urge his recommendation still more forcibly. Pathology gives you a way of knowing what is happening and going to happen in your patient; and the public expect that of you. I shall take leave to pity you much, if you do not get a good knowledge of such pathology, otherwise you will be ignorant and unstable; and, if you have any conscience, you will be full of fears that others better informed than yourself would conduct the patient's case better than you are doing. So you will take your unmerited fees in a properly nervous perspiration, suspecting all the while that the patient's aunt is strongly recommending Mr. Johnson. It is for your own good that you learn pathology, so that you may have sound knowledge to rely upon when rivalry outside and weakness within shall shake your nerves. Here is the difference, then: pathology serves to give confidence to yourself; therapeutics serves to cure your patients, and you will find that is what your patients want. They do not care about the interesting *bruit de pot felé* or *de diable.* After a course of pathology and auscultation, so long and close that you have lost your memory of everything else, it gives you quite a turn to find out how little your patient cares about it all. It seems very hard. It took you so long to learn. Perhaps it was almost all you did learn at the hospital, yet the patient thinks very little of it. You have made a great diagnosis, and, with a flush of interest almost proud, you tell him he has got a tuberculo-pleuropneumothorax. Instead of being satisfied like you, he goes on looking big eyes at you, as if he had received nothing at all. Perhaps you explain his case to him, and are then put quite out of countenance at his pathological apathy, and are beginning to think him an ungrateful creature. But you must remember the pair of you are not on the same footing in the affair. You wanted to know what is the matter to get a sound scientific position about it, and you naturally expect him to go with you into the little affair with all that pleasant interest in his diseased changes which science has taught you to take. He, on the other hand, naturally expects you to join at once and warmly in that want of relief which is his one passionate desire. You see, in short, that the trouble is outside of you and inside of him, and that makes a difference which, after a course of scientific pathology, it needs always quite an effort to see; but, if you do not see it, it will likely be sent into you in two or three rough lessons.

The patient is looking for your therapeutics. He wants your medical art, and you will be judged by him according to your works. You have now to think of his occupation, his rest, food, drink, and sleep; his comfort, his ease from pain. Now for the artist who can, with a few bold touches, throw the nursing into fit arrangement, and touch the lights up with a well devised mixture. Your science gives you a little dry dark stuff to deepen the shadows: do not put in too much. What you want is energy in cheerful device, and this is helped by a nature bent on doing all, even the very least that can be done for the patient. And it grows into an experience which the public deeply appreciate and want; and the article they want cannot be made any other way; too much science goes rather against it; it spoils your liver, and makes you think of yourself instead of your patient. The first quality of the young doctor is the tendency to nurse. Over the clinical room should be inscribed, "Nobody not born a nurse should come in here". For success in the world, I see that a good nurse with little science is better than a great university man who is all nowhere with those little points of posture and diet which make a sick person suffer less. The world chooses the kind-hearted nursing man. Of course, he must be efficient in point of knowledge. What we have to aim to secure is a proper proportion of knowledge, and activity, and sympathy; that is, of matter, force, and agreeable form in the construction of character.

Now, if by therapeutics you mean the composing of potions and pills, why I think that is rather a poor, mean sort of thing. No doubt, the amount of good you do by a potion or pill is often very questionable; so much so, that the science of potions and pills is not a very attractive science. But we must learn to regard the drug-medicine as no more than one branch of therapeutics; sometimes the fruitful, the necessary branch; often very small in its relative importance in the proper system of managing the patient. Pereira defines therapeutics as "that branch of medicine which has for its object the treatment of diseases". He says: "In the most extended sense of the word, it embraces all the known means of cure", and he adopts that sense. Mind, I am not saying anything against potions and pills; but I should not be doing my duty here as I wish to do it if I began to describe drugs to you without first clearly pointing out that the giving of physic does not constitute therapeutics. You will find that the drugs a good doctor gives are often only, as it were, signs and symbols in the plan he is carrying out for the patient's benefit—symbols vitally important in the practical world. Without the doses three times a day, the service would not go on. They unite the attention and work of doctor, patient, nurse, and friends in a periodic series of efforts, something not unlike those little yells a group of sailors make in time when they are hauling hard on a cable, without which it appears the cable would never come along, though there is no apparent force in the noises they make. Only here the patient has the dosing to himself; but then it is for his benefit; that potion every three or four hours is like a set of stepping-stones for his faith in the weary time. I am now speaking of the lowest degree of usefulness which potions possess; but they always can further play mighty sparkling little tricks with the heart, or brain, or stomach, so as to allow the doctor to share with nurse and patient a sense of the good that is being done by them all in their periodical concert. To obtain a correct view of the service rendered by drugs in the general effort that surrounds a sick person, is an essential step towards becoming a good useful medical man. They are quite indispensable. A doctor without physic is like a priest without a creed, or a poet without rhyme. It is only the other day that the *Times* said: "If there be anything which nature abhors, it is a doctor without medicine or advice." I say, the mixture and pill are often symbolic in reality, so that there is danger of your settling your faith upon such symbols to the neglect of essential means of aid. When asked to see some person who is drinking a great deal too much wine and brandy, or who eats too much, or spends too much time in study, or has engaged in more speculation than is good for his pocket and brains, what a figure you cut if all you prescribe is some drug three times a day! The true art in such a case consists in arranging the plan, including the medicine, so as to make the drinker drink less, the glutton eat less, the overworker work less. The profession of medicine will give you a great power in doing this; and, although no one can tell how much the drugs may do in their mysterious line, anyone can see the good effect of good advice with the aid of drugs. It is an ultimate fact in human nature that, if you do not give drugs, you will not be trusted to give the other advice. Do not make any mistake about this. If you try to get on without giving physic, you will be like those misguided thinkers on religious matters who hope to spread religion without a creed. It is very sublime, and suits your inside nature so well, that you try it on your friends. But it does not suit them. The reason need not escape you, if you remember that, inside, where the ideas grow, you are yourself; but outside, where you try to implant them, you are another, and not yourself; and that makes, literally, no end of a difference. You will be a wise man when you find out that you never are the same where you are another as where you are yourself. That is to see ourselves as others see us.

You may think there is nothing of modern discovery in all this; and, indeed, the most ancient doctors on record had a very clear notion of the necessity of considering circumspectly and in a comprehensive way the causes and the management of their patients' disorders. So that they are worth more of our attention than they can receive from us in this busy time. This time, that is too busy to learn Greek, and proud of its flourishing present, seems ready to forget that whatever is good in the past is a trust we hold for the future. It is not only from the ancient physicians themselves that we know they were sensible doctors; indeed, physicians have always had an unfortunate way of leaving the most useful part of their advice out of their writings, and filling these with technicalities and trash more or less obscure. The ancient doctors wrote for people who understood all about the everyday affairs of the period. Unfortunately, they did not undertake to act the part of ancients at all; they thought they were working for a bright future, not a dusky remote past, in which the habits of life and common conversation of the people they lived amongst would be forgotten and become legendary, so that anything could be said and believed about them, and they would hardly get credit for knowing the obvious. Hence you find in the ancient medical writers too much about boluses and potions, perhaps, and too little of that quiet common sense advice they gave their real patients, which must have been good advice very long ago. The doctors who treated such men as Xenophon and Plato could not have been fools as a class. Of course, then, as now, there would be a great many fools among them. But the physician who felt the pulse of Pericles or Socrates could not but be a good man. You need not read Hippocrates's writings to know that he was a man of sound clear sense, for he was the principal physician of an age when the human intellect flourished as, perhaps, it has never flourished since. But his writings abundantly prove that he was a truly great physician, worthy of the noble age he lived in; entirely free from superstition; hating quackery; liberal in his teaching; so that we find him saying, "Try to do good, or at least no harm"; telling his pupils that life is short, and art long, and experience fallacious; directing their faculties to practical usefulness as skilfully as his contemporary Plato did to subtle and searching examination of the principles of personal and social goodness. It seems marvellous that, when he only wanted to infuse his honest simplicity into others, those in after generations should have taken him by force and made him an authority, and tortured his words into nonsense, having no heart for the spirit of them. It is not, however, only in their writings that we can form a knowledge of the physicians of that age; the lay writers of the time show us how much like doctoring London society was doctoring Athenian society. Let me read you such a piece as I will extract from Professor Jowett's charming translation of Plato in the *Republic*. Socrates is speaking thus:

"You would compare them, I said, to those invalids who, having no self-restraint, will not leave off their habits of intemperance.

"Exactly.

"Yes, I said, and how charming those people are! They are always doctoring, and increasing, and complicating their disorders, fancying they will be cured by some nostrum which somebody advises them to try; never getting better, but rather growing worse.

"That is often the case, he said, with invalids such as you describe.

"Yes, I replied; they have a charming way of going on, and the charming thing is, that they deem him their worst enemy who tells them the truth, which is simply that, unless they give up eating and drinking, and lusting and sleeping, neither drug, nor cautery, nor spell, nor amulet, nor anything, will be of any avail.

"Charming! he replied. I see nothing charming in going into a passion with a man who tells you what is good.

"These gentlemen, I said, do not seem to be in your good graces."

That might have come from a fashionable novel of this day; only it is, perhaps, too like real life, and too sternly meant. Here we have the man doctoring himself, with a fool for patient. The public say a man that doctors himself always has a fool for the patient. And this truth goes farther than they think when they seem to infer that, if a man be doctoring anybody else, he has not a fool for his patient. That assumption is not justified, as Plato's very modern sort of instance proves well enough. It appears that the patient had got good sound advice, perhaps from Hippocrates, but determines to do as he likes, and goes about choosing whose advice he will to please him, really prescribing his particular doctor to himself as he before prescribed a particular pill. The same you will find largely done now. Invalids of the kind still keep the fool under their care, applying one and another pleasing doctor among the rest of their means of helping their foolish selves down the easy descent. When society was so like what society is now, the medical care of individuals would involve the same problems as those of our own time. And, indeed, you will find that there is a great deal to be learnt from Hippocrates. Not that I recommend you to spend your time in prolonged study of Hippocrates. It is of no use going back and trying to realise the teachings of the good men of all past time. There were so many, and past time is so long, you must leave off somewhere, especially when you find that the good men of former times thought much the same as yourself, were clear about the same plain truths, and stuck in the same muddles. You then find a repetition of your own notes much the same as when in music you come to an octave; this, you know, satisfies the ear, and anything beyond is the same over again. We have two such octaves in the history of medicine; one in the climax of Roman civilisation, and the other at the climax of Greek civilisation; the first marked by Galen and Celsus, and the second by Hippocrates and Asclepiades. At each of these times, we find a state of medical thought as like that of our own time as the crest of one wave to the crest of another coming on after it. But, just as in the octaves of music, you have between the key-notes a lot of half-notes and queer discords, so in the intermediate times between the pure tone of Imperial Rome and the pure tone of this century there were very pitiful miserable howlings; all through those very properly so-called dark ages, wherein human nature crept in a loathsome slough of superstition; it is painful to take up any medical writing of those times; there may be exceptions, but the general result is almost to make you thank God that, as Hippocrates says, time is short, lest otherwise you should have had to wallow through the extended mire of an art which is so long and so dirty. Lest you should think I would impose upon you with fallaciously hard adjectives, I will read you parts of a prescription or two. The blood of a he-goat, taken from him in gelding him, and dried in the sun or an oven. The shavings of a boar's tooth. Horse-dung dissolved in carduus water and strained. White hen-dung given to a drachm of the same. All these, and others too nasty to mention, are from one column of Dr. Salmon's *Synopsis Medicinæ*, date 1681. They are for pleurisy. They are such prescriptions as are commonly found about that period and even much later.

One blushes all over to belong to the same craft, and gladly rests one's sight again on the noble forms of the Imperial Roman and the Greek beyond. It is, indeed, incomprehensible to us at first sight how such views could be entertained. In justice, if not charity, to those who enacted such abominations, it would be fair to look at the causes that impelled them. But time presses, and I would not go farther on this topic but that we should consider whether such causes are quite inoperative now, and whether we and our successors are safe from their action; for the climax of rational purity in our time will inevitably prove another wave-summit, and the trough time must come again. Let us for a moment put ourselves in the place of a seventeenth-century doctor, and realise the circumstances in which he lived, and especially the knowledge he had to share. Recollect that the leading and active minds of that age believed in witchcraft and fairy influence, not in a vague and dreamy sort of way as a few weak people hold a similar spiritual view now-a-days, as a pleasant means of encouraging a dull imagination, but they believed that there actually were some sorts of subordinate spiritual agencies who could make tangible things move at their will, and they believed that these spiritual agencies were subject to the influence of spells and charms, so that signs and dodges would bring them into play. They confidently knew that nasty things, like toad's flesh and crab's eyes, or queer actions, like gibberish and grimaces, would effectually overcome physical obstacles. Now we know that, within the range of accurate experience, the influences under which physical changes occur are not erratic. In other words, spiritual powers are orderly so far as they touch physical nature, and any impulsiveness or waywardness, men, imperfectly understanding each other and the whole subject, compel each other to acknowledge, are excited in the world of the soul where the light is not that of the sun, and things with shapes are not subject to gravitation—a world as much within our experience as the other, and to the physician never to be under-estimated, since it is at the points of contact between it and the inert matter within his patients' bodies that his problems are of the greatest importance and interest, and they more often concern the immaterial than the material part of the patient.

But try to realise the time when the best people, confusing the truths of the material and immaterial world, allowed a belief in witchcraft, and think what then would be the mental state of common people. It is worth thinking of; for remember that, if the course of humanity move in waves like the sea, it is only the higher and greater that feel the lift of the wave and catch the light it reflects; deeper down is a sluggish mass that is untroubled by the action above. Look about you and try to estimate the way of thinking of the low people of our own time on anything that does not touch their bread and cheese. Nay, do not wonder virtuously; look within and see yourself fairly; for, though in broad daylight, when you are pretty well and happy, strong-headed and stout-hearted, all things seem established like the hills, and orderly like the stars, yet, if you be not very well, or if it be murky twilight, and the wind howl, and somebody be recently dead next door, it does not take much to make your flesh creep a bit; so that all things take more their tone from the uncertain clouds, calamitous tides and earthquakes, unaccountable blights and shocking accidents, entirely beyond the regulating power of the most diligent and conscientious Board of Railway Directors. So do not think yourself out of reach of superstition, and especially do not think your patients out of its reach. See how credulous and weak, in time of family sickness, is even that doctor who has carried scepticism beyond due bounds. Of course, he will afterwards say it only shows that he was all afloat at the time. But let this show what you are to expect from those who are similarly at sea, but who have never taken in a ballast of medical earth-knowledge. In viewing the superstitions of past centuries, you must recognise that the world does not essentially change from age to age. When you trace any feature common to bygone times, you should find out what it is that corresponds to it in your own. Do not be led by the rational atmosphere at this hospital to think the world is led by reason. Do you think that charms and spells are effaced, and that people do not hold to and long for them? Do not make such a mistake; they have not departed at all, nor been done away; they have only a little changed their shape, and are recognised without much difficulty. You will find the old and natural trust in spells and unknown agencies to be embodied, often very plainly, in the faithfully exact and almost worshipful deglutition of the orthodox dose three times a day. You may know it is only ammonia and gentian. They may half know it. But never think they take it as they would take a "pick up" of brandy and soda; they swallow it as if to Æsculapius, and in the gulp their eyes sparkle with all the old ineffaceable longing for help from the unknown. The time-honoured potion carries with it the undying power of the medicine-gods and medicine-man, of Fairyland, and of the witches, as real as ever. The conditions of emotional overstrain and tendency to unwonted credulity are naturally present around the sick-bed, and often are the more urgent in proportion as the occupant of it is more beloved. The calamity came from the unknown, and they will have help from the unknown. No education or civilisation will ever refine or develope them out of that, for education and civilisation carry nature farther, while it remains the same as before. This insatiable demand on unknown forms of help keeps therapeutics unstable. The demand from the unknown is answered, and the -opathies come out of limbo hungry, but smiling and full of promise, and patients encourage and favour their mysterious aid, and are ready to believe that what they have taken produced all the feelings that happened since, and hope made these feelings more pleasant. Thus pretentious quackery thrives parasitically on the sufferer's faith and hope.

I venture to spend your time in this generalising way, instead of endeavouring to attract your attention to the very ingenious and amusing experiments upon the action of drugs on protoplasm, because I know that it is as to the wider scope of therapeutics that you are in danger of being beaten by unworthy competitors when you go into practice. It is in the greater care they give to the circumstantial and dietetic management of the sick, that homœopaths and other quacks succeed better than some upright practitioners. When people go wrong into homœopathy, and so on, there is always some explanation of it. They mean, in this, as in other things, to be as right as is conveniently possible; and, if many of the currently so-called intelligent fall under homœopaths, we should know the reason of this. A part of it is, doubtless, the longing for mystery of which I have just spoken. So far, they are willing dupes, and you cannot help them, and can scarce pity them, deceived, as they are, for some easy, advantageous, or pleasing process or result. There may come to mind one of Carlyle's best sayings, to the effect that a dupe is a rogue downside up; this is one of the truest things speakable, though, in our context, it verges almost on the unspeakably true. But you cannot believe that any such cause will explain a great part of such prevalence of homœopathy as has been witnessed. Indeed, gentlemen, the width and blackness of this disreputable blot on modern medicine is due, no doubt, to the narrow scope to which therapeutical science allowed itself to be limited formerly under the influence of theoretical systems, as pretentious and vain as homœopathy, but much more dangerous: systems, in which violent measures in medicines and surgery were used, without mercy, and almost without reflection, while the vast influences of wise nursing care were neglected; so that no one knew when a medicine had real efficiency, when it was unnecessary, and when useless or hurtful. But now, thanks to the originators of the medical press, a means has been found in it whereby the experience of observers can be compared, and medicine is no longer so dependent on the authority of enthusiasts. A common sense arises against the quackery of systems; and thus, gradually, a balanced and stable system of truly rational medicine is formed, founded on careful observation of cases, and unpretending attempts at cure correctly recorded. No doubt there is room for improvement now, and we are witnessing a tendency to force the drug-medicines by publication, by men in good position, of results which the experience of other observers does not support. But, though such cures of chorea and boils, and so on, may serve their publishers' purpose, medicine is not much hurt, for other people can correct the wrong statements; and, spite such a gentleman's surprising cures, the world will come soon and commiserate with him on the perversity with which fate, usually so equitable, seemed set to force on him the delusion that his plan was better than others; or will grandly let him go unnoticed, and even let him take with him, as far as he can, the little he gets by it, perhaps not quite suppressing a certain smile at the one who goes glibly by with much benefit from his advertising gallipots of pancreatic filth.

The practical object of the remarks I shall have to address to you, in the course of the next three months, will be to give you a useful critical knowledge of the powers of really powerful remedies. It will be my official duty to make you acquainted with a deal that will not come under that description; and I must crave your patience and sympathy when that may appear too obvious to you. Now, at medicine lecture, a large part of this is put before you very ably, but from a point of view regarding primarily the diseased states, in some order which is founded on the diseases in their mutual relations. Such a mode of consideration makes it seriously likely, that many of the powers and uses of the medicines themselves may escape your notice; for the several kinds of help, which different remedies can give, are so scattered about in the history of medicine, and hit upon hence so casually, that a clear notion of the special services of each could not be directly acquired in such a line of study. You want to take the several drugs that have any real powers; then to know something about them which shall, as far as possible, explain their efficacy; and then to learn well the powers they have, and what disorders they are fitted to relieve, especially any peculiar use of the drug which experience may have brought to light; the last being, in my opinion, the most practically important knowledge, but only tolerable when based on the former. I said that, at medicine lecture, the consideration of the diseases is the primary consideration, and the consideration of their treatment follows. As a consequence of this, the order of proceeding in medicine is based on the method of considering diseases. The question the medicine lecturer asks is, "What is good for this?"

But we have to take up the drugs and ask "What is this good for?" so that we, on our part, must find some line of procedure, having a proper regard to the mutual relations of the drugs. And that forces us to select some class of these relations for the purpose of determining our line of progress. But, as we do not want to cut a figure in the march, but to have a good property at the end of it, we shall not consider the settlement of the sort of relations that shall guide us as a very vital question; which is fortunate for us, since it is a most debateable question. Very debateable questions, you know, must always be settled by will. Still, as the inquiry is capable of clear principle, we will look at it for a moment. Remedies are objects or forces which already are subject to classification in their several natural places; electricity, heat, etc., among the "modes of motion"; minerals, plants, and animal products in the works on chemistry, botany, and zoology or comparative anatomy. Now we may keep them in this their usual scientific order; and this plan is usually adopted in works on materia medica. It is a plan I should employ without hesitation if I were a chemist and druggist. But we are users, and our function is not to store or sell drugs; and hence we will class them, so far as we class them at all, according to their uses in the cure of disease. But what is cure? Perhaps the vulgar notion of cure is very much this. They seem to suppose that the drugs would fit diseases in a perfect way, if we only knew it. They apparently believe that if the stocks of the chemists' shops could at once be properly distributed in the bodies of all sufferers, a balance would be struck, and then and there all human illness would come to a happy end. An individual, in this belief, goes into a chemist's shop, and, as he looks at the bottles in bright array there, thinks that in one of them is that by which he might live; just as you may go into our museum of morbid anatomy, and, among all the bottles, know there is that in one of them of which you will die. But directly you, as a doctor, forsake this vulgar notion of cure, and enter on the question of relieving any diseased state, forthwith your intention finds itself opposite a division of the line ahead. For two aims present themselves: one is, to know what causes the disease, and to meet its causes by the light of that knowledge; the other is, to recognise the disease as one for which a cure is already known, and to use the cure at once.

The first of these plans, that which seeks to act on a knowledge of causes, is called the rational system; the second, which seeks to recognise the disease and apply known cures, is called the empirical system. Now, when you hear that one system is rational and the other empirical, no doubt can exist as to which you incline to prefer. But it is not fair to suppose that the first plan is really the more rational, in the sense of being prudent and proper, because it is called so, any more than it is fair to suppose the Liberal party, so called, is not really more mean than the Conservative party, because it has laid hold upon the name which carries so favourable an impression. I say this, because you often find writers talking up the first plan as rational, as though it had the Goddess of Reason at least, if not Wisdom herself, on its side. But a little consideration will show you that the proper name of such a plan is the *deductive* system, not the rational system; for it professes to act by deduction from general truths already acquired or supposed. If you call this system by its proper descriptive name, *deductive*, then this name, instead of giving it a false colour of superior virtue, shows its inherent weakness. The plan assumes that we know enough to act upon about the causes of disease.

Gentlemen, it is difficult to speak in measured terms of the horrible results that have followed from this fatal assumption. It is this *irrational deduction* which has been the curse of medicine in all ages. This deduction, so irrational, is drawn from principles generally entirely false, and always so incomplete as to be beyond all bounds insufficient, so as to be often worse than false in their effects, even if true in themselves; yet you hear some describing the deductive, or the so-called rational, system as the pride of medicine. And those who have said this are so great, and so justified in feeling what the pride of medicine really is as a sensation, that one must submit; only replying that, if it be the pride of medicine, it has been the fatal curse of patients who have been hurried into the next world with the lancet or brandy-bottle on rational principles. Gentlemen, believe me these deductive systems are not rational; they are deductive on insufficient grounds, and hence are the opposite of rational in any commendable sense of that term.

I will not detain you long on such systems, but will try to explain on very simple principles some things that are commonly admitted as worth notice; such as the Brunonian system, the doctrine of Rasori, the homœopathic and allopathic systems, which, though usually regarded by honest physicians with proper contempt, are nevertheless not unfair, though coarse, examples of rational systems generally. To properly grasp these systems, it will be well to go through a little reflection of a psychological kind, but very elementary in degree. The simplest of mental phenomena is the perception of more and less. I say this is the simplest, because it takes consideration of only one property, that of degree or size. The simplicity of the notion more and less gives it a deep hold in our nature; and this is increased by the fact that it is so well beaten into all young human beings at school in their boyhood, in the shape of arithmetic and algebra, which are its higher developments, that it becomes the most fundamental part of their mental organisation. The consequence is, that all our lives afterwards the reasoning faculties operate most easily in the directions more and less, *plus* and *minus*; and, from a rational point of view, they are most disposed to consider things as varying in that simple relation. In medicine by system, accordingly, you find the easy notion more and less come forward very readily, and you will see that, with only the adoption of special words, it constitutes the Brunonian system and the doctrines of Rasori, of Broussais, and others. To make the Brunonian system, Dr. Brown gets the notion that life is all stimulation, but sometimes more stimulation and sometimes less stimulation; and when there is a certain degree of more or less stimulation, then either of these states makes disease. Therefore, you must find some way, in the first case, of bringing down the stimulation with lower stimulants, and in the second of bringing up the stimulation with higher stimulants. The doctrine of contrastimulus of Rasori differs only in that what Dr. Brown called less stimulation, Rasori thought to be the opposite of stimulation. As, however, neither of them could know whether it was so or not, we need not follow the arguments. Nothing could be more rude and futile than the attempt to consider all the various diseases and remedies as simply more and less, when differences of kind are so evident and important among them.

To turn, then, to the various kinds of -paths. The deductive mind, overpowered by an excess of the arithmetical and disciplinary conception of more and less, makes a Brunonian. In a parallel way, the same sort of mind, engaged by the conception of like and unlike, becomes some sort of a path—say, usually, a homœopath. The notion of like and unlike grows very early in babyhood; it is, unfortunately, not much subject to discipline at school, but is allowed to be loose in young people, and so it grows up loose in them when they are older; so that, commonly, adults do not mean anything very accurate by the statement that one thing is like another. Perhaps, to say that one thing is like another is the weakest thing you can say about it; the likeness may be poetic, or comic, or simply delusive, making you mistake one article for another, so that you do the wrong thing with it. The result is, that adults often require to be told that they mean sometimes one thing and sometimes another by likeness, and are then, perhaps, as surprised as M. Jourdain when he learnt he had been talking prose all his life. When like has any strictness at all, it means identical. It means that or nothing. Follow me carefully for a moment. A thing that is entirely like another thing is entirely identical with it. A thing that, without being entirely like another thing, is yet like it for some purposes sufficient for the meaning at the time, is *identical* so far as those purposes are concerned. In short, likeness is identity *so far as the word like has any force.* Stones of the same shape and size are alike for the mason; if they are of different durability, they are not alike for the house-owner. "Yahoos" are like men for the purpose of being laughed at. Thus likeness may be defined as *identity for the purpose in question.* Yet the term like is, from boyhood, used so fast and loose, from the likeness of equilateral triangles to the likeness of Jack to a monkey, that, when the boy grows into a homœopath, he is ready to attach any meaning to like, from identity to the most fanciful resemblance. Now, in a general way, people believe that unlike things oppose each other, whether these unlike things are diseases or any other things. Such a notion is not worth much, unless you apply it strictly; but, in the only sense in which it has a strict application, it is an identical proposition; for you mean really opposite by unlike, or else you do not mean anything definable. You mean opposite so far as unlike; so that your proposition is that opposite things oppose each other so far as they are opposite—a proposition of infantine simplicity: true, surely, and cogent wherever applicable. It is so evident, that I do not think any school of doctors ever proclaimed it; if they did, they would be allopaths.

But a notorious person named Hahnemann, taking advantage of the fact that doctors, who proceed according to common sense, do not save everybody from dying, rose against common sense, and said like cures like—*similia similibus curantur.* Then was seen how unhappy it is that this idea of like is left at school in such undiscipline; for a whole crowd, ready for something new, go after him, not knowing how to deal with so manifold a thing as likeness, and not caring what it means. But if you examine the proposition "likes cures like", you see its puerility, so far as it has any apprehensible meaning. We have seen that likeness is identity so far as the word has any force. It is practical identity of quantity, if quantity is being considered; of colour, if colour is being considered; and so on. Thus Hahnemann's proposition, so far as it has any accurate or apprehensible meaning, is that identical things have opposite results; nothing being said about the fulcrum which alone could make the arrangement rationally possible.

But it may be said that the cure and the disease are not really alike, but only appear alike. Then the proposition has to be changed to—apparently similar things cure each other. That assumes that things are made to have likenesses the opposite of their real natures; and a proposition of that kind is in every way too empty to be further noticed. Hence we may dismiss homœopathy from consideration, especially as the practice of its professors really no longer differs from that of doctors who do not adopt its absurdities. Indeed, the system is well known to have degenerated into a means of attracting the notice of the public by means of globule-boxes and tinctures.

It is worth while to thus consider these coarse examples of deductive systems of therapeutics, not on account of their worth, but because you will find that all deductive systems of medical therapeutics, even when far less pretentious and vain than homœopathy, are really irrational, if less flagrantly so. And I could, if I had time, show you that it is by the forcing of puerile and crude deductions that all rational schools arise in medicine. Such schools are nothing more respectable than boyish notions of quantity and likeness, etc., brought by weak men into complex realities to which they are wholly inapplicable; so that at best such systems are as though children should be taught to play about with poisons at the tables where confiding guests are accustomed to seek refreshment.

What you want in the practice of medicine, is a close and well-trained observation of the descriptive nature of the kinds of diseases, and of the effects of drugs on them. You must know these well, or you ought not to have an easy conscience. You must be able to recognise the several kinds of disease, and to use the remedies that are best for each kind. Mistrust plans of treatment, in proportion as the reasonings they are founded on are deduced from abstract considerations. Beware of the reasonings in medical therapeutics. I shall have to show you that there is scarcely an exception in medicine to this rule, that all deduced general plans of treatment have been pernicious; that deductive reasoning has been the curse of medicine—I mean of patients. Those who have well observed the results that actually follow, when remedies are used under well-recognised conditions, are the real benefactors of the sick. A steady process of induction is what we want; induction, often in its humblest degree, which shall often give a scarcely communicable experience to guide the watchful physician. Such inductions as that quinine cures ague, iodide of potassium cures tertiary syphilis, tarry preparations cure scaly eruptions, are the best stock of even nineteenth century medicine; and, however mean in the scale of mental performances, are of priceless value in the shivers of intermittent fever, the tortures of cranial syphilis, and the itch of psoriasis, with which you have to do. Such inductions are commonly in harmony with the teachings of physiology; but I advise you to hold them a good deal distinct from those teachings, and do not be too ready to allow them to rest, even in appearance, on those teachings.

In what I have to say on the several drugs, I shall follow the order of the therapeutic divisions in Dr. Garrod's work, which I recommend to you. We shall have an opportunity of noticing, in succession, the sorts of actions on the human body which the various drugs possess. My object will be to introduce to your notice each medicine in the position it has in such a therapeutical scale. Very often you will find that a medicine has several uses, and in giving the notice of the history of each, I shall take all its important powers into consideration; but I shall try to bring the several medicines into that part of the scale of which they are most typical and proper representatives.

MAD DOGS.—Lord Leigh has drawn the attention of the magistracy of Oxford to the prevalence and extension of canine madness, and has called upon the justices to take prompt steps for arresting the progress of the malady.

CLINICAL LECTURES
ON
MENTAL AND CEREBRAL DISEASES.

By J. CRICHTON BROWNE, M.D., F.R.S.E.,
Medical Director, West Riding Asylum; and Lecturer on Mental Diseases to the Leeds School of Medicine.

V.—SENILE DEMENTIA. (*Concluded.*)

IN contrast with the cases just described, I should like to quote one of recurrent mania, occurring in an aged person. I have already told you that mania affecting an aged person is in all respects distinct from senile dementia with excitement; and morbid anatomy bears out that statement. Bridget W., aged 81, was an inmate of this Asylum for eighteen months, and died on August 22nd, 1872. Up to the time of her death, she was intelligent and acute, and gained a kind of notoriety in the ward which she inhabited by her sallies of Irish humour. She suffered from occasional attacks of maniacal excitement, in which she was restless, talkative, very abusive, and violent if thwarted in any way. But throughout these attacks she talked coherently, if foolishly, and rationally, if not reasonably; while in the intervals between them her memory was clear and tenacious and her judgment sound. She became affected by caries of the bones of the right foot, and sank exhausted during a cyclone of excitement. At the *post mortem* examination, the skull was found to be of average thickness and fairly symmetrical, but all the bones entering into its constitution were of a reddish colour. The dura mater was strongly attached to the frontal bone, and the grooves for the middle meningeal arteries were unusually deep. The whole brain weighed forty ounces, and there was no excess of serum. There was no thickening nor opacity of the arachnoid membrane, but a certain amount of fine injection of the pia mater was visible. There was no wasting of the convolutions, and the grey matter was of average thickness. The fornix was somewhat softened, but that was probably a *post mortem* change. The cerebral ganglia were plump, and, like the cerebral substance generally, of firm consistence.

Now, in the brain last described, there was an absence of those appearances that correspond with senile dementia, and that are indeed characteristic of atrophy; for cerebral agenesis or wasting, whether due to simple impairment of the nutrient activity of the tissues, or to diminished supplies of nutrient material dependent upon vascular degeneration, is the true anatomical basis of the fatuity of old age.

The coarse changes in the brain discernible with the naked eye correspond with more intimate alterations in its structure. The microscope reveals these, and shows degeneration and softening. The cells of the grey matter are comparatively few in number and small in size, as if shrunken; or, on the other hand, they contain molecular fat and pigment. In prepared specimens, the cells are pale and but faintly stained with carmine, while the nuclei are distinct and deeply coloured, or they are swollen and deformed, their nuclei being displaced and their branches wanting. In an advanced stage of the disease, aggregations of granules remain as the *débris* of distinct cells. The vessels traversing the grey matter are studded with fatty granules and large compound corpuscles, and the neuroglia pervading it also shares in the fatty change. The fibres of the medullary substance also undergo some degree of fatty metamorphosis. Nerve-tissue, whenever its function is abolished, tends to undergo fatty degeneration. The extremity of a nerve severed from its trunk, and from communication with its centre, is rapidly converted into a conglomeration of oil-globules; and the brain that is cut off from its accustomed activity tends to undergo a like change.

It is particularly in connection with this form of mental disease that questions as to the validity of wills arise; and some of you may find yourselves called upon hereafter to pronounce upon the competency of an aged and infirm patient to dispose of his property, or to give evidence as to his mental state at a time when he signed a testamentary document. A large proportion of wills are made by aged people, and the reasons for that are obvious. The fruits of industry and frugality are reaped towards the close of life; and property has a natural affinity for grey hairs, and perhaps lends them some of their venerableness. Slightly altering Goldsmith, we might say that "wealth accumulates when men decay". Then, many persons have an almost insurmountable objection to make a will of any kind until death is actually staring them in the face. The act is, in however remote a degree, a confession of mortality and a preparation for the tomb, against which their whole soul revolts. You, being young men, can scarcely perhaps realise how strong this prejudice is. I have in my recollection a lady, now seventy years of age, and very intelligent, who cannot be persuaded by her friends or men of business to give any written instructions as to the disposition of the large means which she possesses, and which, in the event of her death, would pass to the heir-at-law, against whom she entertains the bitterest enmity, away from some near relatives to whom she is tenderly attached. She knows all this; and, when spoken to on the subject, simply excuses herself by saying that she could never feel happy with a will in her wardrobe, or even in her lawyer's safe. She promises faithfully, however, to make a will in her last illness. Now, if that last illness should be delayed until this old lady reaches a state of dotage, it is not improbable that any will then executed will be disputed. Thus it is, at any rate in many cases, that, by a foolish postponement of a duty from the days of strength to those of weakness, intentions are frustrated and lawsuits encouraged.

When you are required to give evidence, at the trial of a probate issue, as to the mental condition of a testator whose will is disputed, you have only to describe what you observed in clear language, as free as possible from technical terms. The decision as to the capacity of the testator to make a will rests with the jury. But when you are required to examine a patient, and to say whether he is in a fit state to make a will, the decision as to his capacity in a manner rests with you. A grave responsibility devolves upon you. You have to anticipate the functions of the courts of law; and it is well, therefore, that, being liable to such duties, you should know something of legal rulings in as far as these affect the validity of wills. Under such circumstances, you have nothing to do with medical or scientific standards of mental unsoundness; you have to view the case from the legal stand-point, and to make your advice conform to the decision of the courts, which, notwithstanding the abuse which it is fashionable for some members of our profession to heap upon them, are generally in harmony with common sense.

Now, first of all, I need scarcely tell you, that the mere natural infirmity of old age does not in itself disqualify for will-making. Second childishness does not imply a second period of minority or nonage. The mind may be debilitated, the memory enfeebled, the senses weakened, and yet, if sufficient intelligence and discernment to appreciate the character and consequences of the testamentary act be retained, the power to dispose of property by will remains. The faculties of the mind may be greatly obscured by the advance of life without being unsound in such a sense as to establish legal incompetency, for the law jealously and judiciously guards the rights of declining years. Old age would, in many instances, be indeed forlorn, even in civilised communities, were it not that a control over the disposition of property is preserved after other attractive qualities have been lost. But, notwithstanding the liberal construction thus put upon patriarchal privileges, there is a point at which they cease to exist, by reason of defect of intellect. There comes a time in dotage when mental power has reached so low an ebb, that it would be dangerous to all concerned to allow the exercise of rights involving important interests. That time, the law says, has arrived, when a man cannot understand the character and effect of his actions, or appreciate his relations to the natural objects of his bounty. Not until mental infirmity has gone to this extent, can a man be deprived of his power to distribute his means as he may think best. So long, then, as a testator has an ordinary knowledge of the nature and amount of the property which he possesses, and a full and intelligent consciousness of the nature and consequences of the proceedings in which he is engaged, and feelings towards those persons or objects who are to participate in his benefits, or to be excluded from them, unbiassed by diseased ideas or beliefs, he may be declared to be of a sound and disposing mind, memory, and understanding.

In seeking, in any case of senile dementia, to determine whether the legal limit of competency has been attained, you will not, of course, be content with questions bearing merely upon ordinary and indifferent topics, or upon the health and immediate wants of your patient, as a conversation upon such subjects may be maintained creditably by a mind which is really much crippled. Having possessed yourself of some preliminary information, you will, during your interview with your patient, first observe whether he can apprehend what is said to him, and whether he can fix his attention so as to return a rational reply. You will next test his memory, both as to recent and remote events, and especially as to its power of embracing the proper objects of his bounty and the means at his disposal. You will next ascertain whether he realises the plain and simple results of any disposition of his property which he may have in contemplation; and you will then probe for delusions—embodying exaggerated notions of his own rank, wealth, or importance, suspicions of the motives and practices of others, or ideas as to supernatural agencies operating upon him or communicating with him. But even if, in this exploration, you should discover delusions in the mind, you must not think that you have thereby established its incapacity. No doubt, the presence of any delusion in a mind creates a presumption against its testamentary capacity; but that will not be legally established until it can be shown that the delusion in some way influenced the testamentary disposition. Dr. Johnson, and many other great and sensible men, laboured under single delusions or hallucinations, which, however, never modified their conduct; and surely the existence of these ought not to have reduced them to a state of legal infancy. If, however, it can be demonstrated that even a single delusion or hallucination restricts the exercise of the faculties, interferes with discrimination or prejudices, either by enhancing or depreciating the claims of natural affection and relationship, then it is fatal to the power of making a will.

Further than this, you will endeavour to satisfy yourself that the will is free in its action, and not the slave of recent impressions made upon the mind. In some aged persons, a sense of helplessness and dependence eventuates in a paralysis of volition, so that they cannot choose for themselves, but seize upon any suggestions that may be offered by those who are in attendance upon them, and at whose mercy they perhaps believe themselves to be.

I shall give you a few practical directions as to the conditions under which a patient ought to be declared incapable of making a will; and, whenever you come upon a case not covered by any of these exclusive clauses, then, I think, you may safely sanction the execution of one.

When the memory is so much impaired that the amount of property possessed, and the names, relationship, and claims of those who might be expected to benefit by a testamentary disposition cannot be recalled, then a patient ought to be declared incapable of making a will. It is clear that the mind, in order that it may act with reasonable freedom and justice, ought to be fully informed as to the matter with which it is dealing, and ought to be able to submit itself to those sentiments of regard, or gratitude, or respect, by which sane men are influenced in providing for the distribution of their property. And it is clear that the mind cannot be so informed unless the memory be adequate to the slight exertion of recalling facts, which are of primary interest and importance to every man, which are the most easily recollected, and which are among the last to fade from a failing memory. The inability to recall such facts must of course depend upon a real and persistent weakening of the memory, and not upon any transient embarrassment, agitation, drowsiness, or other temporary cause, in order to amount to a permanent disqualification for making a will.

When the apprehension and judgment are so much deteriorated that no clear or consistent conception can be formed of the objects and purposes which are to be held in view, or of the methods by which these are to be attained, then the patient ought to be declared incapable of making a will. Of course, it is not requisite that a testator should comprehend the legal bearings of a will, or all its complicated provisions. It is essential, however, that he should appreciate the simple elements of which it is composed; and if he neither know what he desires to do with his property, nor how to do it, then his mind is a blank, and is not in a sound or disposing condition. It has been held that less apprehension and judgment go to the making of a will than to the making of a contract, because in the latter the antagonism of interests is likely to bewilder and mislead; whereas, in the former, the mind is left to its own impulse, and is engaged in a subject which may have occupied the thoughts many times previously. To me it seems that this is a hazardous and erroneous distinction, as a weak mind will often act with greater energy and accuracy when stimulated by antagonism of any kind than when left to drift on its own course, and as making a bargain or contract is a much more familiar operation to most minds, and less disturbing than making a will. The balancing of interests, the just recognition of contending claims, the providing for contingencies involved in will-making, require, in my opinion, more delicacy and force in apprehension and judgment than most contracts.

When speech is so incoherent as to convey no rational meaning, the patient ought to be declared incapable of making a will, as no trustworthy expression of his wishes can then be obtained. Although, under such circumstances, intelligible sentences may now and again be uttered, and although assent or disapproval of any suggestion offered may be emphatically expressed, so that a scheme for the distribution of property might thus be elicited from the patient, it would be obviously unfair to allow any force to instructions obtained in such a manner, even should these instructions be in accord with the testator's deliberate and long cherished intentions. Incoherent and unconnected conversation is a sure criterion of mental incapacity.

When the perception of the identity of surrounding persons is interfered with, so that one person is mistaken for another, then the patient ought to be declared incapable of making a will, as it is clear that a confusion of thought of this description must fatally prejudice the information by which rational action is determined, and must peculiarly expose the person labouring under it to be influenced by attempts to coerce or deceive him. The existence of this loss of the power of recognition must, of course, be proved by adequate evidence and repeated tests, and must not be inferred from the mere accidental misapplication of a name, or from the forgetfulness of a comparative stranger, or from any blunder arising out of impaired sight or hearing. It is when relations and familiar friends are not properly distinguished from each other, or when the dead and the absent are confounded with the living and the present, that incapacity may be alleged.

When the delusions which pass through the mind are multifarious and varied, and not of one species and constant, then the patient ought to be declared incapable of making a will. For multifarious and varied delusions, which are connected with the diverse relations of life, and which succeed each other in incongruous groups, invariably betoken a general subversion of the mind, and a rapid disintegration of the brain. Unlike delusions which are of one class or kind, and constitute a monomania, they overthrow the whole mental fabric, and obviously unfit those who suffer from them for the performance of any legal act. Of delusions of such a nature, it is, of course, impossible to predicate what course they may pursue, or what transformations they may undergo; so that, although at one time they may leave untouched the knowledge of worldly affairs and the family affections, at another time they may link themselves with these, and disturb and stultify their operations.

When delusions, although of one class and confined to one department of thought, are rooted in a feeling of general suspicion, and refer to plots and conspiracies against the life and happiness of their victim, then the patient ought to be declared incapable of making a will. Nothing as certainly corrupts the judgment and perverts the sentiments as morbid suspicion. The man who is living in fear of a violent or insidious death because every man's hand is against him, or who feels satisfied that he is the object of machinations and persecutions of a world-wide character, or who believes that he is cheated and defrauded on all hands, cannot be expected to bring a well balanced understanding to the arrangement of his affairs. Either he is morbidly prejudiced against certain persons whom he imagines to be opposed to him, or he is extravagantly grateful to other persons from whom he fancies that he has received protection. In all cases of this kind, the man's relations and most intimate friends are mixed up with these delusions, and in all his equanimity and power of calmly contemplating his own circumstances are compromised. Where general suspicions exist, it is not necessary, as in cases of isolated suspicions, to endeavour to ascertain whether there is any reasonable, though insufficient, ground for the suspicious ideas. Their universality proves that they do not result from prejudice or defective reasoning, but from a diseased state of the mind. Now, it is into delusions of general suspicion that the querulousness of old age tends to gravitate as the powers of mind fail; and hence the importance of studying the disabling effects of these delusions, and of bearing in mind that they inevitably vitiate any will made under their influence.

When a delusion—although single and isolated, and leaving general intelligence and business aptitude little, if at all, impaired, but connected in some way with some one who, in the ordinary course of events, would be interested in a testamentary disposition—exists in the mind, then the patient ought to be pronounced incapable of making a will. This is so, altogether irrespectively of the complexion of the delusion; for a father might be led to act with injustice whether he believed that his son had attempted to poison him, or that he was the chosen of God and the Saviour of mankind. In the one case he might unduly impoverish, and in the other unduly enrich him. Of course, I presume that, in cases of this kind, you take sufficient pains to satisfy yourselves of the really delusional character of the supposed delusion. You must see that the apparently preposterous statement has no real foundation in fact, or is not merely an extravagant way of putting a genuine experience. Some delusions are visibly stamped as such, but others are less easily distinguished from *bonâ fide* and reasonable beliefs. I have heard a testy old gentleman speak of his son as a conspirator and thief, and thought him deluded, until I discovered that he had good grounds for the allegation; and I recollect once recording that an aged coachman had the delusion that he had driven *an* unicorn, and being much surprised when Dr. Bucknill explained to me that the patient was quite correct, and had frequently driven unicorn to his knowledge.

Now these are the conditions under which, according to my interpretation of the law, it would be imprudent to approve of the execution of a will by any patient about whose testamentary capacity you may be consulted. In the absence of all these conditions, I should see no obstacle to the making of a will, and should fear no impugnment of its validity. If you have once decided that a sufferer from senile dementia is unfit to make a will, the question need not come up for consideration again in the same case, as in that form of mental disease lucid intervals do not occur. Fluctuations in the degree of mental obscuration, or in the accompanying excitement, may be observed, but not real lucid intervals. Remissions take place, but not intermissions. The disease is chronic, habitual, and irremediable, and not acute, temporary, or curable; so that a right use of the faculties and a disposing mind cannot be recovered by those afflicted by it. The changes in the brain, upon which it is dependent, are organic, and not functional.

One other hint let me give you before quitting the legal relations of senile dementia; and that must be especially addressed to any of you who may think of entering my own specialty. I would advise you, as far as possible, to avoid becoming experts in cases in which the validity of a will is disputed on the ground of mental aberration. The position of an expert, always a difficult and invidious one, is particularly disagreeable in such cases. He is regarded as a fantastic theorist, an intolerable dogmatist, or an amiable nincompoop. No matter how comprehensive his judgment, or how sound his conclusions may be, he is discredited and looked at askance. The impression is, that he is placed in the witness-box to dictate to the learned judge and highly intelligent jury; and the wisdom of Solomon would avail him nothing under such circumstances. True, the conflict of experts, the cross-swearing in which they have been wont to indulge, and the tone of advocacy which some of them have assumed, have contributed to this result; but, above and beyond all that, they are a suspected and proscribed class.

We come next to treatment; and respecting that not much need be said. We cannot arrest the course of nature, nor restore the vigour of youth, nor make the shrivelled brain plump again. When the journey is nearly over, and the final descent is begun, all that we can do is to put the drag on and retard the progress downhill, while we avoid certain points of danger by the way. This may be done better by feeding than by pharmacy. A liberal allowance of nourishment, in such a shape that it will be readily masticated and assimilated, ought to be administered at regular intervals, both by day and night. The quality of the food offered must be determined by a regard to the tastes of the patient, to the amount of exercise which he is able to take, and to the state of his digestion. Stimulants are almost invariably requisite. A little negus or hot brandy and water in the evening will often secure sleep to a restless and excited patient; and wine or beer during the day will support strength and prolong life. Alcohol, in some form, is needful in senile dementia; and you may prescribe it, under these circumstances, without feeling alarmed lest your patient should contract habits of drinking, and date his moral ruin from the doctor's directions. Especially when restlessness and excitement are present is alcohol demanded. You saw a garrulous and riotous old man in No. 4 Ward lately, who was silenced and subsidised instantly by two pints of porter *per diem*. Whether the beneficial effects of alcohol on senile dementia are due to a check imposed upon excessive tissue-changes, or upon disintegration of blood-corpuscles, or to a hardening of the vascular walls, cannot at present be determined; but there can be no doubt that they are often shown forth in the most striking manner.

Then, besides attending to the feeding of patients who are afflicted by senile dementia, see that they are kept warm. Old age is chill and frosty. The faculty of producing animal heat is diminished; external cold has a special tendency to cause the heart to beat more slowly, so artificial warmth must be provided. Those patients who are apt to get out of bed during the night should be clothed in flannel suits, and should be placed in rooms which are supplied with hot air. By such means, you conduce to tranquillity, because you insure physical comfort; and you sustain the functions of the skin, and ward off those internal congestions and lung-affections—such as bronchitis and peripneumonia notha—by which senile dementia is so often cut short.

In the next place, it is desirable to see that your patients have exercise, bodily and mental, in proportion to their strength. The functions of life dwindle away all the more rapidly when they are never called into requisition; and the old man who is left in an arm-chair, inert and useless, who is never disturbed by conversation, nor roused by new impressions, will dose off more rapidly than another old man, who is made to walk out, who is induced to occupy himself in some way, were it only in knitting stockings, who is encouraged to repeat his old stories, and who is bothered by his grandchildren. Exercise, short of fatigue, is an excellent antiseptic in the decay of age.

As to drugs, there are some which supply the elements of brain-nutrition in a convenient form; these are cod-liver oil and some preparations containing phosphorus, particularly the hypophosphite of soda. I believe I have seen these, when perseveringly employed, stave off sheer oblivion. Then, when there is prostration or debility, the carbonate of ammonia is a most valuable remedy. It is rapidly diffused, stimulates the brain, just to an adequate degree increases the force of the heart and pulse, braces up relaxed mucous membranes, and creates a feeling of agreeable warmth. You will have noticed that I very often prescribe it in combination with calumba in cases of senile dementia. The calumba is added as a mild tonic, to increase appetite and improve digestion.

Where there is much mental excitement, which does not yield to nourishment or stimulants, you will have to seek medicinal means of subduing it, as such excitement soon ends in irremediable exhaustion. Opium, however, must not be included amongst these means. Its action is always ambiguous in old age, and in senile dementia those degenerative changes in the vessels, which are so frequently present, contraindicate its use. Even where the vessels are sound it may be hurtful, by strengthening the tendency to that vague drowsiness which is apt to lapse into coma, with effusion of serum, or by disordering the functions of the prima viæ. I should say that it is almost always contraindicated in senile dementia. A less dangerous sedative is found in hyoscyamus, which will generally secure repose in such cases, without doing damage in any other direction. I can attest its value, from long experience of it in senile dementia. Beginning with a drachm dose of the tincture, or succus, we increase the amount, until its soothing influence is manifested, and rarely require to exceed half an ounce as a dose. If hyoscyamus fail, cannabis Indica may be tried, with great caution. Chloral, as you know, I do not employ in such cases. When the excitement coexists, with a copious excretion of lithates from the kidneys, it may sometimes be mitigated by the administration of alkalies.

If muscular trembling be excessive, conium in large doses (from two to four drachms) of the succus will probably prove a palliative. Carbonate of iron or spirit of turpentine often also affords some relief.

ADDRESS ON THE PROGRESS OF MEDICINE.*

By JOHN RICHARD WARDELL, M.D., F.R.C.P.,

Physician to the Tunbridge Wells Infirmary.

[*Concluded from page* 605 *of last number.*]

No class of diseases is more familiarly, more thoroughly, known, than diseases of the chest. The great work of Laennec inaugurated a new era in thoracic pathology. It conferred a positiveness in diagnosis which can scarcely in such full measure be said to obtain in judging of any other order of ailments. Nor can it be held, though multitudes of observers have availed themselves of Laennec's discovery, that much of real practical significance has been done beyond what he accomplished. Prior to the recognition of the physical signs, capillary bronchitis and pulmonary collapse could not be distinguished from pneumonia; cardiac diseases were vaguely referred to ossification; effusions could only be decided upon by the Hippocratic symptom of succussion; and aneurisms could alone be guessed at by the more general and objective symptoms. The extent and degree of pneumonia can now be decided upon with not a little of certainty; and its treatment is more successful from a more rational pathology. Those intercurrent forms which constitute episodes in the graver epic of a wider lying general or constitutional malady, and with which frequently the pleura becomes locally implicated, can now be detected with much niceness and precision. Accumulated facts have made knowledge which has ceased to be contested. Pericarditis and endocarditis, we believe, never occur but in rheumatism; fibrin on the margins of the valves is looked upon as a deposit, and not an inflammatory exudate, on the valves themselves; hypertrophy now means cerebral or other hæmorrhages, rather than direct injurious influence on the action of the heart itself; extensive binding down of the lung to the costal wall, it is now allowed, may be compatible with lengthened life, and almost with health; and morbid anatomists now admit that considerable pericardial adhesion may eventuate with comparative recovery. The stethoscope has placed the modern physician on a vantage-ground which could in no wise have been hoped for by the older practitioners. They had not the means of arriving at any correctness in judging of the morbid changes within the thoracic walls. Thirty years ago, the average duration of phthisis was about two years. Under improved treatment, it is now estimated at four years. It has also been conceded that, in some cases, the disease admits of positive cure. Though such instances are exceptional, still they are sufficient to inspire us with the hope that with the progressive increase of our knowledge will come greater and greater success in this direction of our endeavours. *Post mortem* researches teach us that pulmonary cavities, even of considerable dimensions, may contract and heal up, and absolute recovery be the result; indeed, it may be added that such obliteration of these excavations are more usual than in former years was supposed. Our definition of the pathology of phthisis is more exact and defined. We now talk of fibrosis of the lung, a degenerative deposit which bears much resemblance to the amyloid substance; of embolic phthisis, in which are cheesy deposits and disintegrated blood-clots; of bronchial and pneumonic phthisis, characterised by cheesy matter and ulceration of the bronchi, or with exudation into the pulmonary tissue; and of syphilitic phthisis, with gummata allied with the cheesy product. These pathologic distinctions in the description of phthisis render its treatment more successful. The late animated and diffuse debates on tuberculosis have, with other elucidations of its nature, clearly shown the infectious properties of phthisical inflammation. It is now believed by Niemeyer and others that phthisis may follow hæmoptysis without genetic connection between the hæmorrhage and the pneumonic process; and that blood retained in the alveoli gives rise to inflammatory products, which undergo the cheesy change, and that such metamorphosis is followed by tubercle. Grey and yellow tubercles are now shown as being identical; and an intermittent pyrexia or chronic phthisis has latterly been looked upon to denote the absorption of caseous matter. Such are some of our advances relative to this common and justly dreaded disease. The alternation with, or vicarious occurrence of, bronchitis in gout, is an important practical advance; and in bronchitic asthma we are more clearly impressed with the implication of the ganglia and the influence of the vaso-motor function. Pleurisy of the idiopathic or primary character is now considered to be far more rare than was formerly supposed; indeed, if we exclude mechanical and physiological causes, primary pleurisy is exceedingly rare. The types of this disease which we so commonly see are rather the complications or sequential conditions of some foregoing visceral affection, or some constitutional malady which has already produced an impress upon the organism. We contemplate its presence very much in the same way as we contemplate the presence of pneumonia, and we try to discover the indications of some antecedent vice in the system. We more greatly suspect its insidious character; we are aware of its not infrequent association with pyæmic infection, with pulmonary phthisis, with the various forms of renal disease; and in all cases of pneumonia there is, perhaps, a greater or less degree of pleuritic inflammation of the fibrinogenic type. The competent manner in which we can now diagnose fluid in the cavity of the chest, and elect between trusting to absorption and having recourse to thoracentesis, ranks amongst the greatest improvements in modern medicine. This operation is shown to be followed with as little danger as blood-letting. By its timely adoption, as compared with the non-instrumental interference, and the vacillating practice of the past, a large number of lives are now saved. The morbid anatomy of pleuritis with effusion, as well as clinical history, have established the axiomatic rule, that paracentesis thoracis should be had recourse to early, and before the pyogenic membranes become organised, and the lung-substance is bound down and compressed beyond the powers of expansion. The discovery of albuminous expectoration following thoracentesis, made by M. Pinault, and which last year was importantly brought forward at the Academy of Medicine in Paris, as illustrated by the cases narrated by MM. d'Espine, Woillez, Marrotte, Behier, and Terrillon, is a curious addition to pathological acquirements.

Though diagnosis is less certain in lesions of the abdomen than in the chest, still the knowledge of abdominal diseases has been most progressive. The viscera in this cavity being from numerous causes subject to great variation in size, configuration, and position, much difficulty will always be experienced in correctly comprehending the particular maladies which are there to be found. It is now affirmed that no parts in the body have such immunity from disease as the jejunum and the valvulæ conniventes. We have more trustworthy guides for observation on deciding between simple and malignant disease of the stomach. We maintain that acute idiopathic gastritis does not occur in this as it is said to occur in tropical countries. The discovery of sarcinæ ventriculi led to the cure of a tiresome stomach complaint. We know that the sulphites of potash and soda destroy these fungi, as certainly as the sulphites and sulphurous acids destroy these vegetable parasites in the skin. Between torpor of the colon and melancholic depression there is intimate relation. Ulceration of the ileum is never seen in any acute disease except in enteric fever. Ulcerations in the lower third occur in chronic phthisis, but they differ not only in their pathologic characteristics, but in their relation to the axis of the bowel. Cancer we know to be far less frequent in the ileum than in the colon; and if the pylorus be excepted, it is more prone to be located at the sigmoid flexure than at any other part of the digestive tube. Perforation of the intestinal serous covering is most rare, except in enteric fever. Respecting our recent knowledge of the liver, many facts have been accumulated. It has been ascertained that the hepatic cells perform the function of secreting from the blood a substance named glycogen, which is rapidly transformed into glucose or animal starch; and that this principle is carried into the heart, thence to be oxidised in the respiratory process and evolve animal heat. This glycogenic function is a physiological fact, of much significance in a practical point of view. In acute or yellow atrophy, it has been discovered that the urine exhibits remarkable changes, as there may be the total disappearance of urea, uric acid, the chlorides, sulphates and phosphates; and these are replaced by the fibro-albuminous products named leucine and tyrosin. The waxy or amyloid deposit recognised in this organ is considered to be consequent on ulceration of the osseous tissue and long-standing syphilis. Palpation, percussion, and feeling the notches in the free edge, tell us much of splenic enlargement. The latest additions to our information relative to the spleen are chiefly physiological. In the intertrabecular spaces are doubtless first formed the molecules which become developed into blood-corpuscles; and it is believed that in the pulp they also become disintegrated. Such vital processes being there elaborated, it can thus be understood how anæmia and disease of the spleen stand in intimate correlation. In leucocythæmia, that affection which is characterised by excess of colourless corpuscles and diminution of blood-corpuscles, great light has been thrown upon the splenic lesion by which it is accompanied. Excess of fibrine and decrease of coloured corpuscles are the two primary cardinal changes in leucocythæmia. Such are some of the new facts respecting diseases within the abdomen.

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* Read before the East Sussex and West Kent District Branches.

In glancing at the nervous system, much in recent years has been done; still, it is undeniable that a great deal of ambiguity remains in diagnosticating cerebral affections, because the degree of objective symptoms is frequently by no means the exponent of the degree of morbid action. We are often and correctly guided by physiological phenomena; but sometimes there may be lesion and extension when least suspected. A patient some time ago was under my care, and there was found in one of his hemispheres a tumour of the size of a China orange. I recollect another man who had a small osseous formation at the base not larger than a pea, which had produced terrible epileptiform attacks. Both had convulsions, both cases ended fatally, but the respective amounts of lesion very widely differed. It was the location of these growths which accounted for the sum of their effects, and which no diagnostic acumen during life could explain. Schiff has shown that augmented heat produced by activity of the nerve-centres is primarily due to the vaso-motor nerves; and the experiments of Heidenhain, Riegel, and Fick, have solved some interesting problems relative to the extrication of animal heat. In blood-poisoning, we are more impressed with the peripheral irritation which produces phenomena in the great centres. The vaso-motor function renders explicable much which before was ill understood; epilepsy in age we now refer to retrograde metamorphosis of the tissues; and it is generally accepted that this disease, epilepsy, which has an etiology so multiform, is always primarily caused by anæmia; and when there is muscular atrophy in the young, we refer the wasting to a foregoing brain-change. Again, softening of the cord, we now know, always means more or less of anæsthesia as the accompaniment; and it has lately been discovered that induration of the cord is followed by regular and rhythmic paralytic action of the voluntary muscles. It is a great and an important advance that locomotor ataxy, as Todd and Duchenne were the first to show, ought not to be confounded with paraplegia. Its chief characteristics may be defined as the want of co-ordinating motor power in the lower extremities. We also now are aware that the structural disease is confined to the posterior columns of the cord, and very generally to its dorsal portion. Some pathologists believe, and I think clinical observation confirms the opinion, that the excess of cerebro-spinal fluid gravitating into the theca vertebralis, and at a given point producing pressure, may act as a cause. In several cases which have been under my care in the infirmary, I have found that long continuance in the horizontal posture has greatly aided remedies. The microscope shows the diseased part to have undergone the fatty change. One of the analogues of locomotor ataxy, and occurring in the brain, is that morbid condition now known as aphasia, or the loss of articulate language. And it is, as I need hardly remind my hearers, a very curious fact, that its pathological cause is now defined to be blockage of the middle cerebral artery of the left side by an embolon from valvular disease. It may, however, be produced by other causes, as hæmorrhage, tumours, and gummata; indeed, I think it is more frequently the result of specific gumma than is generally allowed. Not long ago, a young man came into the infirmary under my care. He was hemiplegic and inarticulate. He had aphasia, agraphia, and was amnesiac. There were proofs of secondary syphilis. He had fifteen-grain doses of the iodide of potassium, and, as he improved, was ordered electro-galvanism. In the course of a few weeks, he had made a full recovery. Had time allowed, a good deal that is new might have been given relative to the effects of the syphilitic poison on the nervous system, the knowledge of which constitutes one of the many recent and marked advances in our art.

I cannot here do more than incidentally refer to that contested question, the change of type of disease, which at one time received such general acceptance, but which doctrine, in my own humble opinion, never seemed so tenable as many maintained, because the phenomena of disease, like the phenomena of other natural processes, are doubtless based upon fixed and immutable laws; because we have proofs that some acute affections now run their course as they ran it generations ago; and because this change of type, so called, was too sudden, abrupt, and unexampled in its accession to be reconcilable with the theory of some occult and extrinsic alteration, as being a sufficient causation for those modified views and that reversal of treatment which so rapidly followed the declaration of this dogma. It is clear that epidemics vary in the degree of their intensity, doubtless from differences of physical conditions, if we could but demonstrate them, which enter into their etiological state, which may be either telluric or atmospheric, or both; still, their broad outlines, their characteristic features, remain the same. This new notion became the facile hypothesis which, with little trouble, commended itself for adoption, and which supplied a ready answer as to any questioning of novel views. But it never seemed so philosophic as to warrant the extreme lengths to which the theory put into practice was pursued. Whoever will compare the descriptions by Fracastorius and Cardanus of typhus of the sixteenth century, will at once see how in all essentials they apply to the graver forms of typhus of our own times. The accounts which we have of fever in the seventeenth century by Riverius, Mangetus, Willis, and others, are the accounts of the enteric form which we all now know so well. Rutty was the historian, under another name, of relapsing fever a hundred years before its characteristics and its distinctiveness were more fully described in 1843 and 1844. The records of scarlet fever by Sydenham, and Fothergill's sore-throat, are applicable to diseases which we all see daily in our practice; and the course of variola vaccinia is precisely the course which it ran eighty years ago.

Had time allowed, other arguments might have been given to show the invalidity of the uncompromising manner in which change of type theorists insisted upon their creed. It may, however, in passing, be observed that this notion quickly succeeded Bright's discovery, which was about to sweep away many pathological dogmas and theoretical phantasies. The Vienna school had about this time promulgated the doctrine of crasis. Microscopical anatomists and analytic chemists had begun to point out molecular degeneration and secretional abnormities, the ocular proofs of an impaired vitalism. Such terms as metastasis, idiopathic, dynamic, and sthenic, began to lose their hold on the medical mind; and symptoms heretofore regarded as the expressions of excess of strength were, in more philosophic reasoning, to be looked upon as the evanescent excitations incident to degeneration and debility. Febrile affections, pneumonia, and other acute diseases were gradually treated with more success, because the treatment was in clearer manner founded on sounder pathology. The blood-letting in fever, which had erroneously been advocated by Welch, Clutterbuck, and Armstrong, from this new knowledge and closer clinical observation, became discarded, and consequently the mortality became diminished.

In the cursory sketch which I can only now venture to give of many other additions to our information, reference may be made to our knowledge of cerebro-spinal meningitis, diphtheria, hereditary syphilis, and the great class of microphytic diseases; to the wonderful facts brought to light relative to entozoic affections; to the far better understanding of the complaints of infancy and childhood—the term infantile remittent being really another name for ignorance rather than the expression of correct diagnosis; to the more accurate distinction which we draw between gout and rheumatism; to the fact that lactic acid conveyed into the blood artificially will produce symptoms resembling rheumatism and veritable endocarditis; to our greater acquaintance with those congenic conditions, tuberculosis and strumosis; to the fact that cancer, like tubercle, is a debased organic product: and it would be easy to continue this enumeration.

The majority of those whom I now have the honour of addressing will well remember, on the commencement of the practice of their profession, what confused notions prevailed respecting, and how much of ambiguity overshadowed, the great questions involved in the study of continued fever. They will be able to call to mind how authorities differed, and how much of doubt and uncertainty varying and prominent symptoms engendered in the mind of the physician. The definitions of the three types of continued fever, which we can now give, and which are of such inestimable worth in a practical point of view, were then unknown. With these descriptive accounts of their essential differences, the mists which once obscured the pathology of fever have passed away, and trustworthy landmarks stand out—founded on the bases of truth and fact—as guides to all future times. I shall not stop to indicate in any detail the cardinal characteristics of each species which are now so familiarly known, but content myself with the mention of a few of the more important considerations. It is curious, but the Hippocratic and Galenic theories have received confirmation in our own day by the researches of Virchow and Traube. It is now acknowledged that, whatever may be the changes which fever-poison primarily exerts on the blood, the first intelligible physiological effects are in the nervous system, and in the sympathetic and vagus in especial. The increased oxidation of nitrogenous tissues, the commensurate evolution of heat, augmented heart's action, and the non-elimination of metamorphosed products, are the great predominating and fundamental changes in fever. These are the forerunners of all other morbid processes, and between the sum of their excess and the degree of perverted secretion there is correspondent relation. Increase of heat is the symptom pathognomonic of pyrexia. In the recognition of specific differences in fever, we are by parity of reasoning compelled to admit that their material causes differ. The character of tissue-change is determined by the character of the specific poison. It is the opinion of modern pathologists, that the *materies morbi* always invades the organism from without. We now have a vast array of proofs that overcrowding, bad or insufficient food, and mental depression, are the main circumstances which precede epidemics of typhus; that decomposed organic matters produce the enteric form; and that relapsing fever is so apt to follow on the heels of destitution, as to have acquired the synonym of famine-fever. Such are the cognisable, the preventable states, entering into their causation. Those vital and chemical processes which produce combustion of what is called the store-albumen of the blood, mainly give off urea and uric acid; and it is to the retention of these urinary solids that prominent symptoms and intercurrent affections are almost if not wholly owing. It is from these products of metamorphosis that congestion, a low form of inflammation, and uræmia, supervene. Hence, in treatment, to favour elimination is of supreme importance. Before all this new light shone forth, our remedies were prescribed with great dubiousness and much perplexity. We could not anticipate events. We did not know what to expect during the course of the respective species. By the non-recognition of those types which are so distinct and reverse in their essence and phenomena, fears were then unnecessarily aroused, and dangerous symptoms were sometimes regarded with too little heed. In this our day, we know typhus by its mode of accession, its rubeoloid rash, the absence of diarrhœa, the grave impress made on the great nervous centres, the drawing in of the abdomen, and the average date of the crises. In enteric fever, its slower beginning, the lenticular rose-coloured spots, diarrhœa, tympany, pain and gurgling in the right iliac fossa, the cleaner tongue, and less cerebral disturbance, tell plainly of its nature. The sudden accession, quick pulse, great heat, icteric tendency, the abrupt resolution by diaphoresis when the apyrexial state becomes at once complete, and, in the course of a few days, the repetition of primary symptoms, pronounce the relapsing type. Nearly thirty years ago, I pointed out the fact that the temperature in relapsing fever may be 107 or 108 deg. Fahr. without the case assuming an alarming form. In typhus, and in the enteric species, we contemplate with deep and just anxiety such a high reading of the thermometer. Again, in the two last named types, sudden and powerful diaphoresis is not unfrequently a fatal symptom. In each of these three species, we now not only know great cardinal and distinguishing characteristics during life, but what to look for—all changes which we do not expect to discover till after death. In typhus, there is no specific lesion. We do, however, in typhus find brain-atrophy, œdema of the pia mater, and active and passive congestion; but in enteric fever we find specific lesions in the ulceration of the agminate and solitary glands of the ileum, and sometimes sparsely scattered in the colon. In a number of *post mortem* examinations made on those who had died of relapsing fever, I did not in a single instance find these ulcerations, but always more or less of splenic disease. In typhus, we dread cerebral mischief and muscular degeneration enfeebling the heart; in enteric fever, failure of cardiac power from ganglial impression made by the specific poison, intestinal hæmorrhage, and perforation; and in relapsing fever, cholæmic and uræmic poisoning are often associated with the fatal catastrophe. Some time ago, at one of our Branch meetings, I read some cases of uræmic poisoning, and showed how the phenomena of this mode of blood-contamination closely resemble the phenomena of essential typhus. The typhoid state of the specific pyrexia, and the typhoid state from renal disease, are sometimes so correspondent, that the thermometer alone can solve the difficulty. I know no instance in which thermometry so opportunely and in such elucidative manner comes to our aid. Again, during the first week of continued fever, to note the temperature is often to conduct us to a right diagnosis. Such are some of our gains concerning continued fevers.

Gentlemen, I will no longer encroach on our limited time; and I may say, with the poet,

> "Ante diem clauso componat vesper Olympo."

I have endeavoured to concisely indicate some of those great advances which have latterly been accomplished, and which have signally extended the boundaries of medical science; but a vast array of acquisitions of the deepest interest remain untold. Had the opportunity been given, much in physiology and therapeutics might have been recounted; and, as pertains to preventive medicine, the onward march has been commensurate with any of those kindred subjects which come within our studies. Whatever progress may have been made in any of the physical sciences, the progress in medicine has been equal to that of any. During the last five-and-twenty years, more has been achieved than in any previous century. A higher standard of education, better clinical teaching, and more thoroughness of acquirement, are telling favourably on the student. Silent workers—and they are many—in the wards, the laboratory, and the study, are evolving great truths, and continually fortifying the busy practitioner with fresh facts of inestimable value. The medical profession is being held in higher and higher estimation. There never was an age in which more zeal, more ability, and more loyalty, were found in its ranks; and there never was an age in which our exalted vocation was pursued with such success as it is in the present day. An enormous accumulation of facts—irrefragable, applicable, priceless facts—have made great stores of new knowledge, which daily is wisely, humanely being brought to bear in enabling us more certainly, more successfully to wage our war against the ravages of disease and death; and this knowledge, which is broadly recognised, solid, immutable, "will remain as the Danube and the Alps remain, because it is founded on the Beautiful and the True".

THE LIVER IN JAUNDICE.

By J. WICKHAM LEGG, M.D.,
Casualty Physician and Demonstrator of Morbid Anatomy to St. Bartholomew's Hospital.

[*Concluded from p.* 608 *of last number.*]

THE changes which the parenchyma of the liver suffers in obstruction to the bile-ducts have been very little studied. Oskar Wyss (*Archiv für pathol. Anat.*, 1866, vol. xxxv, p. 553), Leyden (*Beiträge zur Pathologie des Icterus*, Berlin, 1866, p. 85), and Heinrich Mayer (*Medizin. Jahrbücher herausgegeben von der k.k. Gesellschaft der Aerzte zu Wien*, 1872, Heft II, p. 133), are almost the only three observers who have paid any detailed attention to this state. The liver at first increases in size; it becomes of a deep bilious or olive-green colour, and is said to be itself jaundiced. Its consistence is increased, and the surface and section are somewhat granular. If the jaundice continue long, the liver wastes.

The changes in the cells and in the connective tissue of the liver may be considered apart. In all cases of long continued obstruction to the bile-ducts, the connective tissue grows. The starting-point of this overgrowth is the place of obstruction itself, and the degree of the overgrowth depends upon the kind of obstruction. Thus the overgrowth is greatest in animals around whose bile-ducts a ligature has been placed. Here the presence of the ligature, and the accompanying disturbance of all the structures in the porta of the liver, cause a rapid and enormous overgrowth of the connective tissue throughout the whole of the gland. In such cases, I have found, on the fourteenth day after ligaturing the ducts, the most intense cirrhosis, so that the liver-structure seemed made up chiefly of connective tissue, with a few dwindled hepatic cells. This overgrowth of the connective tissue begins within a few hours after the operation. (See the author's paper on the Changes in the Liver which follow Ligature of the Bile-Ducts, in *St. Bartholomew's Hospital Reports*, 1873, vol. ix, p. 161.) On the other hand, if the obstruction be such that the connective tissue around the bile-duct suffers but little, the increase in the connective tissue is also but slight. In a case which I have recently examined, in which the obstruction was caused by the pressure of an hydatid cyst upon the hepatic duct, the increase in the connective tissue was small, and did not pass into the lobules. Further, there was an absence of those lymphatic corpuscles, which are so marked a feature in the new connective tissue after ligature of the ducts and in cirrhosis. I attribute this to the uniform elastic pressure of the fluid in the hydatid cyst, so different in its effects from those of a rough angular gall-stone, one of the most common causes of obstruction. In one of these cases, in which it would appear that the obstruction from the gall-stone was not complete, if the absence of jaundice be taken as evidence on this count, I yet found the connective tissue throughout the liver greatly increased, and containing many new lymphatic elements, so that, at first sight, the section of the liver, seen under the microscope, very strongly recalled a far advanced cirrhosis.

The view that the overgrowth of the connective tissue takes its rise from that surrounding the bile-ducts, is strengthened by the fact that, in all cases of permanent obstruction, the bile-ducts are found greatly thickened. Solowieff (*Centralblatt für die Medicinischen Wissenschaften*, 1872, No. 22, p. 337) also found the same morbid overgrowth of the connective tissue in the liver after ligature of the portal vein, as I have found after ligature of the bile-ducts.

This overgrowth of the connective tissue was not altogether unknown to the older pathologists. Albers (*Beobachtungen auf dem Gebiete der Pathologie*, Bonn, 1836, p. 19), in speaking of cases of obstruction and dilatation of the bile-ducts, says the parenchyma of the liver is granular, rough, coloured yellowish brown; and that in one case the liver was really cirrhotic. It appears, he continues to say, that the cellular tissue of the liver is partly atrophied, partly indurated. Andral (*Clinique Médicale*, vol. ii, p. 534, 4th edition, Paris, 1839) noticed, in a man whose bile-ducts were much dilated, that the liver was small, deep green, very dense, and granular on the surface and section. These changes Andral seems to attribute to a fall on the right hypochondrium two years before death; but it should be noticed that the man had also been a drunkard.

The changes which the liver-cells undergo are less striking. Leyden (*loc. cit.*), from his experiments, drew too hasty a generalisation that a fatty infiltration of the cells followed all obstructions to the bile-ducts. This is not universally the case either in man or in animals. In man, I have yet to meet with the case in which fatty infiltration was the most prominent appearance. In some cats who died within a short time of the bile-ducts being tied, I have, indeed, seen this appearance; but I am inclined to attribute it to the liver having been fatty before the duct was tied—a state not at all uncommon in domestic animals.

The chief change in the liver-cells is atrophy. The size of the cells varies from a little smaller than natural, to twice that of a leucocyte when the growth of the connective tissue has been great. When the connective tissue shows less appearance of growth, the cells are less altered; they then preserve very nearly their natural shape and size. In other cases, the shape varies with the size; they tend to become oval or rounded; their outline indistinct. The nucleus is well preserved, shrivelled, or invisible. The contents of the cells seem to be chiefly fat and a few pigment-granules: the fat is rarely in large drops; and the pigment, in the cases which I have observed, not so abundant as the writings of others led me to expect. The arrangement of the cells in rays around the hepatic vein is altogether lost, when the obstruction has existed for any length of time.

One of the most important functions of the liver known to us is the preparation of glycogen. I have made several observations bearing upon the question, whether the liver continues its glycogenic functions when the gall-ducts are completely obstructed. I have found that, in cats, the glycogen disappears from the liver within a few days after the bile-ducts have been tied; and also that, on the fifth or sixth day after ligature of these ducts, irritation of the fourth ventricle is not followed by the appearance of sugar in the urine (*Archiv für exper. Pathologie*, 1874). It would appear, therefore, that within a few days after complete obstruction to the gall-ducts, the liver ceases to secrete glycogen.

Another function of the liver, that of secreting the bile-acids, is believed by Golowin (*Archiv für pathol. Anat.*, 1871, vol. liii, p. 433) to be abolished in long continued jaundice. He found that, in dogs in which biliary fistulæ had been made and again closed, the bile-acids could not be discovered in the urine; and he concludes therefrom that, in long continued jaundice, the bile-acids are no longer produced. Further evidence will, however, be required before this opinion can be universally assented to.

Some physiologists appear to believe that the urea and uric acid excreted in the urine are formed in the liver. The experiments of Gscheidlen (*Studien ueber den Ursprung des Harnstoffs im Thierkörper*, Leipzig, 1871) seem to make this theory more than doubtful. However this may be, in complete obstruction to the gall-ducts I have several times found that, although the urine was much increased in quantity, yet the amount of urea excreted in the twenty-four hours was quite natural.

In some cases of long continued obstruction to the bile-ducts, the liver-cells have been found completely destroyed; nothing but a fatty *detritus* being seen under the microscope, and not a single liver-cell being found in any of the preparations. I have myself seen this appearance only in acute yellow atrophy of the liver. Yet it is noteworthy, that the very first case in which the liver-cells were found to be dissolved was one in which a permanent obstruction to the ducts existed (Thomas Williams, *Guy's Hospital Reports*, 1843, p. 444). The relation, as to cause and effect, which exists between obstruction to the bile-passages and dissolution of the cells, is dubious. I am unable to admit Oskar Wyss' explanation, that the solution of the cells is simply a *post mortem* change. I have frequently kept a liver from a jaundiced patient, even in the heat of summer, without any preservative fluid, and yet been able to recognise the cells many days after death. In one case, where the obstruction to the ducts was complete, and the jaundice had lasted a year, the liver-cells were easily recognised on the seventh day after death, when the liver gave plain signs of putrefaction.

This solution of the cells was attributed by Theodor von Dusch (*Untersuchungen und Experimente als Beitrag zur Pathogenese des Icterus und der acuten gelben Atrophie der Leber*, Leipzig, 1854, p. 36) to the action of the bile upon the liver; but his statement, that the bile dissolves the liver-cells, has been disproved very satisfactorily by Kühne (*Archiv für pathol. Anat.*, 1858, vol. xiv, p. 324). It is true that the bile renders the outline of the cells indistinct, and the cells themselves become difficult to see; but the outline of the cells can always be restored by the addition of some colouring matter to the slide. I have verified these experiments on several occasions; and there is no likeness whatever between the sudden and complete disappearance of the red blood-corpuscle when acted on by bile, and the slow obliteration of the outline of the liver-cell under the same circumstances.

It is still important, however, to keep in view the results of Leyden's experiments (*Beiträge zur Pathologie des Icterus*, Berlin, 1866, p. 60) upon the slow absorption of the bile-acids. He found that, after injection of the bile-acids under the skin of frogs, the liver-cells showed a marked fatty infiltration; the muscular fibre of the heart a diffused granular appearance. In one case, it is stated that the liver-cells were destroyed. The bile-acids had produced a parenchymatous degeneration of the liver and heart—a common effect of many poisons, such as phosphorus, sulphuric acid, alcohol, etc., and, as I have recently shown, of raising the natural temperature of the body (*Trans. of the Pathological Society*, 1873, vol. xxiv, p. 266). It is quite possible that in these cases, where the liver-cells are found destroyed after death, the long continued circulation of the bile-acids in the blood may have produced their physiological effect, as described by Leyden; and the liver-cells may have thus been dissolved. The appearance of solution of the cells of the liver is, however, not often met with outside acute yellow atrophy; and it would be desirable to have recorded further cases, well authenticated by competent observers.

ON ERYSIPELAS DURING THE PUERPERAL CONDITION.

By JAMES REID, M.A., M.B.

It is generally agreed among medical men that to lying-in women there is no greater danger than exposure in any way to the poison of erysipelas. Among the many sources to which puerperal fever can be traced, this is regarded, and apparently on the most ample grounds, as one of the most potent; though there are authorities who maintain that the poison of puerperal fever is a specific one, and that other specific poisons will not engender the malady. The following case seems, at the first blush at least, to favour the latter theory.

On being called one morning lately to see a woman who was daily expecting her confinement, I found her suffering from a severe attack of erysipelas of the head and face. She had been ill for a couple of days, and was steadily getting worse, the tumefaction over the whole face being very considerable by the time I saw her. There were no symptoms of impending labour in the morning; but in the evening, after a very few pains, she was suddenly delivered of a healthy child. Not having hitherto had a case where labour came on during the height of an attack of erysipelas, and having in view the current theory, I formed in my own mind a grave prognosis, and my opinion was shared by a medical friend who saw the case. The treatment from the outset and throughout was simply beef-tea, milk, eggs, and port wine *ad libitum;* with fifteen minims of the tincture of iron every two hours. During the first two days after parturition, the erysipelas increased in intensity, the contour of the features being in a great measure lost, and the neck being invaded. At one time, there was slight delirium, but this wore off. By the third day, there was a change for the better; and there was now steady progress towards convalescence, the erysipelas terminating in resolution, with desquamation of the cuticle, after a duration of ten days. During this time, the patient consumed a large quantity of the remedies mentioned, and took in all three or four ounces of the iron tincture. The lochia were at no time suppressed or unnatural, nor was there ever the slightest symptom that the uterus was affected. There was, further, no febrile state, more than was accounted for by the erysipelas; and this was not intense, nor did it take on in any way a typhoid aspect. In short, the erysipelas ran its course in a most favourable manner, ignoring as it were, and not interfering in the slightest degree with, the mother's puerperal condition.

Now here is a case where, on the current theory, puerperal fever might have been confidently looked for. If puerperal patients be so susceptible to the poison when conveyed by the atmosphere or by contact, one would, *à priori*, expect that untoward consequences could not fail to follow in a case where the poison was already present in the circulation, and where circumstances were so favourable for its operation. But such was not the case; and either erysipelas cannot invariably be so very fatal a source of mischief to lying-in women as is generally believed, or there must be some explanation of such a case as the present. I do not believe the case is by any means unique, as a friend assured me he had a lying-in patient lately where erysipelas affected the left arm entirely and part of the left side of the trunk, with no more unfavourable result than the formation of large bullæ; and I have no doubt some of the readers of the JOURNAL can recall similar cases.

One explanation may be, that the poison, having already become localised before labour came on, remained so, and wore itself out without invading the uterus or the system at large; though this view is at variance with the spreading and metastatic nature of erysipelas, which might have been fairly expected to come into play under circumstances so favourable as in the case at issue. Or, assuming, as some maintain, that erysipelas and puerperal fever are essentially the same disease, it might be suggested that the erysipelas here acted as a prophylactic against the more severe form of the same disease. Unfortunately, however, for this suggestion, one attack of erysipelas confers no immunity from subsequent attacks. Very probably the case in point can be explained by competent authorities; but, failing any reasonable explanation, it seems to favour the view held by Dr. Snow Beck, that puerperal women have no influences at work in the system whereby the poisons of scarlatina, erysipelas, typhus, etc., can be resolved into the poison of puerperal fever, which poison, he believes, is specific.

CLINICAL MEMORANDA.

HÆMATOMA AURIS.

II.

THIS subject having received some attention in the JOURNAL, the following brief notes of a case which has lately come under my notice may prove interesting from the fact that, in one or two important points, it seems to differ from the cases hitherto observed.

A. B., a Dutchman, healthy-looking and well-built, aged 29, presented himself with a tense, elastic swelling about the size of a small chestnut, involving the helix of the left ear, and almost entirely obliterating the fossa. This swelling was somewhat purplish, and bulged more anteriorly than posteriorly; it did not pulsate, nor was its temperature sensibly increased. He stated that it began to appear about three months previously without any apparent cause, and had been increasing gradually; it had never caused him any pain, nor was it at all tender on pressure. There was no history or evidence of any cerebral symptoms; the man seemed quite up to the ordinary intellectual standard, and denied the existence of insanity in any member of his family. On cutting into the swelling anteriorly through the hypertrophied cartilage, florid, somewhat frothy, blood began to ooze out from a cavity, which, on introducing a probe, was found to exist between two distinct layers of cartilage. When all this blood had oozed out, the swelling was somewhat reduced, but, after a few days, returned to its original size.

If this be a true case of hæmatoma auris, it differs from those previously recorded in the following particulars: 1. In the absence of any mental affection, and of all cerebral symptoms whatever, either in the man himself or any of his relatives; 2. In the gradual appearance and slow increase of the swelling, and absence of all pain and tenderness. I shall keep the case under observation to note its further progress.

JOHN CROSS, M.B.Camb., Spital Square.

III.

DR. PHILLIMORE, in his paper published in the BRITISH MEDICAL JOURNAL of April 25th, upon hæmatoma of the external ear, says he has never observed it "unless accompanied by disease of the brain or its membranes". If Dr. Phillimore mean coarse lesion of the brain or its membranes, these two cases which I now record will tend to disprove it; but, if he mean functional, it is almost useless to make that distinction, seeing that in every case of insanity there must be functional disturbance. For sixteen years, my experience led me to believe in the connection of hæmatoma with cerebral disease; but, during the last four years, I have met with two cases which have convinced me that it may occur independently of grave cerebral lesion; one was that of a girl, aged 22, with acute mania; the other that of a man, aged 45, and similarly affected, but whose case was much more chronic. I do not suppose such cases are extraordinary, but they show that hæmatoma auris has no *essential* connection with cerebral disease. At one time, it was my conviction that this singular morbid condition was found in those only who were incurably insane, and was, therefore, a ground for an unfavourable prognosis; but I have good reason to know that, in many cases, a blow has produced the hæmatoma; it is not always easy to say precisely how the injury was inflicted, but one can readily imagine that a restless patient might, in tossing about in bed, receive a slight contusion on the external ear, and in this way get hæmatoma. In short, it seems to me highly probable that the hæmatoma of insanity may have such an accidental origin, and that we are, therefore, not justified in asserting that there is any necessary connection between the aural lesion and confirmed disease of the brain or its membranes.

WILLIAM C. HILLS, M.D., Superintendent of the Norfolk County Asylum, near Norwich.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, APRIL 25TH, 1874.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

CERTAIN British, American, French, and German physicians and surgeons were recommended by the Council for election as honorary members of the Society. The names were ordered to be suspended for one month, in accordance with the bye-laws.

Cancer of Transverse Colon, producing Sphacelus of Wall of Abdomen.—Dr. ANSTIE read, for Mrs. Garrett-Anderson, notes of the case. The patient was a woman, aged 68, and presented, on first being seen by Mrs. Anderson at the Women's Hospital, December 9th, no distinctive signs of malignant disease. A slightly movable lump, which existed on the right of the navel, was quite painless; and it was at first hoped that it might be mere fæcal accumulation. Purgatives at first diminished the swelling, and seemed to make it softer. Thirteen days after her first visit, however, some pain came on, and she was taken into the hospital the next day. By this time, sphacelus of the skin had already commenced, and it was evident that there was a communication between the bowel and the surface. The treatment consisted of opium and brandy, given by the mouth, and disinfectant poultices applied to the sphacelated part. The woman sank and died on December 30th, or twenty-one days from her first being seen, and one week after admission to the hospital. *Post mortem* examination showed that the malignant disease of the transverse colon was primary, and that there was no cancerous disease in any other part of the body. The bowel became adherent to the abdominal wall, and a perforation took place, through which fæcal matter passed into the muscular and subcutaneous cellular tissue, causing general cellulitis and sphacelus of a large portion of the skin of the abdomen. A ring of cancerous tissue almost occluded the bowel and caused fæcal accumulation above; through this ring slow perforation had taken place, with inflammatory adhesion to, and subsequent perforation of, the successive tissues of the abdominal wall. It was an interesting fact that the colon had been diagonally twisted by the results of old omental adhesions, due to an old omental hernia.—Dr. ANSTIE mentioned particulars of another case, in which it was at first doubtful whether an abdominal tumour consisted of an accumulation of fæces or a solid growth, which in time proved to be a mass of malignant disease. The question of diagnosis in such cases was often very difficult.—The PRESIDENT remarked upon the rarity with which cancer of the bowel led to sphacelus of the abdominal walls. He had seen such an occurrence once or twice, but then the cæcum was the part primarily affected. The bowel at that point being closely bound down, cellulitis was easily produced, and an abscess formed. Such a disease in the colon must be much more uncommon. It was not at first easy to decide upon the exact cause of the abscess; whether it were due to simple inflammation of the cellular tissue, or to malignant disease of the bowel. Another patient, a lady, died of a tumour in the bowel, which formed a hard immovable mass in the iliac fossa.—Dr. FITZPATRICK had treated a case of cancerous tumour of the descending colon, close to the rectum, which baffled diagnosis. It caused a large accumulation of fæces in the colon, and was at one time regarded as a case of neuralgia and of abscess. Further particulars would probably be published.—Dr. D. POWELL inquired if there was any objection to the administration of purgatives in such cases for the sake of diagnosis. In a case of doubt, surely a purgative would clear up the diagnosis.—Mr. T. NORTON had seen Mrs. Anderson's case; the intestinal contents escaped into the cellular tissue and caused the fatal result.—Dr. ANSTIE remarked that, in some instances, a purgative might resolve all doubts about a case; but that, in any case where fæcal vomiting had existed for a day or two, a purgative would be inadmissible.

Traumatic Stricture of the Trachea.—Mr. HENRY LEE read notes of a case. The patient had attempted suicide by cutting his throat, wounding the trachea immediately below the cricoid cartilage, and had then made a second jagged wound with a penknife lower down in the trachea, on the right side. The wound healed readily; but, on two occasions afterwards, he was attacked with urgent dyspnœa, necessitating the reopening of the wound. He was, therefore, obliged to constantly wear a tube, but still there was a great tendency to contraction and difficulty in replacing the tube, if it were removed in order to be cleaned. The patient also entirely lost his voice. This state of things continued for six months. The patient was then placed under the influence of chloroform, and the cricoid and lower part of the thyroid cartilages divided in the median line, thus freely exposing the interior of the windpipe. It was then seen that the posterior part of the upper ring of the trachea, on the left side, approached very closely to the anterior part of the lower margin of the cricoid cartilage, so that the first wound that the patient had made in his throat must have passed between these parts, and they must have been drawn together in process of cicatrisation, so that the interval between them was not more than a quarter of an inch. This upper ring of the trachea was now in a great part removed with a pair of scissors. The upper part of the wound healed readily, and, ten days after the operation, the patient, by placing his finger over the small opening which remained, could speak in his natural voice. A tube, with the inner opening directed upwards, was introduced, and he was able to go about his business as usual.—Mr. EASTES elicited from the author that the patient could wear the tube, and could also permit it to be removed; he could speak with or without it; and wore it only to prevent contraction.—Mr. THORNTON related similar cases; in one, thyrotomy was performed, and the left vocal cord removed; in another case of cut-throat, there was subsequent complete stricture of the trachea. He believed that chloroform under no consideration ought to be given for the performance of tracheotomy, as it did not afford the patient the chance of getting rid of the blood which might run down the trachea.—Dr. MACKENZIE thought Mr. Lee's was the first case in which a ring of the trachea had ever been removed. There was always the greatest difficulty in adapting a tube passing up into the larynx; it might produce temporary benefit, but almost certainly had soon to be removed, on account of the irritation it produced. He thought there were grave objections to the use of chloroform during tracheotomy. He had never been able to do away with a tube once worn after attempted suicide. In one case food passed down the trachea and out at the wound, so that the patient could not appear in company whilst eating.—In reply to Mr. Barwell, Mr. LEE said that the upper limb of his tracheal tube had purposely been made short, as if long it was sure to irritate the larynx.—Mr. BARWELL said that once, in performing tracheotomy, he was compelled to cut through a large thyroid body; there was absolutely no bleeding from the wound in the thyroid, and but very little from the surrounding parts. He never hesitated, where the thyroid body was large, to cut through it; and if the venous hæmorrhage was considerable, he cut at once into the trachea, since the bleeding always ceased as soon as air entered the lungs.

Treatment of Cystic and Fibro-cystic Bronchocele.—Dr. MORELL MACKENZIE read a paper on this subject, which was illustrated by photographs of patients taken before and after treatment. At the end of 1873, Dr. Mackenzie had treated 68 cases of cystic goître, and 19 of the fibro-cystic variety. Of the cystic cases, 54 were cured, 11 were too slight to require treatment, and in 3 instances cardiac disease rendered it undesirable to employ radical treatment. Of the fibro-cystic cases, 11 were cured, 4 greatly benefited, and 1 died, whilst in 3 cases, the disease being slight, did not call for interference; and 1 patient discontinued attendance during the treatment. In the cystic cases, the cyst was first emptied with a trocar at its most dependent part. A drachm or two (according to the size of the cyst) of a solution of perchloride of iron was then injected and the cannula plugged, the iron being left in the cyst; after seventy-two hours, the plug was removed, and the iron solution withdrawn. The plug was then reinserted, and poultices of linseed meal kept constantly applied for a few days (sometimes for ten days or a fortnight) immediately over the cyst. In a few days, suppuration was set up, and the plug was then permanently removed, the cannula, however, being allowed to remain in the cyst until the secretion was limited in amount and thin in consistence. The duration of treatment was generally from three weeks to four months, according to the size of the cyst, the usual time being from six to eight weeks; if, however, the first injection were removed too soon, the process might have to be repeated two or three times, and thus the duration of the cure would be prolonged. In the fibro-cystic cases, the cysts were first treated in the manner described, and the fibrous structure afterwards attacked with subcutaneous injections of iodine. In the only fatal case—one of fibro-cystic substernal goître—death suddenly supervened from the injection of air into a vein. In order to avoid such an accident in future, the author now uses a syringe with a long bent nozzle, which is so constructed that it cannot be completely emptied during the injection. With this precaution, he believes that the risk is entirely removed. Several cases were related in detail, and the following were the conclusions at which the author had arrived:—1. Any cystic goître which has attained the size of a hen's egg requires to be actively treated, even when the symptoms are not urgent; 2. Smaller cysts, which give rise to serious dyspnœa or dysphagia, likewise require to be treated; 3. The conversion of the cyst into a chronic abscess is the safest and most certain mode of treatment; 4. Suppuration is best set up by injections of the perchloride of iron, as the disposition to hæmorrhage is thereby effectually controlled; 5. Injections of iodine (in cystic goître) are dangerous, because often followed by sloughing; 6. There is a risk in the treatment by injections of iron, from the occurrence of too profuse suppuration when the cyst has been allowed to attain too large a size before treatment; 7. All operations on the neck are attended with the danger of air entering a vein and causing sudden death; 8. This risk is in proportion to the development of the veins, and the propinquity of the tumour to the heart; 9. In pure cystic goître, the chance of this occurrence is so slight that it may be dismissed from consideration; 10. In certain kinds of fibro-cystic goître, viz., those in which some of the original gland substance is contained in the cyst, especially in substernal fibro-cystic goître, the risk is at its maximum; 11. The extirpation of cysts is always attended with great danger from hæmorrhage; 12. Extirpation is, nevertheless, justifiable where (the symptoms being urgent) the cyst has attained an enormous size, and has a capacity of several pints, but is not directly connected with the trachea or œsophagus; 13. Extirpation is justifiable where such a cyst has already burst and the patient is in danger from an exhausting discharge; 14. Extirpation may also be employed for the removal of a small but distinctly pedunculated cyst, having, for instance, a capacity of two or three ounces, provided there be no large vessels in its peduncle.—Dr. YEO inquired if there was functional disease of the heart, and if it was removed by removal of the cysts.—Mr. T. SMITH inquired if the solution of iron was allowed to remain in, or if, when the parts inflamed, the cyst was laid open and treated like an abscess; or was the tube allowed to remain *in situ*, and did the discharge of pus through it continue.—In reply, Dr. MACKENZIE stated that there was no functional disease of the heart in any of his cases. He injected the solution of iron and left it there for three days, for he had found that, if it was removed at the end of one or two days, the operation often had to be done again. The tube remained in the wound plugged; after three days, the iron was let out, the pus then escaped through the cannula, which was kept *in situ* for three or four weeks, when the pus, having become thin, could easily escape.

Paralysis of the Radial Nerve caused by an unusual mode of Lead-Poisoning.—Dr. ALTHAUS read notes of the case, which was that of a chemist, who was laid up for four months with erysipelas. Some time after, he lost the use of the muscles supplied by the radial nerve, so that he was unable to use his hand and fingers. The author found, by using electrical tests, that the paralysis must be owing to the influence of lead. There are three different forms of paralysis of the radial nerve—viz., one caused by injury, a second by the influence of wet and cold, and a third by saturnine poisoning; and these may be distinguished from each other by the following signs. In *rheumatic paralysis*, the farado-muscular excitability is generally normal; there is no, or only a slight degree of, anæsthesia of the skin; and the supinator muscles suffer just as much as the extensors. In *traumatic paralysis*, the farado-muscular excitability is lost; there is anæsthesia of the skin; and the supinators suffer equally with the extensors. Finally, in *saturnine paralysis*, farado-muscular excitability is lost; there is no anæsthesia of the skin; and the supinators are perfectly healthy. This last group of symptoms being present, search was made for a source of lead-poisoning; and it was at last found out that the patient had used an ounce of the unguentum plumbi subacetati compositum as a dressing for the sore on his thigh three times daily for a month. Lead is absorbed even by a surface not denuded of its cuticle; but its absorption was in this case considerably facilitated by the highly vascular condition of the sore, and the length of time during which the lead ointment, which was spread on lint, remained on the surface of the wound. Iodide of potassium was given for three weeks without relief, but three applications of the continuous current completely restored the use of the limb. Dr. Althaus concluded his paper with some remarks on absorption of lead in general, and on the seat of the paralysing lesion in cases of lead-palsy, showing that the loss of power is not owing to an affection of the nervous centres or the muscles, but of the peripheral nerve-trunks. He recommended to resort early to treatment by the continuous current in these cases; as, in the later stages of the complaint ,when muscular atrophy and contraction of the antagonists has set in, the effect of the same treatment is much more slow, and not nearly as complete, as in the earlier stages of the affection.—Mr. LEE related the case of a young woman, who gradually declined in health, had loss of tone, etc., and whose ailment was traced to her occupation of shaking out cloths in a room full of dust, lead being found in the dust.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MAY 5TH, 1874.

THOMAS B. PEACOCK, M.D., in the Chair.

Sarcomatous Growths from the Vagina, Bladder, and Uterus.—The report by Mr. Marcus Beck, on Mr. HOWARD MARSH's case, exhibited at a former meeting, was read. The large polypus from the bladder was found to be composed almost entirely of small round cells of a lymphoid type, imbedded in a basis, homogeneous, or nearly so, on the surface, but becoming more and more fibrous towards the pedicle, until, at the base, the fibrous tissue formed the bulk of the growth, the cells being only scattered here and there, either singly or in groups. The whole growth was tunneled in every direction by large blood-vessels. No epithelium was found on the surface of the larger polypi, though columnar epithelium was present in the hollows between the polypi. The growths in the vagina differed from those in the bladder, in containing large numbers of small spindle-cells, arranged in layers parallel to the surface. The specimen might be looked upon as an overgrowth of the connective tissue of the parts implicated. No tissue was found in any part of the specimen, which might not have resulted from a simple overgrowth of the normal tissues of the part.

Xanthelasma Multiplex.—Dr. WICKHAM LEGG related a case, occurring among Dr. Andrew's patients, in a female, who had been jaundiced for two months. There were patches existing on the eyebrows, ears, feet, gums, etc. She passed a hard substance by stool, the jaundice disappeared, and she gained flesh and health. One spot had been cut across, and severe hæmorrhage took place from the cut surface. In Virchow's case, previously referred to, jaundice was not present, although there was multiple xanthelasma, showing that the one may exist without the other.

Sarcoma of Stomach.—Dr. LEGG also exhibited the stomach, removed from a young woman aged 17, who was admitted moribund, and died the next day. At the *post mortem* examination, a growth from the stomach, infiltrating the liver and great omentum, was discovered. No other disease, beyond a fibro-cystic tumour of the ovary, was detected. Under the microscope, the growth from the stomach was found to consist chiefly of round cells, imbedded in a matrix, which evidenced a slight disposition to fibrillation. Some of the cells contained each a large nucleus; in others, it was double; and in others, again, it was indistinct. It was a case of round-celled sarcoma.

Hydatids of the Spermatic Cord.—Mr. HOWARD MARSH exhibited a specimen, closely simulating hydrocele of the cord, occurring just at the external abdominal ring. He was not aware that any similar case had been recorded.—Dr. CAYLEY inquired whether any hernia existed.—Mr. MARSH stated that there was a trace on one side, but not on the other.

Tumour attached to the Cervical Vertebræ.—Mr. NUNN showed a specimen, occurring in a man, aged 73. He had a swelling on the left side of the back, of twenty years' duration. It was highly elastic, and looked as if it were malignant. There was a history of an attack of paralysis, twenty-four years previously; the mouth was drawn to the left side. He had also paralysis agitans of the left arm. The tumour appeared to be attached to the transverse processes of the cervical vertebræ. He died in January. At the necropsy, the cords of the brachial plexus were found involved. It was a case of spindle-celled sarcoma.—Referred.

Ulcer of Duodenum, in a Case of Death by Burning.—This case, reported by Mr. MCCARTHY, occurred in a child, who was burnt over the chest and abdomen. The ulcer existed below the margin of the pylorus, and there was another near it. The duodenum was perforated, and glued to the surrounding surfaces by lymph. The case was rare, and few cases were recorded where the intestine was perforated.—Dr. CAYLEY inquired whether the ulceration began in Brunner's gland, or in the mucous membrane.—Mr. MCCARTHY replied that there was nothing to guide one, as all the coats were eaten away. He had met with this condition in two cases only. In one patient, who died a few days after a severe burn, Brunner's glands were enlarged, like boiled sago; but here the mischief was too advanced to allow one to say where it began.

Ovarian Tumour from a Child Ten Years of Age.—Dr. DICKINSON of Liverpool exhibited a specimen, removed *post mortem*. The child was admitted in October last. She was very delicate and emaciated. About twelve months before, she had complained of pain in the right lower abdomen for a day or two, which continued. A small swelling, of the size of an egg, was detected. The pain continued intermittently for six months. The circumference of the abdomen, at the umbilicus, was twenty-five inches. The dulness was continuous with that of the liver. The flanks and left hypochondriac region were clear on percussion. At first, it appeared to be enlargement of the liver. Malignant disease of the kidney was suspected, the abdomen was very sensitive, and no interference was permitted. She gradually sank, and died in April. She had never menstruated. *Post mortem*, a tumour of the right ovary, weighing five pounds and a half, was discovered. The cyst had a firm fibrous capsule. It contained grumous colloid matter, with some ossified structure, hair similar to that found on the scalp, and cartilage. There was no secondary deposit elsewhere. All the other organs were healthy.—Dr. HARE inquired if the hair was attached to any structure resembling skin.—Dr. DICKINSON stated that the hair was so fine, that it was hardly visible to the naked eye.—Referred.

Syphilitic Gummatous Tumour of Larynx.—Dr. NORTON showed a specimen, involving the arytæno-epiglottidean folds, and extending to the pharynx. There was ulceration of the larynx. An abscess, due to suppuration of a gummatous tumour, occurred in the lower part. Had tracheotomy been performed, it would probably have saved the patient's life. In two similar cases this had been done, and both left the hospital well.

Bothriocephalus Latus.—Dr. LEARED exhibited a specimen, passed by an officer from Canada. There was fulness and itching of the anus. Two drachms of kamala powder were given, and a worm, twenty feet long, was expelled. Its breadth was under half-an-inch. This worm was endemic chiefly in the north of Europe, especially in Poland, Sweden, Norway, Lapland, Switzerland, and Russia; but, in this instance, it was probably obtained from America. The patient was accustomed to eat fresh water fish, which was often imperfectly cooked.

Bladder with a Pouch communicating with a Third Ureter.—Mr. FLETCHER BEACH showed a case of this nature, occurring in a child, aged five years. She had been healthy till six weeks previously, when there was a difficulty in micturition, which increased, and death ensued. *Post mortem*, a third ureter, opening below with a pouch near the bladder, filled with pus, was discovered.

Brain, Heart, and Trachea, showing Absence of Thyroid Gland in a Cretin.—Mr. BEACH also exhibited these, removed from a child, two years and four months old. There was no history of either syphilis or drunkenness on either the father's or the mother's side. There was no difficulty during labour. From birth, it kept the mouth open, and the tongue hanging out. The child ceased growing. It was only twenty-two inches and a half in height, fairly nourished; the head was large, the anterior fontanelle very open, the sutures well united; the arch of the palate was flattened. The chest was not pigeon-breasted. Two soft and flabby swellings existed at the side of the neck. The feet were blue and cold, the abdomen distended. It passed urine in bed, was constantly crying, and was very weak. A loud blowing murmur was heard at the base of the heart. After an attack of diarrhœa, lasting six weeks, it succumbed in August last. The brain weighed only twenty ounces and a half. There was no fluid in the ventricles, and no softening of the brain. The skin was coarse and rough, and easily separable from the subjacent structures.—Dr. LANGDON DOWN thought that a case of sporadic cretinism should not be taken as typical. All the cases he had seen became dwarfish at the first dentition, and were the same in mental and moral attributes. Lime in the water was not the cause of it, as cases occurred in Devonshire. These cases were caused by alcoholism at the time of their genesis. There were two kinds: cases of degeneration from chronic alcoholism, and others procreated during acute alcoholism. Although he had seen fourteen or fifteen cases, he had not, at present, had an opportunity of making a necropsy.—Dr. T. BALLARD thought that the arrested development was due to persistent diarrhœa and impairment of digestion. The theory of the growth of the child being arrested by alcoholism in the father was wild in the extreme, and that of lime in the water equally extravagant. Was not lime-water, especially the saccharated liquor calcis, given to children in large quantities?—Dr. ELLIS remarked that alcohol suspended the action of the nerves, and instanced cases where drunken parents procreated cretins.—Mr. MORRANT BAKER asked if Dr. Down had noticed diminution of the thyroid gland.—Dr. DOWN replied that, in some cases, it was certainly not absent, but there were supraclavicular swellings, composed of masses of areolar tissue.

Tumours.—Mr. GODLEE exhibited specimens removed from a labourer, aged 58. He had a sore in front of his leg, but there was no enlargement of the glands. There was a swelling of the size of a pea in the right groin, but no pain or inconvenience. There was numbness and slight loss of power in the left arm. There was a tumour in Scarpa's triangle on the right thigh, which was free from pain; also another on the opposite thigh. The lymphatic glands were larger than natural, but were the same on the opposite side. The tumour was removed by Mr. Marshall. It rested on the fascia lata, sending a prolongation upwards. It was about the size of an orange, and it seemed not improbable that it was a lymphatic gland, but no such structure was detected microscopically. Twelve days after the operation, he became intoxicated with wine that had been smuggled in. Vomiting occurred, he passed into a semicomatose state, and was unconscious for three hours, but died without paralysis or convulsions. At the necropsy, two tumours, each of the size of a nut, were found in the cerebellum, above the level of the centrum ovale majus. There was a tumour in the medulla, extending to the lower border of the pons. The heart contained two tumours, and throughout the lungs there were numerous melanotic masses. In the intestine, there were numerous black spots and cup-shaped ulcers. On microscopic examination, their structure was seen to consist of ordinary round and spindle-celled sarcoma. On scraping the black lymphatic glands, delicate oat-shaped cells were discovered. The new growth was deposited in the perivascular spaces. In the heart, it was in the muscular bundles.

Dissecting Aneurism of Aorta.—Dr. PEACOCK exhibited a specimen taken from an actor, aged 61, who, on getting on to an omnibus, was taken with difficulty of breathing and pain in the region of the heart. He was very faint, but walked into St. Thomas's Hospital. Four-and-a-half hours afterwards, he was suddenly taken with increased pain, placed his hand over his heart, and died. On examination, rupture of the inner and middle coats, at the origin of the aorta, was found to have taken place. The extravasation extended to the mediastinum, and thence to the pleura. Rupture generally occurred near the aortic valves, the blood dissecting down to the iliac arteries.

Perforation of Bowel in Typhoid Fever.—Dr. PEACOCK also exhibited a specimen from a young man, aged 17, who had suffered from diarrhœa for three days. Two days afterwards, violent delirium ensued, and continued for three days. The abdominal symptoms increased. Two days before death, the temperature rose, he got pneumonia and general peritonitis, and died. On examination, a single ulcer, which had perforated the intestine, was found; there was a slight ulceration also in the cæcal valve. There were no spots on the skin, yet it was a case of typhoid.

Malformation of Heart.—Dr. PEACOCK also showed a heart removed from a child, aged 10 months. It had been cyanotic during life. The aorta rose from both ventricles, or rather, there were one ventricle, one auricle, and one aorta; the pulmonary artery being imperfectly developed, consisting of a cord pervious only for half the distance. The quantity of blood distributed to the lung was exceedingly small, though probably there was some compensating supply. The whole of the circulation was carried on by the right ventricle through the aorta.

EPIDEMIOLOGICAL SOCIETY.

WEDNESDAY, APRIL 8TH, 1874.

INSPECTOR-GENERAL LAWSON, President, in the Chair.

The Alleged Spontaneous Development of the Poison of Enteric Fever. By W. H. CORFIELD, M.A., M.D.—After referring to the recent nature of our accurate knowledge of this fever, and the differences, especially from an etiological point of view, between it and typhus fever, the author pointed to the different definitions given of it by the authorities. Trousseau held that its contagious character was "incontestable", and said that it presented the most striking analogy with the eruptive fevers; he held that it was caused by a specific poison, which was under certain circumstances spontaneously developed; and he held precisely the same view with regard to small-pox and scarlet fever. Dr. W. Budd's view was the same as Trousseau's, except that he did not allow the alleged spontaneous development of the poison. Dr. Murchison, on the other hand, said that enteric fever was "an endemic disease, generated and propagated by certain forms of decomposing organic matter"; and, in his definition, omitted all mention of contagion, but shortly afterwards said: "My experience is entirely opposed to the view that it is contagious in the strict sense of the term." Dr. Corfield maintained that no one could deny the striking analogy pointed out by Trousseau between enteric fever and the other acute specific diseases. They agreed in being febrile, in having definite durations, divided into periods in a distinct and characteristic manner; they had characteristic lesions, and seldom attacked the same person twice; and they were communicable from one person to another directly and indirectly, enteric fever being the only exception, if it were one. Hence, those who considered that this fever was not contagious put it in a remarkably exceptional position. Indeed, after quoting cases in which the fever had been clearly shown to have spread from one person to another, Dr. Murchison said: "With such facts before us, it is impossible to deny that enteric fever is in some way communicable by the sick to persons in health." Dr. Corfield contended that this statement really conceded the whole point of the contagious or infectious nature of the disease. No one could make such a statement of rheumatic fever or of ague, and this was the whole difference between a contagious fever and a non-contagious one. The fact that medical attendants, nurses, patients in wards with those suffering from enteric fever, etc., seldom contracted the disease from them, was continually put forward as an argument against its contagious nature. But such a thing did happen; indeed, while Dr. Murchison said (*Continued Fevers*, 2nd edition, page 461), "I have never known nor heard of a case where the fever has been communicated to the medical attendant not residing in the infected house", he said, a little farther on (page 469), when remarking on the case of Putegnat, who thought that he had caught it from making the necropsy of a patient who had died of it, "It is true that he was seized a few days after the autopsy; but he had attended both the patient and her mother during their illness". In enteric fever, the bulk of the poison discharged from the patient was swamped in a mass of liquid, and did not go, as in the other diseases, to contaminate the air, clothes, etc., and this was the reason why attendants did not frequently take it. But it was said that all the evidence was against the poison being contained in the fresh fæces, and that it was not developed until the fæces began to decompose. We did not know that the poison was volatile; indeed, from the analogy of the active principle of vaccine matter, there was more reason to assume that it was not. There was no more reason to say that fresh typhoid fæces did not contain the specific poison of the disease, than to say that sugar of lead was not poisonous because a man might live in a room with a solution of it exposed to the air without being poisoned, or that vaccine matter was not infectious for the same reason. When fæces containing the poison decomposed, they gave out bubbles of gas, which mechanically carried up various particles, including poisonous ones, into the air around; and then the poison entered the air of sewers and cesspools. Water very readily absorbed foul matters from sewer-air, and the abominable practice of connecting the waste-pipes of drinking water-cisterns directly with the house-sewers was, perhaps, the commonest cause of the spread of this fever in London. Of seventeen fatal cases that had come under Dr. Corfield's notice last year in a large district in London, no fewer than thirteen occurred in houses which had this sanitary defect—a defect which, unhappily, was found in, perhaps, nine-tenths of the better class of old houses in the West End. If the fresh fæces were presumed not to contain the poison, but to develope it while decomposing, it was not a great step to imagine that all decomposing fæces might produce it, and this was the conclusion come to from the fact, that in many—it might even be said in the majority—of cases, it was difficult or even impossible to trace a case of enteric fever to a previous case. Upon such a basis, the theory of the spontaneous production of the poison was founded. Enteric fever appeared in a place; every effort to trace the importation of the poison failed. A defect in the sewerage arrangements was found, and it was said that the poison had been generated there. If it appeared wherever there were defects, wherever there was accumulation of decomposing excreta, it should be common and almost universal. Dr. Corfield referred to two towns which had been for years in a condition most suitable for the development of this poison, had such a thing been possible, but where no cases of the fever were known, until it became epidemic, being traced in each case to importation; while, in a third instance which he had recently investigated, it was traced to the chief hotel in a small country town, but could not be distinctly proved to have been brought thither. If the source of importation could not be traced in many cases, it was because persons might go about with the disease for a long time from place to place without knowing that they were spreading poison; the wonder really was, that we were able to trace many cases to their sources; but, because we were in many instances unable to find any proof of importation, we were not justified in assuming a spontaneous generation of the poison. Besides, it was well known that decomposing fæces caused simple diarrhœa, the intestinal catarrh of Trousseau, which he pointedly distinguished from the specific catarrh of enteric fever. One of the commonest causes of an outbreak of simple diarrhœa in a household was a stopped up soil-pipe or trap, or an escape of sewer-air into the house. Something more than this was wanted to produce an acute specific disease. The disease was contagious—virulently so. Those who first observed it thought it was not so, because the channels for the transmission of the poison were not those to which they had been accustomed, because the attendants did not catch it as they did small-pox and scarlet fever. Trousseau, who had more definite ideas about contagion, said that it was incontestably contagious, because he observed that it spread from one person to another. As to its alleged spontaneous origin, the author maintained that there was no proof of it. Trousseau held that all these contagious diseases were on the same footing upon this matter, and he considered that they might one and all be developed spontaneously under certain circumstances, supporting his view by the fallacious argument that, because they must have begun at some time somewhere, therefore they might begin at any time anywhere. If small-pox, scarlet fever, and the like, could not be admitted to arise *de novo*, we could not admit it of enteric fever. A field might be well cultivated, richly manured, amply watered; but no groundsel could grow there, unless seeds were brought by the wind; no wheat, unless the corn were sown; so a town might be perfectly adapted to foster and spread enteric fever; it might have a very high general death-rate on account of its insanitary condition, but years would pass by and no enteric fever appear there, until, in some way or other, the poison of the disease was imported.—Inspector-General Dr. Murray spoke to the existence both of typhus and typhoid in India. The former still prevailed in some jails, the latter in certain cantonments, where it chiefly affected young soldiers recently arrived from Europe.—Dr. Alfred Carpenter expressed his belief that enteric fever might arise without the intervention of a preceding case. The cause that aided in the production of typhoid might exist everywhere; and, just as a particular fungus was produced when bread and cheese were left to decay in a damp cellar, so, if animal excreta were decomposing, the fungus would arise that might excite typhoid. Numerous instances had occurred to him where the disease had arisen without being traceable to importation. Recently, diarrhœa appeared in a large school; he found contamination of the well from accidental communication with the closets, and three cases of typhoid. Careful inquiry showed that the children using these closets had for the past three months certainly been free from typhoid; still, he was convinced that infection was not limited to decomposing animal matter, but might exist with full power in the recent excreta of typhoid patients.—Dr. Squire said that the facts brought forward by Dr. Carpenter seemed rather to favour the other side of the argument. Sometimes the diarrhœa spoken of by Dr. Corfield was not catarrhal, but specific; capable therefore, in all probability, of producing typhoid elsewhere. Cases of modified typhoid, and some cases of infantile remittent, might spread the disease without the source of it being even suspected. Lately, Professor Jürgensen of Tübingen had collected more than a hundred such cases, each, no doubt, able to set up the worst form of the disease.—Dr. C. E. Saunders said that, in the rural districts to which, as medical officer of health, his attention had lately been directed, cases illustrative of the origin of typhoid might be better studied than in large towns. A young man died of typhoid who had lately come to live in the country, in a house, one of four, recently connected with a common cesspool, unprovided with any means of ventilation, so that all the pressure of contained gas was upon the traps of the closet, this one being nearest to the cesspool. After this was opened and ventilated, no other case occurred. It had only been constructed a few months before, and no case of typhoid was known to have been there.—Dr. Corfield, in reply, protested against the notion that a disease-poison must be considered to be spontaneously developed, if, even in the majority of instances, no connection could be traced between one case and another. If such connection could be distinctly traced in one case, that was worth a great many in which it could not, as, especially in the case of enteric fever, we could only be expected to trace it in a few instances. The illustration given by Dr. Carpenter was singularly unfortunate, as the moulds on bread, cheese, etc., had not been shown to be developed spontaneously; indeed, the evidence that they were not developed at all without the importation of pre-existing germs was, he held, overwhelming. Dr. Corfield believed that such of the disease-poisons as were organised living beings were evolved from pre-existing living creatures of a slightly different nature by the same process of natural selection by which all the forms of animals and vegetables on the earth's surface had been developed. He would, in fact, apply the principles of the Darwinian theory to account for the appearance of various kinds of disease-germs. His end had been attained; the subject had been discussed; and he had had an opportunity of opposing views which he believed to be mischievous, in that they discouraged persons from attempting to stamp out the disease by destruction of the poison at the earliest possible moment after its exit from the body.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

A Rapid Cure for Tapeworm.—A. J. Schafish of Washington says that, in treating some cases of tapeworm, he employed no preliminary provisions beyond forbidding the patient to take any breakfast the day on which it is intended to remove the worm, and giving him a large dose of Rochelle salts the preceding night. At 10 o'clock in the morning, he had the following at one dose:—℞ Bark of pomegranate root, ½ ounce; pumpkin-seed, ½ drachm; ethereal extract of male fern, 1 drachm; powdered ergot, ½ drachm; powdered gum arabic, 2 drachms; croton-oil, 2 drops. The pomegranate-bark and pumpkin-seed were thoroughly bruised, and, with the ergot, boiled in eight ounces of water for fifteen minutes, then strained through a coarse cloth. The croton-oil was first well rubbed up with the acacia and extract of male fern, and then formed into an emulsion with the decoction. In each case, the worm was expelled alive and entire within two hours. No unpleasant effects followed. In each case, the worm was passed with the head firmly fastened to the side of its body at about the widest part, from which it was with difficulty removed; and the worm was twisted and doubled into various knots.—*The Druggists' Circular.*

PHYSIOLOGY.

The Styloid Muscles and Anæsthetics.—Dr. S. W. Copeland gives (in the *Boston Medical and Surgical Journal*, February 26th, 1874) the following explanation of the irregular and obstructed breathing which frequently occurs at a certain stage in the administration of anæsthetics, the patient being in the usual sitting or recumbent posture, with the head held back. The styloid muscles are put on the stretch. The stylo-glossi draw the tongue backwards, the stylo-hyoidei draw the os hyoides upwards, and the stylo-pharyngei raise the pharynx and thyroid cartilage upwards, all thus uniting to close the epiglottis. Pulling out the tongue will partially overcome the action of the stylo-glossi, while the other muscles will maintain their action. If now the head be tilted forward, the styloid muscles are all relaxed, the tongue falls forward in the mouth, and the larynx falls into its proper place, thus leaving the epiglottis free and the glottis unobstructed, and establishing regular respiration through the natural channel of the nose.

MEDICINE.

Scirrhus of the Mesentery.—Dr. Staples reports (*North-Western Medical and Surgical Journal*, March 1874) a case diagnosed to be scirrhus of the mesentery, involving the duodenum and pylorus. The patient was a German, aged 50. He had been ill four months with pain in the epigastrium, frequent vomiting, obstinate constipation, emaciation; he had the cancerous cachexia. The tumour was three inches in diameter, circumscribed and movable, and lay nearly in the centre of the epigastrium. The patient had worked in a sawmill, and had worn a tight leathern belt for years, instead of suspenders. Dr. Staples had known another case of scirrhus of the pylorus in a man who had worn a tight belt, and another of cancerous disease of the mesentery in a patient who had for several years worked in a shingle-mill, where he was compelled to lean over the bench of his machine, bringing a constant pressure to bear across the abdomen.

OBSTETRICS.

Congenital Deformity from Impression upon the Mind of the Mother.—Dr. Franklin Staples (*North-Western Medical and Surgical Journal*, March 1874) reports the following case. A labourer, working in a stone-quarry, had his right hand badly crushed. The mangled part was amputated, but the loss of the thumb and forefinger and subsequent contraction of the tendons resulted in an ugly deformity. At the time of the accident, and for some months afterwards, the man resided in a boarding-house, the mistress of which was pregnant. While he was ill, she nursed him and dressed his hand, although with a strong feeling of dislike and almost of disgust, and subsequently the frequent sight of the stump greatly annoyed her. In due time, she was delivered of a female child, well formed and fully developed in all respects, with the exception of its right hand, the three middle fingers of which were absent. The general appearance of the two deformities was remarkably similar. Both parents were healthy; their other children had been well formed; and no instance of congenital deformity had ever occurred in their families.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 16TH, 1874.

THE COMPARATIVE STUDY OF DRUNKENNESS.

IN an article in this JOURNAL entitled "Apoplexy and Drunkenness", we drew attention to the far too common mistake which the police make in treating certain cases of apoplexy as if the sufferers were drunk. We pointed out that apoplexy, even when caused by so gross a lesion as intracranial hæmorrhage, does not always imitate the *comatose* stage of intoxication, but sometimes the stage of uproariousness. The correctness of that statement no one will doubt, who has seen much of cases in the receiving room of a large hospital. We could narrate striking cases in illustration. We wish now to speak of the importance of making a comparative study of the results of what we shall call "Reduction" in very different morbid conditions, and especially to speak of the mode of action of alcohol taken in intoxicating, but not in comatising, doses. A sudden intracranial hæmorrhage, a certain kind of epileptic seizure, a large quantity of spirits, are severally very different things; but each of them reduces the subject *to a more automatic condition*. The general doctrine embodied in this sentence is one which has been recently applied to the explanation of acute and temporary insanity after epileptic attacks and of insanity in general. It has been pointed out that in lesions of the cerebral division of the nervous system—for example, in those lesions producing aphasia and hemiplegia—there is an order in the symptoms. And, in general, the order is that the more special or more voluntary movements and faculties suffer first, most, and longest, whilst the more automatic or more general suffer last, least, and for the shortest time. There is reduction to a more automatic condition of mind in the cases of which we are about to speak, as there is to a more automatic condition of language in cases of aphasia, and to a more automatic condition of movement in hemiplegia.

We spoke of Reduction by a certain kind of epileptic seizure; and this requires comment before we pass on. In epileptic mania, there is, we believe, as a consequence of a strong and sudden nervous discharge, temporary paralysis of the highest nervous centres, just as in epileptic hemiplegia after a severe convulsion, there is paralysis of a subordinate centre—the corpus striatum. But, for the present, we shall not dwell on any particular pathological process, but on what is seen in cases of reduction by any process whatever. Be the reducing agent what it may, it does two things: (1) It puts out of use more or less of the highest processes of the nervous system; and (2) thus indirectly causes, or rather permits, increased action of the lower processes. These two expressions are, indeed, complementary. Looking from the symptomatic point of view, we say there is (1) Loss of Consciousness, and, so to speak, under this (2) Increased Automatic Action. It is never to be lost sight of that the condition is duplex: there are together two opposite states; negatively, there is more or less of consciousness, and positively there is increased automatic action.

The sentence we have just written is, in principle, almost like a direct reproduction of what Laycock wrote so long ago as 1851. As Dr. Carpenter, himself an able exponent of the view, has recently said—"The extension of the doctrine of reflex action to the brain was first advocated by Dr. Laycock in 1844." In what Laycock wrote on Odyle, Mesmerism, and Electro-Biology, in 1851, is embodied a principle which is, we believe, true of such cases as uproariousness after intracranial hæmorrhage, boisterous conduct in drunkenness, and of epileptic mania. Borrowing Laycock's words, we may say of these cases—"One great fact proper to all is that the action of the Will and of Consciousness is suspended, and the encephalic ganglia placed in the condition of the 'true spinal' or reflex system." Here are our two elements—the negative and the positive.

We shall occasionally use the short expression "Reduced to a more Automatic Condition of Mind", or simply the word "Reduced"; and for the automatic action itself, whether slightly grotesque or maniacal, the term Mental Automatism. Thus the nomenclature is from the positive element. It is so in the term epileptic mania; but for the corresponding physical state—that is to say, in the expression epileptic hemiplegia—the nomenclature is from the negative element. This is confusing, and hinders one from seeing how, as we have already said, these two states correspond. There is really a duplex condition in each. The negative elements are loss of consciousness and hemiplegia; the positive elements are the mental automatism and the conservation of movements more automatic than those of the face, arm, and leg.

Before we go further, we must remark on the very striking fact that, along with loss of the highest processes (loss of consciousness), there is not merely action of those processes which are more automatic (the "mental automatism"), but *increased action* of them. This is a fact of the same order as that there is, after section of the spinal cord, increased reflex excitability. Now, of this Bernard says (*Leçons de Pathologie expérimentale*, 1872, p. 205)—we draw especial attention to the words we have italicised: "Nous trouvons, dans ce phénomène, un fait pathologique qui mérite d'être sérieusement étudié, *d'autant plus qu'il est applicable au système nerveux dans toute son étendue.* Tout neuf séparé du centre dont il émane acquiert des propriétés spéciales, qui ne diffèrent cependant de celles dont il jouit à l'état normal que par un excès d'intensité."

The principle that we get over-action of lower centres from the mere removal of the influence of the higher centres has very important applications. It was distinctly formulated by Anstie some years ago. Thus, speaking of the effects of opium, he wrote:—"The apparent exaltation of certain faculties should be ascribed rather to the removal of controlling influences than to the positive stimulation of the faculties themselves, or of the physical machinery by which they work." (*Stimulants and Narcotics*, p. 80.) We have more to say on this important principle later on, especially on the slowness or suddenness of the lesion, or rather of the slowness or suddenness with which the Reduction is effected, or better still, on the slow or sudden removal of control.

Let us now illustrate the general doctrine of Reduction to a more Automatic Condition of Mind by the particular case of Drunkenness. As above implied, our view is that the boisterous conduct of a drunken man is not due to *direct* influence of alcohol on the processes, the energising of which is the cause of that boisterous conduct. The processes most affected by this poison are the very highest processes. More or less of them are, we suppose, paralysed by the alcohol; and, if so, it need not be said that it is not to *their* excitement that the drunkard's silly behaviour or violent conduct is due. On the contrary, the silly behaviour or violent conduct is due to uncontrolled action (uninhibited action) of lower processes, that is, of processes subserving more automatic action, which the alcohol has not affected. Similarly, the mental symptoms in a case of epileptic mania are not, we would urge, the result of the discharge, or rather they are not the direct result of it. The discharge has put the highest processes *hors de combat;* the raving occurs when the discharge is over, and is owing to over-action of parts of the nervous system subserving more automatic mental action than those parts which the discharge affected and paralysed. The part the discharge plays is that which alcohol plays; it removes control by putting out of use the highest processes, and thus, whilst it cannot cause, *permits* increased action of more automatic processes.

If this view be correct, there should be, so to speak, an exhibition of the lower—that is, of the more automatic faculties—of the man who is drunk or maniacal, and indeed when reduced by any other process. This is manifestly the case in drunkenness. De Quincey says that the expression "*disguised* in liquor" is erroneous. He remarks that most men are disguised by sobriety, and exceedingly disguised. We may say that, the highest processes being in constant action, the lower or more animal faculties are continually kept under—inhibited. But when drink has paralysed these highest processes, the lower faculties have the upper hand. De Quincey puts it that the animal nature is clearly uppermost in intoxication. But there are all degrees of reduction by drink, from slightly increased activity of faculties next to the highest, down to the boisterous action of the lower, or—so to speak—more animal. This is because there are ready, for the reducing agent to attack, all gradations, from the highest and most special processes to the lowest and most general or most automatic processes—or, otherwise put, from the most intellectual to the most animal. This will be seen to have important bearings if we apply the principle to various kinds of Mental Automatism after epileptic fits and to ordinary cases of insanity. As we would put it, there are different "depths" of reduction. But the process is downwards in all. We remind the reader that we are writing not on drunkenness, but on the comparative study of drunkenness. Before we consider degrees of reduction by alcohol, let us speak of reductions by epileptic discharges. Admitting the possibility of all degrees of reduction, we shall make three arbitrary degrees. When the reduction is shallow, that is to say, when but few of the most special processes have been put *hors de combat* by the discharge, the mental automatism is of a high kind. It is due to increased action of those processes next to the very highest. It is then simply absurd action; often, indeed, a very good caricature of normal voluntary action. This is what we occasionally see after some very slight attacks of *petit mal*. When, as in what we name the second degree, the reduction is deeper, the "mental automatism" tends to be an exhibition of the lower or more animal faculties; there is struggling, or even violence and raving; there is epileptic mania. But we would urge that that degree of slight reduction which permits merely grotesque actions, and which we have called the first degree, is very common after slight epileptic fits. As the use of the general term Mental Automatism implies, we think these slighter degrees are, from a scientific point of view, as important for our consideration as actual mania necessitating temporary restraint. Now for the third degree. When the epileptic fit is very severe, there is reduction even lower than those lower processes by which raving and coarse animal action result; the automatism is then no longer mental, but physical; there is coma, in which the only observable action is of parts so automatic as those of circulation and respiration. Coma, in this view, is a degree of reduction lower than mania—a reduction to physical automatism; it is the analogue of dementia.

Let us now see how the above corresponds with what takes place in drunkenness. An exact correspondence we could not expect; for we took arbitrary degrees for simplicity of illustration; and another reason is, that reduction by drink, in comparison with reduction by an epileptic discharge, is a slow process. It is clear, however, that there is a general correspondence. Macnish (*Anatomy of Drunkenness*, 5th edition) shows plainly that there is in increasing drunkenness a gradual reduction to a more and more automatic condition. "At first the intoxication partakes of sentiment, but latterly it becomes merely animal." This author gives a very elaborate description of the succession of the phenomena of drunkenness—from the stage in which the drinker has "a spirit of universal contentment with himself and all the world"; . . . . "the acme of the fit", when the "ecstasy is perfect", through an intermediate condition in which "the power of volition, that faculty which keeps the will subordinate to the judgment, seems totally weakened"—to the last stage of total insensibility, what we have called coma. So far for reduction to different depths—to levels more and more automatic, and correspondingly a descent from the more special or more intellectual to the more general or more animal faculties.

Another point is that what De Quincey calls the undisguising in drunkenness, which will vary according as the character of the person who is reduced varies. The idea is indeed proverbial, as in the saying, "In vino veritas." The application of the principle to other cases than drunkenness is so important, that we must consider its bearings. It involves the principle of hereditary transmission of insanity. Macnish says that "the natural disposition may be better discovered in drunkenness than at any other time. . . . Intoxication tears off the veil, and sets each in his true light, whatever that may be. The combative man will quarrel; the amorous will love; the detractive will abuse his neighbour." Indeed, this author has a chapter (Chap. IV) on Drunkenness modified by Temperament. He contends that, as the bodily and mental constitutions of all men are not alike, on individual peculiarities will depend certain differences during a paroxysm of drunkenness. Similarly, in Reduction by other processes, we have to consider mental automatism "as modified by the temperament" of the person *to whose brain the reduction comes*. The principle, we believe, applies, whatever the reducing agent may be. Mr. Callender has remarked that, in some cases of severe injuries to the head, there is evidence that the patient's natural disposition comes out. Those who are violent, and who rave after such injuries, are those who are naturally irascible. This principle has also been recently applied to cases of epileptic mania and so-called masked epilepsy. It will be, on this hypothesis, the naturally savage man who, when suddenly reduced by an epileptic fit (provided the reduction be deep), will furiously attack those who are near him. In pursuance of our comparative study, we point out that this is paralleled by what we find in the actions of some drunkards. Those who look at police reports see now and then an account of a sudden, brutal, and very violent attack by a drunkard on some wayfarer who has chanced to stumble against him. The drunkard no doubt speaks the truth when he says he remembers nothing of it. Such a person would perhaps make a very good savage, but he is in this age and country a "survival in culture". What Spencer says of women, but which we suppose really applies to inferior persons of either sex, applies in a still greater degree to the savage drunkard. In him, there is only a *rudimentary* development of those "two faculties, intellectual and emotional, which are the latest products of human evolution—the power of abstract reasoning, and that most abstract of the emotions, the sentiment of justice." He is very easily reduced to a low mental and moral state, because there is very little higher faculty to reduce; and no doubt he is easily reduced to a low level by trifling causes. The effects of drink are seen on more innocent inferior specimens of the race. Thus, to quote high authority, Griesinger says: "Sometimes we see individuals who, after partaking of a relatively small quantity of spirits, and without being in a state of deep intoxication, but retaining fully their consciousness, present a great tendency to commit very extravagant, noisy, and foolish acts—a circumstance which may be truly considered as a predisposition to mental disease." They are easily "reduced"; and the inference from what Griesinger says is, that they would be easily reduced by overwork, misery, or general bodily disease, even by disease not directly attacking the brain itself, to that degree which constitutes insanity ordinarily so called.

THE EDUCATION OF WOMEN.

We publish, in another column, a report of the proceedings of the Convocation of the University of London. To us it appears that, if the grounds for refusing to examine women for the higher degrees of the University be strong, the cause has not been materially helped by the arguments put forward on this occasion.

The ground that the health of women will be unduly affected by the necessary studies does not accord with any known experience. If, however, it were true, it would concern the women themselves and their parents and guardians, and not an examining body. The University has never made a physical examination of its male candidates; it does not prohibit a phthisical lad from competing for its gold medals, or require a doctor's certificate as a preliminary to admission to a competition for honours. It trusts to the good sense of the parents and advisers of the lads, and to the lessons to be derived from experience. It may fairly do the same with the girls. There are good advisers—Maudsleys and Clarkes—who will not allow the element of sex in education to be overlooked. The University of London has enough of its own work to do, without aiming at supplementing the decrees of Providence by prohibition legislation intended to enforce a disability which it is feared that the alleged natural incapacity of women might be powerless to maintain.

The same excess of benevolence of intention, accompanied with absolute cruelty in action, marks the rest of the argument. A woman must not be granted a degree in medicine because she could not practise efficiently when *enceinte*, and because she ought not to take home scarlatina to her children. *Caveat emptor.* The first is a matter which concerns those who propose to engage and pay for her services very much—the University of London not at all. As to the second, it may be said that a man ought not to carry scarlatina to his own children or to anybody else's children any more than a woman: it is presumable that he takes precautions, which are not the exclusive privilege of any sex. The argument is two-edged; for it might, in practical life, easily be turned in another direction, as accoucheurs are aware. It is, in fact, worthless for either use.

Did the world undertake to provide handsomely for unmarried women, the benevolence of the argument which would, against their will, deprive them of the higher and more remunerative kinds of knowledge and mental training, might be more cogent. But as it does not, and as it raises no objection to their following the laborious callings of schoolmistress, governess, nurse, and midwife, on the condition that they shall be only half educated and poorly paid, the benevolence of the proceeding seems to be on a par with its logic.

THE SOHO HOSPITAL FOR WOMEN.

We have received from Lord Cholmondeley a copy of the reply of the Council to the statement of the medical officers, in respect to the alleged disregard of their complaints as to the nursing and general management of the hospital. Had we received it earlier we would have felt it a duty to publish it, notwithstanding its length. As, however, the dispute to which it relates may, we hope, be considered as in a great measure settled by satisfactory concessions on the part of the Council, we trust we do sufficient justice to the Council in this matter by intimating that this document expresses a general defence of their proceedings, and gives an account of their efforts to improve the nursing. We hope that the Council, having established a better system of government, will make the *amende honorable* to those who had to tender their resignation in order to secure it. It ought to be mentioned here, that Dr. Heywood Smith has, as we learn, been in no small degree instrumental in influencing the adoption of the improved constitution, to which we last week referred.

Dr. James Palfrey has been appointed co-lecturer on Midwifery and Diseases of Women at the London Hospital Medical College.

Three distinct laboratories for Physics, Physiology, and Pharmacology, are being constructed at Potsdam, under the superintendence of Herr Spieker.

On Monday evening, May 25th, Dr. J. H. Aveling will read a paper at a meeting of the Health Department of the Social Science Association, to be held at their rooms in Adam Street, Adelphi, on "The Amelioration of the Present Position of Midwives".

The biennial festival of the Royal National Hospital for Consumption at Ventnor was held on April 29th at Willis's Rooms, under the presidency of the Bishop of Winchester. Ladies as well as gentlemen were present at this dinner, and the contributions during the evening amounted to £500. The last block of two houses, completing the original design for the hospital, as intended by the founder, Dr. A. Hassall, is to be erected at the cost of the Baroness Meyer de Rothschild, in memory of her late husband.

We publish in another column an alleged cure for hydrophobia, sent to us by Mr. Prince, from whom we have already published several communications on the subject. It is impossible not to attach some importance to the cases recited; but the formula appears to us to resemble many which have already been tried and found practically useless.

THE TICHBORNE CLAIMANT.

We understand that the result of imprisonment has been materially to lessen the enormous bulk of Arthur Orton—the Tichborne Claimant. He gets the ordinary prison diet, and has not suffered in health. He is employed in tailoring. He is reduced in weight from 22 stone to less than 18.

KING'S COLLEGE HOSPITAL.

We understand that the Secretary of King's College Hospital, and the members of the Council who had publicly declined to accept the report of the arbitrators in respect to the nursing of the hospital, have resigned; so that it may now be expected that concord will be restored. It is, in our opinion, much less important that this hospital should be nursed under any particular system, than that a good understanding should prevail among all who are responsible for the efficiency of the hospital. We hear that there is likely to be some opposition to that clause of the arbitrators' report which adopted the suggestion contained in our report on the nursing—that a senior resident medical officer should be appointed. That opposition is, however, apparently based upon a misconception, which is likely to be corrected by further inquiry. The appointment of such an officer would involve a small expenditure only; and if, as at St. Mary's Hospital, he were constituted registrar and chloroformist, the expense could be nearly met by an existing endowment, and no sacrifice of the junior appointments would be necessary.

DARWINISM TESTED BY RECENT RESEARCHES IN LANGUAGE.

On Monday, May 11th, Dr. Bateman of Norwich delivered a very interesting lecture on this subject in Paris to a large Anglo-American and French audience. Sir John Cormack, who was in the chair, in a few remarks at the close of the lecture, amid the assenting applause of the meeting, said that he thought the lecturer had made good his anti-Darwinian position. Dr. Bateman chiefly insisted on the three following points. 1. Articulate speech is an *universal attribute* of man; all races have language and the capacity of acquiring it. In support of this proposition were cited the writings of Tylor, Lubbock, and Moffat the African traveller. 2. Language is a *distinctive attribute* of man; it consequently establishes the difference of kind between man and the lower animals, which Mr. Darwin is in search of. 3. Although physiologists—Gall, Broca, and others—have been for a long period trying to connect speech with some definite portion of the brain, they have hitherto failed; and, as science has failed to trace speech to a material centre—has failed to connect mind with matter—*speech constitutes a difference of kind between man and the lower animals.*

DEATH FROM CHLOROFORM.

A lamentable accident, with a fatal result, occurred on Wednesday, May 6th, to Mrs. Walker, wife of Dr. Robert Walker, Lowther Street, Carlisle. The lady was troubled with toothache, and had occasionally taken chloroform to allay the pain. On the afternoon in question, she complained of toothache to Dr. Walker, as he was leaving home to proceed to Longtown. Afterwards she lay down on the sofa, which she was accustomed to do after dinner, and was observed by a servant to have a handkerchief pressed to her face. Dr. Walker returned at half-past four o'clock, when, to his great grief and astonishment, he found his wife lying quite dead on the sofa. He tried artificial respiration, and galvanism, but in vain. An inquiry into the cause of death was held, when the evidence of Dr. Sullivan showed that the immediate cause of death was suffocation, brought about by the filling of the mouth, and the falling back of the root of the tongue into the throat during unconsciousness produced by breathing chloroform; so that suffocation was the immediate cause of death, but that suffocation owed its presence and its action to the influence produced by chloroform breathed immediately before. The jury held a brief consultation, and returned a verdict that death was accidental through the inadvertent use of chloroform.

THE BRITISH CHARITABLE FUND IN PARIS.

OUR Paris correspondent writes: The annual ball on behalf of the British Charitable Fund in Paris, and under the patronage of the British Ambassador, took place, for the first time since the war, on Tuesday, the 28th ultimo, at the Grand Hôtel, and a most brilliant affair it was. The hall was profusely decorated with flowers, and by the British, American, and French flags. Among the personages present, were the Duchess of Magenta, Lord Lyons, Mr. Washburne, several members of the diplomatic body, and a large number of British and American residents, as also Frenchmen. The medical element was also fairly represented, and the following British practitioners of Paris were present on the occasion: T. B. Bishop, M.D.; Alexander Boggs, M.D.; Sir John Rose Cormack, M.D.; The Hon. Alan Herbert, M.D.; D. MacCarthy, M.D.; J. D. MacGavin, M.D.; A. Markheim, M.D.; J. Faure-Miller, M.D.; also Surgeon-Major H. Blane, M.D. (Bombay Medical Service), and Surgeon-Major R. T. Lyons (Bengal Medical Service).

CREMATION.

THE Vienna correspondent of the *Times* writes:

> "If we seldom commence a movement, we do not like altogether to be left behind; so we have taken up the agitation started for the burning of bodies, instead of interring them in the old fashion. The agitation, in this instance, is not altogether owing to a spirit of imitation, for the cemetery question is a burning one. All the cemeteries about the outskirts of Vienna are not only getting gradually filled, but, as the town becomes extended, they will soon be in the midst of the inhabited districts; so that in every way it has become necessary to provide new cemeteries. A plot of ground at Schwechat, to the east of Vienna, sufficiently removed not to be exposed soon to the danger of being surrounded by buildings, has been acquired by the municipality with a view of making a central burial-ground there. A railway is to be built to the spot, so that every convenience will be given for getting there. But time presses, and until this can be done provisional measures are to be taken. The bodies are to be taken from the mortuary chamber to the church, and thence, after service, to the mortuary chambers of the district, from which they are to be transported in the evening, in closed carriages, to the central burial-ground. This has provoked considerable opposition, as it would in some measure prevent the relatives from assisting in rendering the last honours to the defunct. To meet this objection, the idea is to complete the interments early next morning, which means for poor people a loss of two days instead of one. Then in what state will the bodies—enclosed, in the case of the poor, in deal coffins, at the price of 5s.—arrive at the central burial-ground, after a jolting for fifteen miles over the road? Then there is the greater expense which the distance entails. There is no difficulty now in walking out to the burial-grounds, which are close to the town, but it will be otherwise when fifteen miles intervene. The whole question being thus still in an unsatisfactory state, the idea of joining the movement in favour of cremation naturally suggested itself. Two public meetings have already been held, in which the idea met with general approval; and the more energetic movers in the matter have already got up an association, called the 'Urne', to promote the realisation of the idea. Like all enthusiasts, they seem, however, apt to forget the difficulties which are in the way of so great a change from old habits and notions. Instead of confining themselves to popularising the idea in the first instance, they are already thinking of carrying it into effect. Thus, at the last meeting, attended by five hundred people, who met in Kummer's beer-saloon on Wednesday, they tried to interest people in their new association, reading its complicated statutes, with a mutual insurance of the costs of burial. Naturally the idea arose that the whole thing was meant to get up a new burial society, and great was the disappointment. People had come to hear something of cremation. Naturally, there was beer in plenty, and, besides, those who are always ready to take advantage of such occasions for a 'lark'; but at last one of the movers in the matter placed things in a fair way by asking for the moral support of the meeting, which was given unanimously. From this you may see that, if cremation is the topic of the day, we have not got far as yet in advancing its realisation. Notwithstanding the favour it finds in many places, there must be people of greater weight to take it in hand before it can succeed. The little way the movement has made in spite of much talk and discussion, appears best from the fact that it has not met with opposition from the clerical side."

INTERNATIONAL MEDICAL CONGRESS.

IN consequence of the decision arrived at in September last at the Medical Congress held in Vienna, appointing the city of Brussels as the seat of the next meeting in 1875 for the International Congress of Medical Science, a Committee has been formed to make arrangements. The Committee is composed of the following members: M. Vleminckx, President of the Royal Academy of Medicine of Belgium; M. Deroubaix, Vice-President of the Academy of Medicine; MM. Bellefroid and Crocq, former Vice-Presidents of the same institution; with M. Warlomont as Secretary. The Committee has promulgated the following regulations and programme for the Congress. 1. A Medical International Congress will commence its sittings at Brussels on September 19th, 1875, under the auspices of the Belgian Government. 2. The Congress will be exclusively scientific, and will last one week. 3. It will be composed of those members of the medical profession, Belgian and foreign, who shall have given notice to the General Secretary. They will not be liable to any expense, and will have exclusive right of taking part in the discussions. 4. The labours of the Congress will be divided into five sections; viz.: *a.* Medicine, Surgery, and Obstetrics; *b.* Military Surgery, including the service of and material for ambulances; *c.* Hygiene; *d.* Ophthalmology; *e.* Pharmacology. 5. When the members of the Congress claim their ticket of admission, they will state to which section they desire to belong. Any member can have himself put down in several sections. Each section will elect a president, two vice-presidents, and a secretary. 6. The Congress will meet twice a day: in the morning, from ten to one o'clock, for the work of the sections; in the afternoon, from one o'clock to half-past five, for general meetings. 7. Reporters, previously appointed by the Committee, will lay before the sections statements of the questions which have been assigned to them. These statements will contain provisional conclusions, which will have been made public several months before the meeting of the Congress, and which the sections will examine in the order adopted in the reports. This work finished, the sections will be able to devote the remainder of their time to the receipt of communications not included in the programme. The conclusions voted by the sections will afterwards be submitted to the sanction of the general assembly. 8. The general meetings will be devoted—*a.* To the communication of papers relating to questions not included in the programme; *b.* To the discussion of the reports in the order of their presentation, and, if need be, to votes of the whole Congress on the conclusions arrived at by the sections. 9. Members who wish to present communications on any subject foreign to the questions included in the programme, should give notice to the General Secretary at least one month before the opening of the Congress. The Committee will decide whether the communications are proper to be received, and in what order they are to be read. The time allowed to each speaker will be limited to a maximum of twenty minutes. This arrangement does not apply to the reporters. 10. At the first meeting, the Congress will name its working Council, which will be composed of a president, two acting vice-presidents, an indefinite number of honorary presidents, a general secretary, and secretaries of sections. 11. All the papers read at the Congress will be deposited at the office of the Council. The Committee of Organisation, which, after the session, will resume its functions in order to go on with the publication of the proceedings of the Congress, will decide on their entire or partial insertion in, or omission from, the published transactions. 12. Though French will be the language in which the business will be conducted, members will nevertheless be allowed to express themselves in other tongues. In this case, if a desire to that effect be expressed, the substance of their discourse will be briefly interpreted to the meeting by one of its members. 13. The President will direct the meetings and the discussions according to the plan generally adopted in deliberative assemblies. He will decide on the orders of the day in concert with the working Council. 14. Medical students will receive cards of admission, but cannot be allowed to speak. The Committee are now employed in considering the questions to be represented in the programme. They will gratefully receive from any and all quarters communications on this subject, and take note of them in the constitution of their definitive programme, which will be published in the medical journals in January next, with the provisional conclusions arrived at by the Committee. Copies of the programme will be forwarded to members on application.

A NEW SARCOTOME.

At the last meeting of the Clinical Society, Mr. Callender exhibited, for Dr. Hollis, an instrument devised by the latter gentleman, which substitutes for the caoutchouc tubing, used by Dittel in his operations by the elastic ligature, a simple waxed thread, or a wire, which is tightened by a spiral steel spring. The force exerted on the thread can be constantly maintained at any given point up to 12 lbs. When the instrument, which is shaped somewhat like an ordinary penholder, and is about four inches long, is fastened on the tissues to be divided, it cuts its way out in about two, three, or four days. One great merit claimed for this sarcotome is, that it appears to be absolutely painless in its operation. For the division of fistulæ, removal of small growths, etc., it has been used by Mr. Callender.

MEDICAL FEES.

One passage in the recent Quarterly Return of the Registrar-General contains a statement which we commend to the earnest attention of the members of our Association. It relates to certain statistics included in the report respecting the prices of the necessaries of life, which are found to have risen rapidly during the last twenty-two years. By taking the averages of the prices of the two years 1852-3 and 1872-3, it is found that the price of wheat has risen 23 per cent., the price of potatoes 31 per cent., the price of mutton 40 per cent., the price of beef 50 per cent.; so that it may be computed that £134 will purchase now only the same quantities of meat and wheat as £100 purchased twenty years ago. "The reason of this is obvious: the same process of depreciation of money has begun which took place after the first discovery of the American mines of the precious metals in the reigns of the Tudors. The quantity of these metals that can be used in making money has probably been doubled in the twenty years; and at the same time, in addition to Spain, Italy, Austria, and Russia, which have circulated chronically for years an excess of debased inconvertible paper-money, France and the United States, formerly employing a large stock of metallic money, under a sound system of finance, have recently, by the pressure of war, been driven into the issue of floods of inconvertible notes still floating. This has affected prices all over Europe. There has been a general rising wave, but it has been felt only by starts whenever an increased demand, as in the case of coal and food, or a diminished supply, have given sellers the opportunity." Whilst, however, the prices of the necessaries of life have increased in this great proportion, medical charges remain in many districts precisely as they were. One guinea purchases now as much medical advice as it did in 1850. This being the case, it would appear to be high time that the members of the profession took the matter seriously into consideration, with the object of making a general rise in their charges.

ARLIDGE ON LUNACY.

In the January number of the *British and Foreign Medico-Chirurgical Review*, there is a suggestive article by Dr. Arlidge on Lunacy in England and Scotland, in which, among other topics, he dwells on the accumulation of chronic patients in pauper asylums, and the method of encountering it. "The perversion of English county and borough asylums from their primary purpose as hospitals for treatment, to boarding-houses for lodging incurables, demands the serious consideration not only of medical men, but also of statesmen." And the first question to be solved is, what has led to this state of things? He points out that one cause is the delay in procuring early curative treatment in English asylums. Instead of sending recent cases at once to the asylum, boards of guardians struggle to keep down immediate expenditure by retaining them in the union workhouses. Advice on this point has been given again and again, but in vain. But Dr. Arlidge asks, Why should this be the legal process? "Why should workhouses be legalised by Acts of Parliament as receptacles in the first instance for the insane, thus becoming feeders of asylums, instead of the latter institutions being always made the places for primary admission, and the workhouses the receptacles for many of those chronic cases which unhappily will remain as a residuum after the best treatment has been afforded? To put the question in another fashion, Why should one policy be pursued in England, and another in Scotland?" In the latter country, not only do the Commissioners exercise to the utmost their authority and influence to secure asylum accommodation for every recent case of insanity, but, by the powers vested in them, they limit and regulate the transfer of patients to workhouses; thus they prevent the introduction of curable and otherwise improper cases into workhouses, and weed out from asylums those hopeless cases that encumber their wards. In addition to those removed from asylums to workhouses, a large number of chronic cases in Scotland are boarded out in cottage-homes as single patients; and thus also relief is afforded to the asylums. These patients are under methodical inspection, chiefly by the Deputy-Commissioners; and their reports of the condition of the patients so placed are highly satisfactory. Their mortality is lower than in asylums or workhouses; and, what is more remarkable, there is a very appreciable ratio of recoveries among them, equal, according to Dr. Sibbald, to rather more than a third of that which occurs in asylums. The English Commissioners, however, do not encourage the boarding out of patients with strangers, on account of the risks that, in the existing state of the law, are incurred; for, as matters stand, the staff of English Commissioners have only a casual and intermittent acquaintance with such singly placed lunatics, and no sufficient and satisfactory inspection of them is supplied by the officers of the Local Government Board, under whose auspices they are especially placed. The experience of the Commissioners for Scotland has shown that, though this distribution of the insane exhibits many advantages, it must be placed under strict supervision and control. "Why, and how long," asks Dr. Arlidge, "should this dual administration in regard to lunatics in England exist? Cannot all the pauper lunacy in the kingdom be under the inspection and control of one Board? And cannot that Board be made sufficient for its duties, which clearly it is not?"

FIGURES AND FALLACIES.

Amongst the numerous pamphlets which have been published in connection with the King's College Hospital quarrel, is one entitled *Hospital Expenditure, or the Cost of Maintenance in the various London Hospitals*, by Charles Hood, F.R.S. The paper, however, scarcely warrants so wide a title. It consists mainly of an elaborate analysis of the annual expenditure of King's College Hospital during the last five years. Amongst other details, "the number of articles of hospital linen washed per week" is given; and our statement (in the papers on Hospital Nursing published a few weeks ago), that the St. John's Sisters are somewhat extravagant in this respect, is confirmed. As an after-thought, an attempt has been made to analyse on a similar plan the accounts of seven other metropolitan hospitals—viz., University College Hospital, Charing Cross, the Westminster, Royal Free, London, St. George's, and St. Mary's. Unfortunately, these figures are not so carefully collated as are those of Mr. Hood's own institution. For instance, we were astonished to find it stated that the cost per bed at King's College Hospital and at St. Mary's is about equal—£66 : 8 and £66 : 6 *per annum* respectively—exceeded only by University College Hospital, which is put down at £71 : 17. As this differs considerably from the result of our own recent investigations into the same accounts, we were anxious to find out how these figures were arrived at. We find that, in the first place, Mr. Hood deducts the whole cost of the board of the resident medical staff at King's, but includes that of St. Mary's. As a hospital cannot be carried on without a resident staff, the cost of this is certainly an item of ordinary expenditure; though when, as at University College Hospital, the number of residents is in excess of the actual requirements of the hospital, a *part* of the cost may reasonably be deducted. Then Mr. Hood puts down £609 as the cost of wines and spirits at St. Mary's. The actual cost of these items in 1872 is given in the hospital balance-sheet as £391. And, lastly, the cost of the 1872 "festival" of the Maternity Charity, and other sums, are included, which should not strictly be charged to the cost of ordinary maintenance. If Mr. Hood had treated the accounts of St. Mary's as he has those of King's, the cost per bed at the former hospital would be under £60. The statements respecting the other hospitals named seem to be more nearly correct, though the cost of the residents' board is deducted from the expenses of University College Hospital, but included in those of the six institutions following. It has been said that "figures may be made to prove anything"; but, so far as we can see, Mr. Hood's figures prove nothing at all; nor can we say what they are intended to prove. It is easy to copy the *form* of Mr. Wilkinson's well known tables; but that gentleman's patience, accuracy, and knowledge of his subject, are not so readily acquired, and have certainly not yet been acquired by Mr. Hood.

CREMATION.

THE New York Incremation Society has applied to the Legislature of that State for an act of incorporation. The society numbers among its members several distinguished men, and at a recent meeting a committee reported that there was strong probability of the charter asked for being obtained. The society accepts the obligation of burning the bodies of all the members, provided the relatives of the deceased do not object. The statement was made, that a body could be burnt at a cost of five to eight dollars. As soon as the charter is obtained, the society's intention is to lease a piece of land in the suburbs of New York, and erect thereon buildings and furnaces, "where bodies will be burnt in a business-like and unostentatious manner." The estimated cost of these structures is 10,000 dollars. A great deal of interest in this subject is being developed in the country.

THE QUARTERLY RETURN OF BIRTHS, DEATHS, AND MARRIAGES.

THIS return includes the marriages which took place in England in the last quarter of 1873, and which, being 61,261, were more numerous than those registered in any preceding quarter. The births and deaths enumerated are those which were registered in the first three months of the present year. The birth-rate was slightly below the average: 214,437 births were registered. The deaths during the quarter amounted to 136,528; and the rate of mortality was 1.6 per 1000 living persons below the average of the last ten winters. The Registrar-General computes that, roughly speaking, thirteen millions of people now occupy the chief town districts and subdistricts, whilst ten millions are spread over the small towns and county parishes; the death-rate of the former was 25, that of the latter 21, per 1000 living persons. The rapid growth of the population living in towns, while it implies increase of intelligence, makes the question of their hygienic condition of infinitely greater importance than many trivial questions of the day on which public attention is squandered. It is a question not only of more or less sickness and suffering, but of the health, the vigour, and the development of the excellencies of the English race. Measles, whooping-cough, and scarlet fever prevailed: 3801, 2931, and 5326 deaths were due in the three months to these three diseases respectively. Small-pox, fever, cholera, and diarrhœa were less fatal; but sanitary authorities must not be thrown off their guard, for Asiatic cholera has been prevailing in Munich and other cities of Germany, and may enter this country in the course of the year. London, it is satisfactory to learn, was one of the great towns of the United Kingdom which showed the lowest rates of mortality; it had also the lowest death-rate for the quarter of all the chief towns of Europe. The low death-rate throughout England was, perhaps, in part due to the mildness of the season, for late winters have given the lie direct to the proverb which speaks of the relationship of a green yule and a full churchyard. Still, it is allowable to suppose that the increased efficiency of sanitary measures, which are now to some extent in operation, is beginning to produce visible effect in these diminished returns of deaths. And further improvements in the life of the nation may yet be anticipated. The births in January, February, and March exceeded the deaths by nearly 80,000; that is, the population would have received an augmentation amounting to 866 daily, had immigration and emigration been equal. Nearly 25,000 emigrants left these shores, of whom over 15,000 went to the United States. The remainder went principally to the Australian colonies. The meteorology of the quarter was peculiar. The mean temperature at Greenwich was 2.7 deg. Fahr. above the average of 103 years. The rainfall was less than half the average, being only 2.4 inches, whereas the average fall for the three months of the March quarter is 5.0 inches. There has only been one instance since 1815 when the rainfall at Greenwich has been so low; that was in 1829, when the amount measured was also 2.4 inches. The corresponding quarters of 1872 and 1873 were wet seasons; consequently, as regards the rainfall, the meteorology of the past quarter presents a strong contrast to that of the preceding winters.

THE ADULTERATION OF FOOD COMMITTEE.

THE Select Committee of the House of Commons appointed to inquire into this matter met again on Monday last, when evidence was taken as to the manufacture of mustard and cocoa. Mr. Colman, the well known mustard-manufacturer, first gave evidence; and he was asked, incidentally, as to the injurious effects likely to ensue from the use of impure mustard in the shape of plasters for medical purposes. He stated that, if mustard condiment—that is to say, mustard in the manufacture of which other articles than the pure seed had been used—were bought for medical purposes, and there happened to be little or no mustard in it, he did not imagine it would answer the purpose as a plaster; but those who purchased mustard for such a requirement should be particular as to where they bought it, and as to the article they got. He did not think absolutely pure mustard was used for this purpose. There were two processes for producing mustard, one of which produced pure mustard, and the other mustard mixture or mustard condiment. The only ingredient used in the manufacture of pure mustard was the flower of the white and brown mustard-seed, while to make mustard condiment there was an addition of a little wheaten flour and turmeric; and, if it were desired to make a very cheap article, some manufacturers used a small proportion of chilies or cayenne. These admixtures were not in any way injurious to health. According to the experience of the mustard-manufacturers, the public decidedly preferred the mixed article to that which was absolutely pure and contained none of the ingredients he had mentioned. The operation of the Adulteration Act had greatly disturbed the trade; and he contended that mustard should be altogether exempt from the Act, as the article was already made so good, that its quality could not be improved upon. The statement that the retailers adulterated the article was altogether untrue; it would not pay them to do so. Witnesses were next examined as to cocoa; and Mr. Fry and Mr. Holm (Dunn and Hewitt) gave evidence upon the subject. They concurred in saying that the public preferred the ordinary soluble or manufactured cocoas, rather than the cocoa in its pure state; and that the former were much the more nutritious and wholesome for general consumption. The English public also abhorred anything like a tedious cooking process; and in the prepared cocoas they had an agreeable drink without any trouble of that kind. The principal ingredients used were sugar and arrowroot or sago; and some descriptions were flavoured with aromatic substances, such as vanilla, which was very expensive. One of the chief objects in combining arrowroot and sugar in the preparation of cocoa was to make it soluble; or, as this term had been objected to as not chemically accurate, he ought perhaps to say miscible. It was also contended that the cocoa-trade ought not to be brought under the operation of the Act, as the article was not sold or made in any way fraudulently, but was vended quite in its proper character. Mr. Fry said he was not particularly desirous of any alteration in the law; but, if a new Adulteration Act were passed, it was desirable that a notice-label, stating plainly that the article was a mixture, should protect the seller from prosecution. It was also mentioned that the prepared cocoa was largely consumed by the working classes, and in that respect was valuable as a substitute for alcoholic drinks. The Committee then adjourned.

"HYPOTHESES NON FINGO."

IN an article, interesting to all who care about scientific method, lately published in the *Fortnightly Review* of December, Professor Jevons deals with the Use of Hypothesis. The Professor thinks that Newton's celebrated saying, *hypotheses non fingo*, "*bears the appearance of pure irony*". Throughout Newton's works, he tells us we find deductive reasoning wholly predominant, and experiments are employed, as they should be, to confirm or refute hypothetical *anticipations* of nature. The word we have italicised will automatically call to mind Bacon's protest against "anticipating nature". But the Professor, after stating that the true course of inductive procedure is that which has yielded all the more lofty and successful results of science, declares that "it consists in *anticipating nature*" (here the italics are his), "in the sense of forming hypotheses as to the laws which are probably in operation; and then observing whether the combinations of phenomena are such as would follow from the laws supposed. The investigation begins with facts, and ends with them". What he says about the much vaunted Baconian method deserves careful consideration. There has been in recent times, he declares, a reaction against the purely empirical or Baconian method; the value of this method may be, he considers, estimated historically by the fact that it has not been followed by any of the great masters of science. This truth, he tells us, has only been recognised by physicists in this century. Nevertheless, in the eighteenth century, although science was supposed to be advancing by the Baconian method, "in reality hypothetical investigation was the main instrument of research". Jevons elsewhere says that it is probably the greatest merit in Mr. Mill's logical writings, that he points out the entire insufficiency of what is called the Baconian Method to detect the more obscure and difficult laws of nature. That Newton once or twice uses the expression *experimentum crucis* in his *Opticks*, is the only evidence Jevons can find that this great man had any acquaintance, direct or indirect, with Bacon's writings. After remarking that there was, in fact, little truth or reason in Newton's celebrated protest against hypothesis, Jevons states that Newton's theory of gravitation rested upon the greatest and most successful of hypotheses, and that his views of the material nature of light and the causes of its peculiar phenomena involved a false hypothesis, which has long since been completely disproved. We think these statements should be borne in mind by those who quote the sentence which we have made the heading of this article. In his recently issued *Problems of Life and Mind*, Lewes devotes a chapter to the Use and Abuse of Hypothesis. In the Introduction of that work, he shows, by citing instances, that Newton largely availed himself of the aid of hypothesis, notwithstanding that he reprobated its use. To those to whom the word hypothetical is almost a missile of abuse rather than an exact term, the study of Lewes' chapter may be strongly recommended. Lewes makes three kinds of hypotheses: real, auxiliary, and illusory. We conclude with a quotation from this masterly work. Speaking of auxiliary hypotheses, Lewes says: "It is necessary to insist on the strictly scientific use of the imagination in constructing these auxiliaries, because Newton has, in emphatic language, condemned them, though his own practice we have seen to be a splendid vindication of them. He pronounced hypotheses illegitimate which were not deduced from the phenomena; in fact, it was these only that he called hypotheses. 'Whatever is not deduced from the phenomena', he says, in the famous *Scholium*, 'is to be called an hypothesis; and hypotheses, whether metaphysical or physical, have no place in experimental philosophy.' The weight of his authority has pressed hypothesis into the mire, where it is trodden on by the feet of writers who are by no means slow to profit by its services; and thus, in spite of its services, hypothesis has become the pariah of research."

SCOTLAND.

THE directors of the Gartnavel Lunatic Asylum have voted to Dr. Alexander Mackintosh a retiring annual pension equal to two-thirds of his salary, in consideration of his long and efficient services as its medical superintendent.

SMALL-POX IN ABERDEEN.

THE small-pox epidemic in Aberdeen, which broke out recently, threatens to become somewhat serious. On Saturday afternoon, six patients were taken to the Small-Pox Hospital, Mount Hooly, making the total number of cases twelve—four from Woodside, and the remainder from the city. The disease is, happily, of a mild type.

IRELAND.

THE medical officers of the Kinsale Union have had their salaries increased, each from £90 to £100 *per annum*.

AT a meeting last week of the Board of Guardians of Nenagh Union, Dr. Quin, late medical officer, was unanimously allowed a retiring allowance equivalent to two-thirds of his salary.

DR. O'NEILL QUIN has been awarded a retiring pension of £143 *per annum* by the Nenagh Board of Guardians upon resigning as medical officer to the Workhouse and the Silvermines Dispensary District.

SIR DOMINIC CORRIGAN, of Dublin, we are pleased to state, has been unanimously elected to the vacant place of Corresponding Foreign Member of the Academy of Medicine, Paris. We congratulate Sir Dominic Corrigan on the honour conferred upon him by an Academy which numbers so many illustrious names among its members.

ROYAL COLLEGE OF SURGEONS.

THE annual meeting for the election of Examiners was held on Tuesday, the 5th instant, when the following gentlemen were elected for the ensuing year. *Anatomy and Surgery:* Christopher Fleming, Benjamin Wills Richardson, Edward A. Stoker, John Parker, Edward Stamer O'Grady, Robert McDonnell, William O'Leary. *Midwifery:* J. Rutherford Kirkpatrick, William Roe, John Cronyn. *Arts:* J. H. Tweedy, William Stoker, M. Ward. The previous Examiners in Anatomy and Surgery were re-elected, with the exception of Mr. Stapleton, who has been replaced by Mr. O'Leary, M.P., Surgeon to St. Vincent's Hospital. The first examination under the new system took place on the 21st ultimo, with a result of nine candidates being rejected out of thirteen who presented themselves. We understand that the medical students in Dublin are unanimously opposed to the recent changes which have taken place in the surgery examination of this College, and that a numerously signed memorial has been presented, praying that the new system may not be enforced.

BELFAST BRANCH OF THE ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

ON May 6th, the quarterly meeting of the committee of this local Branch of the above Society was held. After deliberate consideration of nine cases which came before the committee, seven were approved of as suitable to receive assistance. Dr. Stewart, honorary secretary, made the satisfactory communication that the medical students of the Belfast Queen's College had this year exceeded their liberal donation of last year by £2, handing in now £17. The committee regarded this as an example to be followed, not only by the students of the profession elsewhere, but by practitioners themselves. Dr. Filson, of Portaferry, presented subscriptions from Surgeon-Major Scott, late Rifle Brigade;

Dr. Maconachy, Downpatrick; Dr. Thetford, Strangford; and himself of one guinea each. It was suggested by Dr. Whitaker, and unanimously agreed that, for the future, a statement should be given in the Annual Report, not only of the respective amounts obtained from the Branches throughout the country, but also of the portion which each received subsequently in grants at the yearly distribution of the funds in hand.

VACCINATION PROSECUTIONS.

THE Council of the Irish Medical Association have addressed a letter to the Local Government Board, calling their attention to the fact that the medical officers of dispensaries are required to attend, without fee or reward, at the prosecutions of defaulters in vaccination; and have received a reply to the effect that if the justices, before whom the proceedings are, certify under the thirteenth section of the Compulsory Vaccination Act that expenses ought to be allowed, the medical officer will be entitled to be paid out of the poor-rates.

SANITARY REPORT OF DUBLIN.

THE Public Health Committee of the Dublin Corporation have lately issued their report for the quarter ended March last. During that period, 7,000 official visits of inspection were made in examining tenement-houses, and 560 visits to slaughter-houses. During the three months there were 131 confiscations of unsound meat, and the amount condemned was equivalent to 51,000 lbs. weight; the penalties and costs levied coming to £56 15s. There were thirty-two less cases of fever than in the corresponding quarter of last year, and 304 less than that of 1872. The deaths from zymotic affections amounted to 143.

DUBLIN COW-POCK INSTITUTION.

THE secretary of this institution has lately drawn attention to the fact that the State grants the sum of £10,000 yearly in England for the supply of vaccine lymph, which can be obtained by any medical practitioner there free of charge; but, in Ireland, medical men have to pay sixpence for every package they require. The reason of this is, that the Dublin Cow-Pock Institution receives only a grant of £400 yearly, which miserable pittance is altogether inadequate to allow the gratuitous distribution of lymph. The governors of the institution, however, state that, if the Government will increase its nominal grant by £600 a year, they will supply vaccine lymph without charge to all applicants. We may add that this institution issued 24,698 charges of lymph during the past year.

BELFAST GENERAL HOSPITAL.

THE quarterly meeting of this institution was held last week; the committee state that they have completed their new buildings for extern cases, fitted up with three consulting-rooms, and with appliances of the most approved construction for the treatment of patients, and for the performance of such minor operations as may be necessary. These buildings have cost nearly £1,000. A donation of £500 has lately been given by Sir Edward Coey, to be invested for the benefit of the hospital, and a bequest has been received of £1,000 from the late Mr. Daniel Ross.

THE CORK NORTH INFIRMARY.

WE very much regret to see that party feeling in Cork is running high, and is expending some of its exuberant vigour on the medical conduct of the North Infirmary. Nothing else can explain the absurd and mischievous repetition of a charge which is being urged at the Board of Guardians, that the medical officers conspired to cut off an old woman's leg unnecessarily, and, in concert with the other officers and nurses, proceeded to remove her unnecessarily and cruelly to another institution, for the purpose of avenging her refusal to submit to amputation. The reported debates on the subject are anything but creditable to the good sense or judgment of those who have brought these transparently absurd accusations.

PROFESSOR OWEN AT KING'S COLLEGE.

ON Tuesday last, the prizes and certificates of honour awarded to the students in the medical department of King's College were distributed by Professor Owen, D.C.L., F.R.S. After the distribution, Professor Owen addressed the meeting in the following terms.

I have to thank you, sir, the professors, and the others in authority by whom I have been placed in this distinguished and most happy position. It is with very great pleasure that I find myself here taking part in these proceedings. My memory goes back far now, and most agreeably, in association with King's College. I look back half a century, when the Council of the Royal College of Surgeons put me in communication with a young architect then residing in Ely Place, and with the intimation that, if the museum of comparative anatomy were not made to my mind, it would be my fault. The disposition of light and economy of space, and all the ideas I could impart to that architect, were realised and carried out by him to a degree of perfection which the museum itself now testifies. It is with one accord considered to be a type museum for such a purpose throughout Europe; its plan has been copied in the museum in Jermyn Street, and is mainly carried out in the great new museum of natural history for our national treasures, which is being erected at South Kensington. That architect became Sir Charles Barry, and through that early acquaintance I have enjoyed the friendship of his representatives and descendants. Then, of course, I recollect many of your old professors, some of whom are happily still in the flesh—Dr. Bissett Hawkins, my dear old friend Thomas Bell, Sir Charles Lyell; and then others of a somewhat younger stage, whom I remember as giving me the pleasure of being my pupils during my first course of lectures delivered at St. Bartholomew's Hospital, of whom I see two now present—Rymer Jones and Arthur Farre. All these are associations which link one in feelings of amity and every good wish to King's College. I must say that, in fulfilling the duty that I have the pleasure of performing to-day, I see no prospect of King's College losing in any degree its reputation, but rather of its continuing to extend and increase. King's College has a great reputation in those sciences to which I have especially devoted myself. I may name Professor Todd, who has brought together a vast mass of systematised information in that constantly resorted to *Cyclopædia of Physiology*. Then associated with him was Bowman, who made one of the finest discoveries in minute anatomy, unravelling for us that organ, the kidney, in a manner equal to the work which Kiernan did for the liver. So you have had a succession of eminent men—Dr. Beale, and Dr. Ferrier, who has given us a most unexpected insight into the most recondite field of physiology. And now, with regard to those among my many friends (if I may be permitted so to address you) who have not been successful, I should be very much wanting in giving expression to my feelings if I forgot you. To you I wish to say that, in the degree in which in this competition you have stored and systematised any parts or parcels of those divers sciences and kinds of knowledge which your professors impart to you in your future life, you may find that knowledge more lasting and of greater value than those material signs of success that I have had the pleasure this day of distributing. As to any kind of advice which the experience of a somewhat long life devoted to the direct acquisition of knowledge may give, I think the first piece of advice I would give is this: beware of mistaking generic names which signify groups of ideas for positive entities. I think, if I were to presume to consider at all the probable progress of medicine, or its advancement to the claims of a science, I should say that it would depend upon a right and clear understanding of what it now is. Take, for instance, those definitions of groups of symptoms which we read in the admirable works of medicine—definitions and groups of symptoms which are lessons to us as descriptive analysts. Say rheumatism—a genus with its species, acute, chronic, and so on. We see how these are analysed, and the remedies applied to each particular species and variety. Now all that means considerable study and great powers. So with regard to carditis and its subgenera pericarditis, endocarditis, and so on; their detection by the stethoscope, by percussion; and the various remedies applied. So with reference to pleurisy, pneumonia, dyspepsia. I have now given utterance of a number of Greek compounds, all at least tetrasyllabic, all signifying certain groups of symptoms; and, when you have learned all these, and know how to appreciate them, and know the remedies to be applied, you regard yourselves great scientific physicians. But what I would suggest to you from this place would be, that there is another step requisite in order to make your science truly so; that is to say, that you should not only understand the signs and detect the symptoms, and know how to apply the remedies, but that you should know what is the cause of such symptoms. To illustrate my meaning, let me suppose an accomplished physician, a perfect master of that phase of science of which I have spoken, and another who may have employed the microscope or other collateral means of obtaining information. The physician is called to see a patient who has a weight on the stomach, a tendency to sickness, nausea, or dyspepsia; and the learned physician gives his remedies accordingly. Another practitioner may say, "What is the last thing you ate?" and, if he learn that it was ham, he may say, "I should like to see a little of it", and he takes up a small portion, puts it under the microscope, and possibly discerns the cysts of trichinæ. Now compare his knowledge of this cause of dyspepsia with the other kind of knowledge to which I have alluded. The physician who has that knowledge not only sees the symptoms, but he sees the cause of them. He sees the trichinæ beginning to flourish and propagate, to increase in numbers in the stomach, and probably, if he be a practical man, he rings the bell and tells the cook to bring up the mustard-pot, and he mixes the mustard and hot water, so as to lose no time in getting the offending creature out of the stomach. He may be too late; he may be called on to a case in which there are symptoms which, in our systems of medicine, would be grouped under the Greek names of diarrhœa and dysentery, and, having a knowledge of the cause of the symptoms, he sees again that he has a chance of doing something by large doses of calomel; or, again, he may come at another stage, and find palpitation of the heart, oppression, immense difficulty of breathing, pain, and all the symptoms that may be classified or described under carditis, pericarditis, pleurisy, and pneumonia. Without knowing the real nature of these things, he might know the remedies usually applied; but, if he had the knowledge to which I alluded, he would know that the young of that infesting creature had contrived to get out of one part of the frame into the circulating system; had found their way to the heart; that they had gone from the right side of the heart to the pulmonary arteries and their ramifications over the lungs, and had come back to the left side of the heart, and so irritated the whole of those parts. Mark the difference of knowledge and feeling between the physician knowing the cause of these symptoms and the physician knowing only the name and the group. The one unfortunately says, "I can do nothing; the case is past my power; it has escaped me". When these creatures get themselves over the whole system, and, by a curious selective attraction which has often reminded me of the migration of birds that come to a country that suits them, they take up their abode in the muscular tissue, then you have the symptoms of acute rheumatism to a very dreadful degree, and all that you can do will scarcely save the patient's life. Now that is a case that may illustrate what I mean, when I say that I hope and trust the time may come (it must be a long time) when medicine may properly be called a science, instead of remaining in its present state with regard to the great majority of maladies that have classical names. I am unwilling to sit down, moreover, without saying a few words on the present phase of my own science or class of sciences. That phase—I dare say every one of you knows to what I allude—is very rarely presented in what appears to me its fair aspect. The presentation of it is a good deal modified by preconceived notions. The present phase of biology; the number of phenomena, both as to the known species of organised things and their relations to space, and then, again, their relations to time, as shown by the evidence of the extinct remains of those creatures; the various stages and forms of structures that each individual of existing species passes through before maturity.—all these now burden our minds and thoughts very much in the same way as that in which Copernicus felt himself burdened and perplexed when he contributed so greatly as he did to the knowledge of the phenomena of the movements of the heavenly bodies. I dare say most of you know the history of Copernicus—a young student at a fine old university in Poland, then an extremely flourishing country in the European system; his family having a living or canonry ready for his enjoyment, and he himself strongly bent upon the acquisition of natural knowledge, not only going through the divinity class, which he did with great success, but also the medical class, and taking the degree of doctor of medicine. However, he was ordained, and took the family canonry, and he lived and died there with the blessing and gratitude of all his flock, to whom he was extremely charitable, whom he attended, not only as a spiritual, but as a medical adviser and curer. There was an old tower in the neighbourhood of his church, and thither he used to betake himself of an evening to watch the progress of the heavenly bodies. He had no telescope, not even anything to be compared with that which Galileo afterwards used, which might be about as good as our ordinary binocular glasses used in theatres at the present day. He tried to make out the satellites of Jupiter, and he said, "These phenomena compel me so to multiply the mental machinery by which they were explained (machinery called the way of cycles and epicycles), that the whole superstructure has got cumbrous, and will fall down. I must ask you to allow me to suggest another way of explaining these phenomena. If you will allow me, by way of hypothesis, to regard the sun as the centre, with our earth as one of the planets moving round it somewhere between Venus and Mars; allow the motion of the earth upon its axis to be diurnal in connection with this annual movement, I can then explain these phenomena so much more clearly to my own mind and, I think, to others." Well, it was an hypothesis; there was no great objection to it, and the Pope of that period permitted him to dedicate his immortal work *De Revolutionibus Orbium Celestium* to him. The work came out in print when Copernicus was on his deathbed, when he clasped it to his breast, thankful that he had been permitted to complete it. But the friends of Copernicus said: "It is all very well to talk about this fixity of the sun and the movement of the earth. If the earth did go round in twenty-four hours, knowing, as we do, something of its size and the rate at which your hypothesis requires that it should go, your steeple would fly into space, and we should all do the same." Copernicus said: "I cannot explain how it is that we do not do that; all I can say is, that this hypothesis will enable me to explain my phenomena better." We know what occurred afterwards; and it is very encouraging to us to think favourably of a hypothesis that will enable us to explain a number of phenomena that cannot be explained without it. A century or so passed, and then came Galileo with his telescope, who saw in the movement of the satellites of Jupiter, visibly and in fact, what Copernicus had suggested for the universe in general. Then came Kepler, and afterwards Newton, who showed us the nature of the power by which we do not fly off. Biology, as far as I can comprehend it, is now in its Copernican stage. If you go back in time, you find that the horse of the present day was preceded, in the middle tertiary period in geology, by one that, instead of having one hoof, had a pair of small hoofs, which completed the rudiments that you find in the legs of existing horses. Go back a little farther, and you find a pair of small dangling hoofs in the miocene horse, presenting the appearance of another type. Now, there you have a series of phenomena that you may explain in two ways. In this work that I have brought with me, and that I hope may be accepted for the library, you have represented a rare creature called the king-crab, a curious thing, something like a frying-pan with a long tail; and, when you trace the mode in which that creature gets its form, you find that, at one stage, it is without a long tail. But, in our old world, we find not one or two, but four or six of the several stages through which this limulus goes in the progress of development, permanently retained by the adult procreating animals in the olden times. I merely mention these two examples of classes of phenomena which we find it is impossible to explain or make intelligible to ourselves by the hypothesis of special creation. For look what you have to do. You suppose a special creation for the palæotherium with three hoofs on each foot. Cuvier, who was in the condition to go on building up cycles and epicycles for these things (and to him we are indebted for the knowledge of the facts), said that there came a day when a great cataclysm took place, and all the palæotheria were swept off the face of the earth, and the act of special creation was again renewed; so that we had the three-toed horse and all its congeners again, which through the long lapse of years flourished upon the surface of the earth. Then came another revolution or cataclysm, and these again were swept away, and again a direct creative act interposed and produced a horse of another kind. That is an explanation resting exactly upon the same grounds as those of the friends of Copernicus, who quizzed him about the reason why he was not driven away from the earth when the earth was whirling at the rate at which his hypothesis required. Now, if you take another hypothesis, and regard the creative power as operating through secondary law and cause, and in these long lapses of time by slow variations producing one form after another, we can get the same comfortable notion of the condition in which we go on, and comprehend all these facts, as Copernicus did when he suggested his hypothesis. Therefore, encouraged by that hypothesis of Copernicus, we may hope that in time we also shall have our Galileo in biology, and finally, perhaps, our Newton. The present position in which we are is, these attempts are made, and continue to be made, most laudably to explain how the secondary law acts, and in what way one species comes to be turned into another. To that question I am compelled to give the same answer as Copernicus did to his friends: "I do not know." The author of the *Vestiges of Creation* suggested causes which might account for some of the phenomena, but not the whole. Charles Darwin has contributed some observations in reference to "natural selection"; but I am compelled to say that they are inadequate to the whole solution; they do not bear (what we are really in want of) the relation which Newton's crowning discovery bore to astronomy. With these remarks, I ask your forgiveness for trespassing so long on your patience.

UNIVERSITY OF LONDON.

THE annual meeting of convocation was held on Tuesday last, Dr. STORRAR presiding. He stated that, in January last, the following motion had been proposed by Mr. A. P. Hensman, B.A., and seconded by Mr. G. Serrell, M.A., "That, in the opinion of Convocation, it is desirable that women should be permitted to take degrees in the University of London". Upon the motion of Mr. Hutton and Dr. Sibson, the consideration of the question had been adjourned from that meeting, and the Annual Committee had, as requested, placed the question first on the agenda paper.

Mr. FITCH commenced the debate by reviewing the objections made to the motion at the previous meeting. As regarded the entry of women into the profession, the degrees were simply certificates of proficiency, not licenses to practise. [The CHAIRMAN corrected this statement in so far as the degrees in medicine was concerned.] Again, it was said that, if degrees were given to women, all sorts of evils would be brought about, as the objects and aims in life of the two sexes were so divergent, but the very same arguments had been used when the Supplementary Charter was discussed some years ago, before women were admitted to any examination in the University. Forty or fifty thoughtful women had taken advantage of that charter, but none of the predicted evils had come to pass; women had not yet been made into men. The University had made distinctions which should not exist in the examination of the two sexes. Italian and botany were introduced into the curriculum for women; but no special certificate of proficiency had ever been gained by women in either of these subjects. The women who had shone at the examinations already held had always taken up the subjects of ordinary education of men. Men would rebel, if told to restrict their education to a few beaten tracks; and women should have equally liberty in the matter. There was absolutely no difference in the papers set for men and women respectively; the standard of examination had not been lowered to suit the assumed inferior capacity of women. The world knew the value of the University degrees; it was, therefore, fair to place it in the power of women to obtain such advantages as belonged to the degrees. Not many women, he thought, would ever gain them. He did not think women would be less efficient at, or would forsake, ordinary domestic duties because they had degrees in that University. He quoted Mr. Grote, that many women had attained the highest positions in learning and scientific culture, notably Mrs. Somerville. Every woman should be allowed to choose for herself her own course in life. If amongst the types she should choose that upon which examinations are held at the University, she should be welcome to her well-won degree. The education of women needed to be more systematic and thorough. Oxford and Cambridge were now examining girls' schools all over the land, applying the very same standard of severity for boys and girls, for which cause their examinations were most popular. Should the University of London be behind in the good work? No; they must ask the Senate to obtain alterations in the Charter, so that women might be admitted to any examination at which they desired to present themselves. Petitions in favour of the motion had already been presented to the Senate, signed amongst others by twenty-seven women who had already passed the established examination for women. Why should they be kept back from higher honours? Undoubtedly, there was a necessity for physical as well as mental culture; perhaps, also, competitive examinations as far as women were concerned might be modified. The demand now made, however, was based on the ground of justice and generosity, and could not be long delayed.

Mr. GOLDSMID, M.P., opposed the motion. Women's education wanted improving, but that might be done without granting them degrees. The sexes should be kept separate, and their education should be distinct, their aims in life being different. Women were superior to men in many respects; but they would lose by having men's training and by competing with men.

Mr. ELLIOTT said the motion would allow exceptional women to take degrees, if they desired to do so; why not? Why should not men and women be examined together?

Mr. A. CREAK proposed, as an amendment, that women should be admitted to the examinations in arts, not in anything else, and that successful candidates should receive, not degrees, but certificates of having passed.

Dr. SANSOM seconded the amendment.

Mr. CONWAY regarded the opening up of degrees to women as a powerful means of ending the heartless frivolity prevalent in the sex after leaving school and before entrance in the married state. Besides, the whole education of the country would be put on a higher level, if women were better educated.

Mr. ROBBERDS and Mr. MILLER supported the motion; the latter especially dwelling upon the fitness of women for the obstetrical branch of medical art.

Dr. QUAIN asked the last speaker whether he and other clergymen who advocated women doctors were prepared to see their pulpits besieged by an army of Amazons. Medical men were perfectly ready to welcome the ladies, but they had too great a regard for the sex, knowing the evil effects of hard study upon women's minds and health. This was a question of placing men and women in the position of competing one against the other. The degrees of the University of London represented the highest type of education for men; was that type suitable for women? Suppose a woman entered the medical profession, married, and had a child, would she visit a case of scarlet fever? She must either expose her child to infection, or neglect her patient. Again, if asked to attend a lady-patient at her confinement next November, she might be compelled to decline, because at that time she might be requiring attendance herself. How could a refined lady continue her attendance at the dissecting-room without being prejudicially affected thereby? or, if a lawyer, how could she return to her home from the filthy purlieus of the Divorce Court or Old Bailey? Women's mission was higher—to make home happy and to educate and train their children.

Mr. A. MACKENNALL said that the highest education of men and women was self-development; it afforded enjoyment of the highest kind to its happy possessers; why, then, debar women from its pleasures? The degree had advantages of its own supplementary to the certificate.

Dr. MERYON gave two instances of young ladies, who became paralysed from overwork.

Dr. SIBSON said that women required a high education, but one suited to their sphere in life; raise that as much as possible. The proper balance of education, physical as well as mental, was required; no part should be overworked. Properly conducted education conduced to health of mind and body; if women worked for degrees as men did, they would fall and suffer in the competition. Could a vote in that room alter suddenly the traditions of centuries? Should the University provide for general wants, or for a few exceptional masculine women? He thought there was an absolute needlessness of the University allowing women to be examined for degrees.

Others spoke amid cries of "Divide, divide".

Mr. HENSMAN, in reply, said the matter had, on the whole, been treated seriously; and that, if his proposition was passed, human nature would remain much as it is at present. The opponents of his motion had answered one another in most of the objections they had urged. Many women were single, and never entered the state of matrimony. They also formed a large part of the teaching power of this country; why, then, deprive them of the degree after they have passed the necessary examination? No profession was thereby opened to the sex.

The CHAIRMAN said one female practitioner was on the register.

Mr. HENSMAN was glad to hear it. If women were capable of taking the degrees, was there any justice in preventing them from doing so? If the house passed the resolution, they would be doing justice to women and honour to themselves.

The amendment was at once negatived; and the original motion carried amid loud cheers by a majority of 83 to 65.

The report of the Annual Committee was then presented and received.

Mr. COZENS HARDY, for Mr. SHAEN, moved, "That, while cordially concurring in the object of the Medical Acts Amendment (University of London) Act, Convocation requests the Chairman to express to the Senate their hope that, for the future, no similar action may be taken without the previous consent of Convocation." The one important function of Convocation was, that no new charter, or alteration in the charter, could be made without their consent; and, therefore, they must press this right, lest a radical change in the University should be at any time made without their consent.

Dr. FAGGE, in seconding the resolution, observed that each of the bodies affected by the conjoint scheme had had to give up something; they would each lose, that the general public might gain. Still, that was no reason why the members of Convocation should abandon their undoubted privileges.

The CHAIRMAN observed that what had been done was a mere matter of inadvertence; every one concerned had overlooked the fact that the privileges of Convocation had been encroached upon.

After a few remarks from Mr. R. M. FOWLER, the motion was carried unanimously. It was carried unanimously that the proposals of the Legal Education Association be referred to the Annual Committee.

It was decided to hold a meeting of Convocation in January next. Mr. Robson was appointed Clerk of Convocation for the ensuing year.

It was resolved, "That the present representation of Convocation on the Senate is not satisfactory, and that it be referred to the Annual Committee to see what change shall be introduced, in the event of a supplemental charter being obtained."

The proposition, "That information as to the number of marks awarded by the Examiners should be given to successful candidates for the higher degrees," was negatived upon a show of hands.

Mr. HUTTON proposed "That this House earnestly requests the Senate not to allow painful experiments on living animals, when not intended to be medical or curative, to be in any case carried on in the physiological laboratory of the Brown Institution: 1. Because such experiments are so far from being sanctioned by the late Mr. Brown's Will, that he distinctly directed that 'kindness to the animals committed to the charge' of the Superintendent should be 'a general principle of the Brown Institution'; 2. Because such experiments, wherever their subjects are 'domestic animals', are in all probability in contravention of the second section of the 12th and 13th Victoria, cap. 92; 3. Because the connection of this University with experiments of the vivisectional kind would be detrimental to its honourable position, and an outrage on the principles of a large class of its graduates." He said he brought no charges against the director of the Brown Institution or any other gentleman. It was a fact that vivisectional experiments had been made, and the Senate was in favour of them. He based his proposition on three grounds. 1. Such experiments constituted very likely a breach of trust. Mr. Brown founded the hospital out of the kindness of his heart to the lower animals; he certainly never contemplated that fever or other diseases should be produced in them. And, since such experiments could not tell us exactly what the effects of like operations upon mankind would be, would it not be better to create at once a subdivision of the slave trade, or take the criminal classes of the community, in order to provide subjects? The physiological experiments on them would be far more exact. The motives for performing the experiments of which he complained might be philanthropic; they certainly were not benevolent. 2. These experiments were very likely, he thought, to be a breach of the law. It would not be difficult for anyone who knew the race of lawyers to get an opinion against the legality of the acts now permitted at the Institution; whilst anyone who knew the race of judges knew that it was a "toss up" as to how the question might be decided if brought before a Court. Truly, it might be said that the experiments were done for the purpose of ultimately benefiting human beings; but that was not the question. The Act 12 and 13 Victoria, cap. 92, stated that one should not torture . . . animals; now torture did not involve a question of motive; but the punishment for any act of torture was a fine not exceeding £5. He believed that no physiologist had ever been prosecuted under the Act; but still anyone giving pain to an animal amounting to torture, whether for the good of human nature or not, was liable to a fine of £5. 3. The University was catholic; it covered all religious and all moral opinions; but, by permitting these experiments, they committed themselves to the narrow principle of vivisection. It was monstrous that the opinions of a large minority of the members of the University should be outraged in that way for the sake of the scientific results to be gained therefrom. Those who had experimented might be noble-minded and upright; but they must for the future be prevented from such acts.

The CHAIRMAN read a letter from Dr. Sanderson, who said that the laboratory was not used for physiological inquiries, simply for investigations into the nature and treatment of disease. It was necessary for such investigation to induce the disease and to perform small experiments, such as the abstraction of a little blood, etc. This must be done. As much care was taken of the diseased animals sent there as if they were human beings.

Mr. HERSCHELL opposed the motion. He said that, if passed, it would be a vote of censure on the Senate; but the Senate had not so acted as to lose the confidence of that House. What experiments did Mr. Hutton intend to prevent? He ought to have been more explicit. What reasons had Mr. Hutton given for knowing what had been done, and what was going to be done, at the Institution? He criticised severely the three reasons upon which the proposition was based. As regards the first, that was a very serious statement; because, if anything had been done constituting a breach of trust, the Institution might be removed from the control of the University. Now Mr. Brown said, in one paragraph of his Will, that the Senate might purchase diseased or wounded animals or their carcases "for the purposes of science". He, therefore, wished for the promotion of science, and was more benevolent and philanthropic than Mr. Hutton gave him credit for. They were asked to affirm that so and so was, in all probability, the law; now either it was or it was not the law. Clearly and unquestionably such acts as Mr. Hutton hinted at were not contrary to the law. The experiments of Dr. Brown-Séquard, mentioned by Mr. Hutton, were in the knowledge of Parliament when the Act which had been cited was passed. The whole clause, which spoke of overdriving, torturing, etc., was governed by the word "cruelly", which prefaced the whole sentence; to "cruelly torture" an animal was illegal. According to Dr. Johnson, "cruel" signified "pleased to give pain"; according to Webster, it meant "disposed to give pain to others", "reckless of the pain given". There might be justification for pain given, as in the experiments in question; when the individual would not come within the letter or spirit of the law, but anyone who cruelly tortured animals was clearly within the purview of the clause, were he donkey-driver or physiologist. He thought Mr. Hutton's view of the law of the question was wrong, and that no judge in Westminster Hall would decide with Mr. Hutton. It was a monstrous proposition that the majority should be asked to give way to the sensitive natures of the minority, because they affirmed that it was a question of principle with them. Everything was a question of principle; people objected to the Income-tax on principle. But they were assured by Dr. Sanderson that no experiments of simple scientific curiosity were done there; only those necessary for the investigation and treatment of disease. Either that was a right thing or a wrong thing to do. If right, it ought to be continued; if wrong, it should be done nowhere. But, further, if it were a right thing, and if it came within the terms of the will, as he thought it did, the directors would be wrong if they did not do it. Was it wrong to give pain to animals, as was daily done when we killed them to support our lives? Clearly not. Neither was it wrong to give pain for the preservation of more valuable lives, as by testing a pestilential disease. It could not be wrong to give pain that thousands of lives might be saved. Mr. Hutton had said that you would get more valuable results from experiments on criminals; and that, if experiment on the lower animals were right, the other experiments might be defended on the same plea. Clearly not, however. We might pole-axe a rabid animal, but might not shoot a man rabid from disease. We might never have a less regard for human life. We clearly might subordinate the lower animals to our use, as by eating them to support our own lives.

Mr. PARKER said Mr. Brown did not give his money to benefit man, but to advance science on behalf of the brute creation. He founded his hospital exclusively for the use of animals; and any experiments for the benefit of man which might have been done had already contravened the intentions of the founder.

A GRADUATE said that the will allowed animals diseased or wounded to be purchased for scientific purposes. That did not allow them to be tortured. Again, was over-driving not torture, even if not cruelly done? Any one over-driving was guilty and liable, whether he did it because it gave him pleasure or not. However, he should vote against Mr. Hutton's motion, because, from the letter which had been read, he believed that Dr. Sanderson thought the provisions of the will to be contrary to such experiments, and seemed determined that no experiments should be performed except those for the real advantage of the animals themselves.

Mr. SOLOMON thought the lawyers would be opposed to Mr. Hutton's view of the matter.

Dr. SANSOM and Mr. NESBIT proposed that the meeting should pass to the next business on the paper; but the motion was lost.

Mr. HUTTON then replied. He had purposely abstained from making charges against the learned Superintendent of the Brown Institution. He wished clearly to separate his own motives in the matter from any charge of cruelty against very eminent men. Mr. Brown certainly desired that animals should be bought for scientific purposes; but only on behalf of the animals themselves. He (Mr. Hutton) did, however, know that doctors had such zeal for experiments that he would rather not leave the matter to their discretion. It might be perfectly right that these experiments should be made, but that was far different from saying that the University should permit them to be performed in the Brown Institution.

A division then took place; when the motion was lost by a large majority. Sixteen only voted for, and fifty-nine against it.

The following medical graduates were elected to serve on the Annual Committee for the ensuing year:—M. Baines, M.D.; Marcus Beck, M.S.; E. Clapton, M.D.; C. H. Fagge, M.D.; W. Tilbury Fox, M.D.; W. H. Holman, M.B.; H. Maudsley, M.D.; A. Meadows, M.D.; J. F. Payne, B.Sc.; G. V. Poore, M.D.; and P. H. Pye-Smith, M.D.

The meeting then terminated.

A YOUNG lady, Miss Jacobs of Sappemeer, has passed the examination for a medical degree at Rotterdam with the greatest success. She is the first lady who has achieved the distinction in Holland.

ASSOCIATION INTELLIGENCE.

GLOUCESTERSHIRE BRANCH.

The next meeting of the above Branch will be held on Tuesday, May 19th, at the Plough Hotel, Cheltenham, at Seven o'clock.

The dinner will take place at 8.30 P.M.

Rayner W. Batten, M.D., *Honorary Secretary.*

Gloucester, May 7th, 1874.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

The annual meeting of the above Branch will be held in the Corn Exchange, St. Ives, on Wednesday, May 27th, at 3 P.M.; W. R. Grove, M.D., President.

Gentlemen intending to read papers, or be present at the dinner, are requested to communicate with the Secretary without delay.

The dinner will take place at the Lion Hotel, at 6 P.M. Tickets, 10s. 6d. each. J. B. Bradbury, M.D., *Honorary Secretary.*

Corpus Buildings, Cambridge, May 4th, 1874.

YORKSHIRE BRANCH.

The annual meeting of this Branch will be held in the Cutlers' Hall, Sheffield, on Wednesday, May 27th, at 2.30 P.M.

The members will dine together at the Royal Hotel. Tickets (exclusive of wine) 6s. 6d. each.

Gentlemen desirous of bringing forward communications, or attending the dinner, are requested to communicate with the Secretary.

W. Procter, M.D., *Local Secretary.*

York, May 4th, 1874.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

The next meeting of the above District will be held on Wednesday, May 27th, at the Castle Hotel, Hastings, at 3 P.M. The Chairman to be chosen at the time.

Notice of intended communications is requested on or before Wednesday, the 20th instant, in order that they may be inserted in the circular convening the meeting.

Dinner as usual, at 5 o'clock. Tickets 5s., exclusive of wine.

Thomas Trollope, M.D., *Honorary Secretary.*

35, Marina, St. Leonard's-on-Sea, May 12th, 1874.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

The annual meeting of the above District will be held at the Fleur-de-Lis Hotel, Canterbury, on Thursday, May 28th, at 3 o'clock; H. G. Sadler, Esq., in the Chair.

Dinner at 5 o'clock precisely; charge, 5s., exclusive of wine.

The Chairman kindly invites members and their friends to lunch at his house, from 1 till 3.

Gentlemen who wish to make communications to the meeting are requested to inform me *at once*, in order that a notice thereof may be included in the circular convening the meeting.

Edward W. Thurston, *Honorary Secretary.*

Ashford, May 9th, 1874.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

The next meeting is appointed to be held at the Infirmary, Gravesend, on Friday, May 29th, at 4 P.M.; Alfred Shewen, M.D.Lond., in the Chair.

Dinner will be provided at the Old Falcon Inn, at 6 P.M.

Papers are promised by W. Buchanan, Esq., on the Treatment of *Post Partum* Hæmorrhage by the Perchloride of Iron; and by the Chairman, on Hydatidiform Mole. Further papers are desired.

Frederick James Brown, M.D., *Hon. Sec.*

Rochester, May 11th, 1874.

CUMBERLAND AND WESTMORLAND BRANCH.

The spring meeting of the above Branch will be held at the Keswick Hotel, Keswick, on Thursday, June 4th, at 12.30 P.M.; Robert Tiffen, M.D., President, in the Chair.

Gentlemen intending to read papers, or be present at the dinner, are requested to give early notice to the Secretary.

Henry Barnes, M.D., *Honorary Secretary.*

Carlisle, May 5th, 1874.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

At a special meeting of the Committee of Council, held at the Freemasons' Tavern, on Thursday, the 7th instant—present, Mr. G. Southam, (President of Council) in the Chair; Mr. Baker, Dr. Bastian, F.R.S., Mr. Board, Dr. Bryan, Dr. Carpenter, Dr. Chadwick, Dr. Ward Cousins, Mr. Nicholson, Dr. Parsons, Dr. Quain, F.R.S., Dr. Sibson, F.R.S., Dr. Stewart, Dr. Steele, Dr. Wade, and Dr. Waters (Chester).

Read circular convening meeting.

Resolved—That the Laws and Incorporation Subcommittee be requested to confer, in order to consider the proposed alterations in the laws of the Association and the articles of incorporation, and to report to the next meeting of the Committee of Council.

Resolved—That the President of the Council be the Chairman and convener of the Amalgamated Committee.

Moved by the Chairman, seconded by Mr. Nicholson—

That the minutes of the Journal and Finance Subcommittee be approved, and the report adopted.

Whereupon an amendment was proposed by Dr. Stewart, which not being seconded, the original motion was put, and the same was declared to be carried.

Dr. Stewart announced his intention of resigning the Journal and Finance Committee.

Resolved—That Dr. Stewart's resignation as a member of the Journal and Finance Committee be not accepted.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Some very suggestive reports from four newly appointed health-officers now lie before us. They illustrate four common forms of sanitary district.

1. Pateley-Bridge Union.—This is under a rural sanitary authority, and contains a population of less than 9,000 persons, on an area of 75,000 acres, lying to the north-west of Harrogate. Mr. Edward Warburton, the Medical Officer of Health, gives a clear account of the physical geography of his district, bounded on one side by a line of watershed in the western highlands of Yorkshire, and having an annual average rainfall of forty inches, which is exceeded in parts of greater elevation, as on the Whernsides, Middlemoor, Ramsgill, etc.

The main geological features in the district are (1) the limestone formation, under which crops out a broad strip of (2) millstone-grit and shale; the water from the former being hard, from the latter soft and good. The average density of population allows nearly eight and a half acres to each person, and leaves a vast extent of uninhabited area, consisting chiefly of moorland, which is drained of its natural moisture by the river Nydd and its tributaries. So little care, however, is taken of an abundant supply of water that the greater part runs off into water-courses, defiled with all kinds of surface impurity. No provision is made for storage, or for efficient drainage of the land. There is no systematic protection of water from the most reckless pollution. The death-rates of the whole district for three years past were 22.68, 21.18, 19.68; showing a steady improvement, which, however, has no connection with the Public Health Act, hardly yet in operation. The death-rate varies enormously in the four registration subdistricts, from 26.63 (1870) in one, to 13.45 (1872) in another.

Mr. Warburton cannot complete his vital statistics until he is supplied, as he is not at present, with regular returns, from the different subregistrars, showing the mortality according to age, and in the zymotic class of diseases. He deserves every commendation for what seems to have been a fearless, searching, and complete investigation and exposure of nuisances, with the names of defaulters. Heaps of decomposing farm-yard refuse, cesspools, pigsties, open ditches, overflowing privies, and filthy accumulations of all kinds—defiling the soil, the wells, and the water-courses, especially in the immediate vicinity of the villages and hamlets—seem to be common abuses throughout the district; as are also defective or absent ventilation, dampness of house-walls and floors. No wonder, then, that typhoid fever and diarrhœa have prevailed. The schools are reported to be in a foul and dangerous condition, badly ventilated, and generally wanting in proper privy accommodation. Some instances of gross overcrowding are inexcusable in so sparsely populated a district. Neither the inhabitants, nor the local authorities, nor the health-officer himself, seem to have an idea of a prompt system of disinfection by dry earth or ashes as a substitute for cesspools and other foul accumulations of organic matter. Hence we see nothing proposed in the way of remedy, but sewers and drains, though of better construction, and more regularly flushed than any of the few which now exist. It is obvious that a thorough sewerage of so extensive a district and scattered a population, would be a more costly and unremunerative process, even with proper sewage utilisation, than a well contrived system of movable receptacles constantly disinfected by earth or ashes, and emptied at least thrice weekly; and the contents, after being properly dried, applied to the land; thus completely preventing pollution of the natural water-supply. Where there is a scarcity of water, as is the case even in some parts of this generally well watered district, it seem a strange extravagance to propose to use it for flushing drains, all of which have their ultimate outlet into the river, which constitutes the water-supply of a large population. To talk of sewerage for a hamlet containing only twelve houses seems almost absurd.

Mr. Warburton's description of the disgusting absence of personal cleanliness in these villagers would apply to most populations of the same kind in this country. It is an evil only to be cured by education, and furnishes one of many reasons for uniting national education and national health under one chief minister, superior to the President of the Local Government Board. Mr. Warburton complains of the neglect (felt also in other places) of a railway company in providing no proper urinal or closet for passengers at stations. His proofs of the contagious nature of diphtheria, and of the possibility of stamping out an invasion of it, by enforcing isolation of the cases, are also of general interest, and show how efficient is his action in emergencies.

II. WEST DERBY.—A local board district, under an urban authority, adjacent to Liverpool. This is a curious instance of complexity of boundaries, and confusion of names. The local board district of West Derby had a population in 1871, of 27,282 (now supposed to be 29,454); but it forms part of the parish of West Derby, population 77,969, in the West Derby union, population, 342,925. A portion of the parish, again, having a population of 50,687, is included in the borough of Liverpool, although in the union of West Derby. We conclude, by calculation, that the local board district is outside of, and adjacent to, the borough, but the census does not say so. As the census omits also to state the area of many urban districts, we cannot give the density of population in the district of West Derby. The Medical Officer of Health, Dr. W. Carter, reports that the deaths in the district (1873) were at the rate of 17.51 per 1,000, contrasting very favourably with that of the previous decennium 1861-1870, and with that of its gigantic neighbour, the borough of Liverpool. An useful table of mortality, according to age and sex, is given, as also the fatal cases of diarrhœa, phthisis, and bronchitis, according to age and season. Deaths from zymotic disease were 19.7 per cent. of the total deaths.

Dr. Carter mentions the great advantage to the health-officer of possessing early information of sickness and mortality; but he receives this information only as far as deaths are concerned. There are no records of disease at his disposal; and he modestly hopes "that the Legislature may one day devise a plan for obtaining a registration" of sickness not ending fatally. He calls for additional powers to suppress "any obvious cause of danger to the public health," *e.g.*, power to remove cows kept for milking in close proximity to patients suffering from scarlet fever. He seems to have done much in the way of home-visitation and sanitary advice; and he notices the very common evil of badly constructed drains, allowing, more or less, escape of foul emanations into the interior of houses, and thus contaminating not only the air of rooms, but also the provisions kept in them, beer and milk especially. He urges the necessity of vigilant and constant inspection, and of power to compel the removal of nuisances. He also complains of the great waste of water in the repeated flushings of closets, to prevent the offensive odours which now constantly proceed upwards from sewers and drains.

III. CHELTENHAM.—A borough under "Improvement Commissioners", a local board and "urban" authority. The first three monthly reports of the accomplished Medical Officer of Health, Dr. Wright, contain the primary results of his efforts to obtain returns of births and deaths, as well as of sickness attended in medical institutions, and among paupers, in-door and out-door.

In the report of January, he shows that this information, so far as it is complete, affords to sanitary authorities the only reliable means of estimating the healthiness of a population.

The hospital and dispensary returns are furnished by the resident officers in the form prescribed; but one of the four union medical officers is reported to have declined to return his cases of sickness, unless specially remunerated for his contributions. Whilst, with Dr. Wright, we may regret the result, we cannot join him in blaming this reticent officer for his independence in maintaining the rightful claims of his branch of the Civil Medical Service to fair payment for necessary public information. It is hardly just to censure Poor-law medical officers for an omission which is evidently due to the parsimony of the authorities, central and local, and to the defects of the Public Health Act. Dr. Wright seems not to be aware that returns of sickness have been, for years past, collected by voluntary effort, and scientifically abstracted, with far greater completeness and accuracy than those of his own and other districts, in various places, under the Local Government Board. The Cheltenham returns distinguish merely deaths and cases under five years from those above that age, and certain "miasmatic" diseases from the total sickness. In the returns from the Manchester and Salford Sanitary Association, for more than ten years, all the medical charities and all the Poor-law districts, within an area of more than 26,000 acres, having a population of nearly half a million, were reported by some twenty-eight or thirty medical officers. Scarcely a return was missing during the whole period. The registration was of a truly scientific character, and its value was increased by regular meteorological returns from skilled observers, and by records of the precise mortality of the sickness registered, so that the true relation of sickness to deaths, among the poorer classes, in various diseases, at all ages, and in the several seasons and in different conditions of weather, has been for some time published in those districts. The same thing was done for Newcastle and Gateshead, and for Birmingham, and, during a few years, for many metropolitan districts. The names of Dundas Thomson, Ballard, Ransome, Morgan, and Philipson, will be for ever connected honourably with these efforts. The results ought to be generally investigated by official gentlemen who are only just beginning to try the experiment. Inexcusable is that government which, having been fully informed of these facts, declines to provide a proper organisation for equally complete statistics throughout the country. To cast the onus upon members of a profession which does more gratuitous work than any other in the kingdom, is most ungenerous and unreasonable, and the attempt should be boldly resisted.

Dr. Wright appears to be also the Medical Officer of Health in two adjacent local board districts—Charlton Kings and Leckhampton. His first report of the sanitary condition of Charlton is very instructive.

In districts of this kind, as in that of West Derby before noticed, the facts peculiar to suburban populations have to be specially investigated. Without an accurate knowledge of these circumstances, no correct view can be taken of the mutual action of the two kinds of population upon each other; no general conclusions as to the health and physical condition of the aggregate can be formed.

Dr. Wright is not officer of health to the rural authority surrounding these districts; *the Cheltenham Board having refused to permit their officer to act for the surrounding parishes, and the central authority being powerless to compel joint action.* How is it possible to work such a system with advantage to the public?

Dr. Rumsey, in his last year's address to the Gloucestershire Branch of the British Medical Association, showed that the separate action of these very boards in the Cheltenham Union, especially in the matter of hospital accommodation during epidemics, was already producing very absurd if not mischievous consequences. There is, in fact, no real co-operation between urban, suburban, and rural authorities in the registration area of which Cheltenham is the centre; and the exposure of the consequent muddle has hitherto led to no good result, which, indeed, can hardly be expected, until the nuisance of conflicting local administrations becomes intolerable to a better educated public or to a powerful and intelligent Government. Dr. Wright's scientific account of the topography of the Charlton suburb, and of its physical relations to the borough, is extremely important. Using the Ordnance survey, he gives the gradually decreasing altitudes of a series of spots from the Pass of Sandywell in the Cotswolds to the Severn valley beyond Cheltenham; and he defines the nature of the strata through which the Chelt brook and its feeders descend. This is just the sort of information required in every extensive district, but it is rare to find a man in office so well qualified for the task as this medical officer, whose great reputation as an original geological observer and writer renders him specially fit for the undertaking, and only increases our regret that the area of his official inspection is limited, by "local government" ignorance and narrow-mindedness, to so small an area. He does not state the density of population of either of his districts, and for the best of reasons, because the census of England does not record the acreage of the local board districts, a defect which ought to be supplied by a boundary commission, or, at all events, by authentic information in the next census. He applies his topographical facts mainly to the drainage question, showing the great facilities which nature has provided for a complete system of drainage and sewerage in Charlton in connection with that of Cheltenham.

But neither the local authorities nor their able officer seem to have contemplated the possible results of bringing the sewerage of the entire area, watered by these feeders of the Severn, an area rapidly increasing in houses and population, into union with the Cheltenham sewers which were constructed and are adapted only for a population limited by the borough boundaries. We venture to say that the sanitary prospects of this large area are by no means of the brightest and clearest description. The water-supply is already felt to be too small, because the natural storage of the Cotswold range escapes chiefly into the Thames basin; so that every gallon of water issuing from the western escarpment of the range is required for purposes of a more urgent kind than the flushing of sewers. Nor are the present opportunities of sewage utilisation sufficiently ample for the safe application of the refuse of this teeming population. Here, as in many other places, the inhabitants are only at the threshold of one of the most difficult questions of modern civilisation. The issues are doubtful; and some serious, if not irremediable, blunders, are not unlikely to be perpetrated.

Dr. Wright has, however, forcibly exposed the evils of the growing pollution of brooks and soil by cesspools open and concealed, and by industrial and trade nuisances. His proposal to extend the present system of sewers to all the small valleys formed by ancient watercourses, involves an almost unlimited expenditure of capital, and probably an enormous waste of valuable manure; for we cannot admit, *pace* Dr. Corfield, that water-carriage secures the economical use of human and animal refuse, *in all places*, to the same extent as its immediate application, unchanged by water, to the land.

There are great undertakings before Dr. Wright, as he himself intimates. Besides the detection of impure water-supplies and the closing of foul wells, there is the control, or rather prohibition, of private slaughter-houses—serious nuisances in Cheltenham—and the construction of extra-urban *abattoirs*; there is the removal of water-mills, which impede the flow of the Chelt, and create much dampness of soil. Moreover, it appears that more complete and general arrangements for hospital accommodation in epidemics are necessary for the whole union, and the condition of lodging-houses requires radical reform. These are all matters on which the medical officer of health will have to give advice. We should also like to hear something authentic about the qualification and efficiency of the inspector of nuisances, who has just been reappointed by the dominant party, after a protest from earnest sanitary reformers. Moreover, it would be well to know why the roads and highways of the district (so important to sanitary management) which are maintained at an enormous expense, should be so generally complained of by visitors. Have the surveyors a civil engineering qualification? Are the several districts combined under one officer, so as to occupy his entire time and attention?

These and other vital questions will be referred to Dr. Wright, and his information and suggestions thereon will be gratefully received, for the benefit of a town and neighbourhood in which he is so deservedly respected.

IV. GLOUCESTER UNION OF SANITARY AUTHORITIES.—Fourteen rural and small urban districts in the south-east and west of Gloucestershire. This remarkable report, for the first six months of the new system, is in every respect worthy of Dr. Bond's high reputation. He does not, indeed, describe very fully the particulars of his work, or the actual progress of public health in the several districts committed to his inspection, although he appends an useful summary of the principal facts and arrangements of each district. There has obviously been no sufficient time for a full investigation of the varied conditions of so extensive a circuit.

But he has done that which is of far greater importance at the present critical time, and which few could have accomplished in so masterly a manner; for he has shown how the defects of the Public Health Act have interfered, and must interfere, with any effective sanitary progress so long as that Act remains without supplement or amendment. He acknowledges the new organisation to be "crude and experimental"; and, if he do not acknowledge, his remarks prove, that he labours under the disadvantage of having no local deputies who would supply him carefully and promptly with the required statistics of sickness and mortality, and announce outbreaks of epidemic disease, and who would also report, as none but a medical officer in charge of the poor can report, on details respecting *causes* of sickness. He distinguishes judiciously between the sanitary survey which every chief officer of health should make of his own district—concerning which he complains that the Local Government Board has issued no form or directions—and the "periodical record of action in regard to nuisances". He has himself compiled a form of survey, of which we should have liked to see a copy in his report, as it seems to have been adopted by other medical officers of health in different parts of the country.

With regard to vital statistics, he asserts the simple truth, that "there are difficulties of all kinds in the way which nothing but the interposition of the Local Government Board and Parliament could remove". He admits that rural authorities have at their disposal a certain amount of information to which urban authorities have no right of access. And here is proof of the greatest defect of recent legislation—the exclusion of the Destitution Authority from all share in the sanitary administration of urban districts. The information, moreover, is very defective; "the returns themselves are of very uncertain value, being often carelessly or incompletely filled up", so, as he says, "that they would be of no value for statistical purposes without an amount of correction which I have neither the time nor the inclination to obtain". Here is unquestionable evidence of the correctness of the position taken by Dr. Rogers and other advocates of Poor-law medical reform, that a national registration of disease under existing circumstances would be almost worthless, and that the first step is to reform the administration of medical relief, by improving the status, the qualification, and the remuneration of union medical officers under a good dispensary system, as in Ireland. The entries and the nomenclature of the returns are at present too commonly inaccurate and defective.

We regret to hear Dr. Bond's opinion that "a general registration of disease, however desirable in the abstract, is practically impossible". Surely he must labour under the same want of information on this point as some of his official colleagues; for, had he examined the published records of sickness from Manchester, Newcastle, Birmingham, and London, to which we before referred, he would have seen that it is not only practicable, but has been most ably carried into effect for many years, at least in two great centres of population. Perhaps he means that the sickness of the whole population cannot be so dealt with. Granted; but this has never formed part of any approved scheme. The cases of sickness treated and recorded in public institutions and among paupers have already been included in the published returns of voluntary societies. If the registration were extended to bodies of workpeople whose illnesses and accidents are now recorded, and if returns from Friendly and Provident Societies were also added, and the whole properly collected and revised under Government authority, the registration of disease would be as perfect as the country requires. By the bye, the last item is proposed by Dr. Bond as though it were his original suggestion; but it has been made repeatedly, and long ago, by older labourers in this field. Well would it be, as he suggests, if Government were to apply a portion of their present financial surplus to so great and useful a national undertaking.

The same defects in organisation which impede the collection of statistics and complicate proceedings against causes of disease lead Dr. Bond into the question of establishing sanitary committees in single districts, as well as a central delegation of such committees for the united district under the charge of a superintending officer of health. The appointment of a sanitary committee by every local authority is not compulsory by the Act; and he says that those authorities who have appointed sanitary committees have made far greater progress than those who have not.

His experience of mixing up Poor-law and sanitary proceedings together is "most unsatisfactory". When there is a press of business, "the latter goes to the wall". No Board, he says, can long carry on such a system without sacrificing altogether its efficiency as a sanitary authority.

It is now obvious that Mr. Simon's original views as regards local organisation are being verified by the failure of plans adopted in neglect of, or opposition to, those views. In his eleventh annual report (P.C.), he showed that, where the Board of Guardians, as in rural districts, is the local sanitary ("nuisance") authority, this "form of law not only gives to the health-interests of the place an undue appearance of being of secondary importance, but also sometimes leads the Guardians to think themselves surcharged with duties foreign to their real business". He, therefore, recommended that, "if the two administrations are to be associated, the Board should be invested by law with a new title denoting its double functions as authority for health and destitution"; and, in that case, of course the appointment of a Sanitary Committee should be made compulsory. So, in what Mr. Simon called "Special Health Areas" (urban districts under the Public Health Act), he doubted whether it would be an advantage that the Health Authority should continue to be "distinct from the Destitution Authority of the place". He thought that "it would generally be of benefit to municipal administration if *one single Board*, with sufficient power of acting by committee, were elected for all purposes of local government, including the relief of destitution."

This idea is worked out in another direction by Dr. Bond under "objects of sanitary organisation", where he advocates the extension of municipal or urban functions to Rural Sanitary Authorities, plainly condemning as absurd the distinction in respect of powers which is made by the Public Health Act between urban and rural authorities. We have thus a remarkable approximation of opinion between two very philosophical writers, in virtual consent also with our own Joint Committee on State Medicine, which, from the first, opposed the present absurd and ill-working scheme, and advocated the unification of local authority by means of councils or committees having the same nature, constitution, and functions in all the districts of the kingdom; the (Sanitary) Committee in towns being appointed jointly by the existing Municipal and Destitution Authorities, and in rural districts by the existing Destitution and Highway Authorities, perhaps completed by the Petty Sessions element, and thus forming a complete, consistent, and homogeneous system of local sanitary authority, under which, as Dr. Bond well suggests, a better nuisance-law, "built anew on the old foundations", might be effectively administered, and under which also, we say, all medico-sanitary action would be brought under one administration by two orders of medical officers; the destitution medical officers being health-officers of the first instance, and as deputies furnishing all needful information and aid (on proper payment for the same) to the superintending officer. Under such a system of local authorities in revised sanitary districts, there would be little difficulty in forming a Central Local Committee, or delegation of district authorities, in an area settled by county authority, and employing a superintending officer like Dr. Bond. His remarks (page 15) justify the recommendation of Inspector Henley on the subject. But, without a new basis of legislation, we are safe in predicting a failure of any such attempt by voluntary or permissive action.

Under "Ill-constructed and dilapidated Houses", he repeats his previously published proposal (approved by the Conference of Medical Officers of Health to combined districts), that decent houses for ordinary labourers should be looked upon as essential sanitary requirements, and that, where they were urgently required, Sanitary Authorities should be empowered (we say, compelled) "either directly to provide them, or to facilitate their provision, in the same way and by the same means as they are now enabled to provide for other sanitary works of a structural character". We heartily agree with Dr. Bond in this suggestion of what may, at first sight, seem somewhat despotic legislation. It is justified by the alarming fact "that there is no appearance of any spontaneous or growing remedy" for this shocking state of things.

"No newer or better houses are springing up to replace the old and decaying ones. . . . There are many places where there is an active demand for good cottages, but where not an inch of land can be got on which to build them. The wages of an ordinary labourer do not, as a rule, allow him to pay such a rent as will give a fair market return on the cost of building."

Under "Water-Supply", he points out the great defects in the existing law. The propositions in Sir C. Adderley's Bill would, as he states, deal only partially with the subject, even if administered by reformed authorities. Dr. Bond says, "It appears to me that the indispensable correlative of compelling a man to find a water-supply for his house is to give him every assistance in so doing, by facilitating his combining with others, or, if need be, by compelling them to combine with him." In places where the rainfall must be utilised, he supports a practical suggestion (made first in the *Times*) which had been tried successfully, namely, to construct "a cistern without brick or stone, simply by applying the cement directly to the earthen sides of a circular pit, and then roofing it over. Such a cistern, large enough for two families, can be constructed, it is stated, for £3 10*s*. and will last for years. If connected with the roofs of two houses, it will rarely be empty."

When *pure* river-water can be obtained, he recommends every place within a reasonable distance of a stream to provide itself with a constant supply of water by utilising the force of the river-current as a motor power. We have seen such machines successfully at work. To prevent the pollution of water, he recommends that the Local Authority should be empowered (? compelled) to "cut off all overflows from cesspools into drains that are not specially constructed for the reception of excremental matters, and it should have the further power of prohibiting cesspools altogether in places where they can scarcely exist without being a source of possible danger".

Under "Closet-accommodation" and the use of its products, Dr. Bond indicates very distinctly the condition by which decomposition can be made perfectly inoffensive. "It is simply to keep those waste matters dry." These words deserve to be inscribed in letters of gold in every country house. He shows that this principle involves "a complete reconstruction of all ordinary privies, so that the excremental matters shall be protected from extraneous moisture, and from leaking into the earth; shall be allowed to dry by exposure to air; and that this drying process shall be facilitated by the addition of simple drying materials which are at hand everywhere. Such drying materials are ashes, which even the poorest cottage can supply to some extent, and earth, which is also universally accessible."

The frequent cleansing of the receptacles, and removal of their contents, he thinks should be the affair of the Sanitary Authority. It entails a system of constant scavenging which need not be expensive, and might become self-supporting when it becomes generally known that such matters have a distinct value as manure. His mode of dealing with slops and house-water will be best understood by referring to his report and to his pamphlet (last edition) *On the Commoner Forms of Nuisance*, etc., in which he thinks that he has reduced the treatment of slops to elementary simplicity, and can show how to make this refuse so remunerative that it will be worth any cottager's while to use it, and to allow nothing but practically pure water to leave his premises.

On the Prevention and Arrest of Zymotic Disease also, Dr. Bond has some well-considered remarks, though involving no new principle or practice (pp. 34-42). He has no more respect than ourselves for the liberty of the subject when that means "liberty to propagate disease at a neighbour's cost". He recommends, as we do, very simple arrangements for the indispensable isolation of infectious cases; a room or two, or a separate cottage, or, at most, the temporary use of a cottage hospital. All infected persons, whether paupers or others, who cannot secure isolation at home should be taken to such a place, the Sanitary Authority having power to recover reasonably for maintenance, and, in the case of paupers, to charge the average cost on the rates. He thinks it "a misfortune that, when Sanitary Authorities were constituted by the Public Health Act of 1872, vaccination duties were not taken from Boards of Guardians and placed in their hands".

But, if Conjoint Sanitary Committees of both Health and Destitution Authorities, such as we have already sketched out, were constituted, there would be at once and everywhere the machinery at hand which would work public vaccination, and all other medical measures, with the advice of a good health-officer, and subject to the control of the Medical Department of the Central Authority. At the close of his valuable report, Dr. Bond administers a sharp rebuke to those *dilettanti* "who counsel delay in further legislation until Sanitary Authorities have learned what their duties are, and who allege that the law as it at present exists gives them ample powers to deal with all the difficulties with which they have to contend".

We strongly recommend all engaged in sanitary legislation and administration to peruse carefully this admirable report.

MR. D. S. SKINNER (Lyme Regis).—No medical man is entitled to charge for either medicine or attendance upon a patient who has a parish medical order. In England and Wales, a medical order makes the recipient a pauper. Either the Chairman is mistaken, or Mr. Skinner has misunderstood him in this matter. When once a medical order is issued, the medical officer has no alternative but to attend, no matter what the position of the patient may be, until the order is revoked by the relieving officer or Board. So long as the medical officer attends under the medical order, so long is the patient in fact a pauper, and cannot be charged for medical attendance. It was suggested by the late Mr. Griffin, that all medical orders should be issued by way of loan; and that, should the patients be able to pay, or become so, they should be compelled to do so at a fixed rate. Such is not the law.

MR. HUGHES (Middlewich).—The union or any medical registered practitioner is entitled to one guinea or more for examining a person in order to ascertain his sanity. The fee is fixed by the magistrate, and the order for payment by the guardians is compulsory. If a second certificate be required, then the magistrate fixes the fee as in the first instance. It is the duty of the medical officer of the workhouse to acquaint the relieving officer of any patient that he suspects to be insane. Thereupon the relieving officer applies to the magistrate, who calls to his assistance a medical man, and gives an order for his payment by the guardians.

MR. HUGHES (Middlewich).—It is always difficult to express a decided opinion as to the immediate cause of a case of enteric fever, unless that opinion be founded on a personal investigation of the circumstances under which it occurred. Purulent deposits in the joints are rare in this disease: and Murchison, in his *Treatise on Continued Fevers*, states that he has only met with one such instance. But, accepting the diagnosis as correct in the special case mentioned, there is no evidence to show that the patient was exposed to the poisonous influence of the specific evacuations of a previous case of enteric fever, unless, indeed, these could have been contained in the privy-cesspool mentioned, or some specifically diseased evacuations could have escaped up the choked drain referred to, from some common sewer: and therefore, although, in the present state of our knowledge concerning the etiology of this fever, it is not advisable to affirm that no case can arise except in connexion, either direct or indirect, with some prior case, yet we think it better, under circumstances similar to those referred to, to point out that the outbreak in question was, as usual, found to be associated with conditions favouring excremental pollution of either air breathed or water drunk, instead of saying absolutely that the disease was *caused* by these unsanitary conditions. This should amply suffice for the purposes of sanitary administration, and no statement will have been made which it is difficult or impossible to prove. No question can possibly arise as to the necessity which existed for the immediate removal of all the causes referred to by our correspondent.

GUILDFORD.—The salary that Dr Young received was very inadequate; and it is pleasing to find that the Board were unanimous in that opinion, and voted the increase asked for. With respect to lessened consumption of wine and meat, it is to be remembered that the dietry of the sick is under the control of the medical officer, and forms an important factor in the treatment of the sick. Dr. Young used his discretion, which appears to have been, on the whole, satisfactory. The argument for increase of salary on the ground of decrease in the cost of drugs and other medical comforts should be taken *cum grano salis*

OBITUARY.

R. W. TAMPLIN, F.R.C.S.

The death of Mr. Tamplin, the well known orthopædic surgeon, which we announced last week, took place suddenly, at his residence at Chiswick, on Wednesday, the 6th instant, from an attack of acute bronchitis associated with some failure in the heart's action. His name is well known in connection with the early history and progress of orthopædic surgery in this country. He was connected with the Royal Orthopædic Hospital from its foundation in the year 1838, when he was associated with his brother-in-law, Dr. Little, in the establishment of that institution, aided by the powerful City influence of Mr. Quarles Harris.

Mr. Tamplin's connection with this Hospital ceased only two years since, when, in conjunction with his colleague Mr. William Adams, he felt called upon to resign the surgeoncy under circumstances which have gained for the Royal Orthopædic Hospital and its present medical staff a very unenviable notoriety.

Mr. Tamplin enjoyed a large private practice for many years, and published a course of lectures on Deformities in the year 1846, and a small work on *Lateral Curvature of the Spine* in 1852. In the treatment of spinal curvature, he strongly advocated the use of spinal instruments of stronger and more complicated construction than those more generally in use; and he believed in the curability of lateral curvature by mechanical means. The subcutaneous division of the posterior tibial tendon in infants was first attempted by Mr. Tamplin about the year 1842; and the method of operating was subsequently improved by Dr. Little, so that the more severe forms of talipes varus were rendered more amenable to treatment. Mr. Tamplin also suggested an improved method of treating webbed fingers, by making a perforation at the apex of the web by means of a screw-clamp, and then, after healing of the aperture, dividing the web. The gradual mechanical extension of cicatrices from burns, and various other procedures connected with the department of surgery which he so successfully cultivated, especially engaged his attention.

In private life, Mr. Tamplin was surrounded by a large circle of friends, whose fullest confidence he enjoyed, as he also enjoyed the confidence and respect of his patients, by all of whom his loss will be severely felt.

SAMUEL DAY FEREDAY, F.R.C.S.

Mr. S. D. Fereday, F.R.C.S., of Water Orton, near Birmingham, formerly of Dudley, died on April 14th, in the sixty-first year of his age. Mr. Fereday was born at Gornal in 1813. He entered St. Thomas's Hospital and the Webb Street School of Medicine. He subsequently settled at Dudley, where he practised for more than thirty years, and was highly esteemed and beloved by his patients and an extensive circle of friends. He was Consulting-Surgeon to the Dudley Dispensary, of which institution he was one of the founders. He was also one of the originators of the Guest's Hospital. Mr. Faraday was author of several papers. He was justice of the Peace for the counties of Worcester and Stafford, and for the borough of Dudley.

FREDERIC BIRD, M.D., F.R.C.P.

Dr. Frederic Bird was born at Colchester on January 23rd, 1818. At nine years of age he was, with his elder brother Golding, sent to school in London. He entered Guy's Hospital a few years later than his brother, and held resident offices under Drs. Addison and Ashwell. In 1840, he held the post of clinical assistant at the Westminster Hospital for twelve months, and then settled down into private practice in Craven Street, Strand. Soon after this, on June 26th, 1843, he performed his first operation of ovariotomy. After this, he lectured on forensic medicine, in conjunction with Mr. Hodges, at the Westminster Hospital; he also held the office of Physician to the Maternity Charity. In 1861, he was appointed Obstetric Physician to the Westminster Hospital. Since then his lectures have been listened to by annual classes of students; and those who had the privilege of hearing him will long remember his eloquent, terse, yet happy mode of expression. In the wards, his diagnosis was rapid, and very seldom incorrect. His writings were few in number—the pressure of actual work among patients occupying the greater part of his time.

He had suffered much from the effects of overwork during the last few months, and twice had been compelled for a few days to rest in the house. His fatal illness commenced, on April 8th, with flying pains, which he thought were the precursors of rheumatic fever, two attacks of which he had gone through nine and seventeen years before. Soon, however, the symptoms pointed more to suppressed gout; never developing into more than a subacute form, evidenced by great prostration, though with but slight local affection. After remaining in this condition some time, grave symptoms of lung-mischief, culminating in bronchopneumonia, came on most severely on the Saturday before his death. From these symptoms, however, he rallied wonderfully on the Monday morning; but on Tuesday, April 28th, symptoms of heart failure were observed, and he passed away in a few hours at 6 P.M. His old friend, Mr. Johnson, of York Road, and Dr. Potter, his colleague, attended him throughout, being assisted at an early period by the valued advice of Dr. Wilks. Dr. Reynolds, who had attended him in his previous illness, also joined the consultations of the last few days.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, May 7th, 1874.

The Case of Mary Day.—Mr. Sclater-Booth, in response to Dr. Lush and Mr. Dixon, stated that his attention had been called to the case of Mary Day, a labourer's wife, of Lasham, Hampshire, who died in a dwelling unfit for human habitation. The case did not come under the notice of the Inspector of Nuisances, though it would have been his duty to report upon it if it had. There was no imputation, therefore, to be cast upon him. The report of the Inspector did not lay blame upon the sanitary regulations of the district, and, although there was no Medical Officer of Health there, if there had been, it would not have been his duty to attend to this case. The Local Government Board, however, had directed that the Medical Officer of Health should be appointed.

Monday, May 11th.

Pauper Lunatics.—Mr. M'Laren asked the Chancellor of the Exchequer whether, before taking the sense of the House on his proposal to pay at the rate of 4s. per head for certain classes of pauper lunatics, he would lay upon the table a statement showing the total number of pauper lunatics in each of the three divisions of the United Kingdom, and the proportional sums which would be paid to each division by the arrangement proposed.—The Chancellor of the Exchequer: I shall be happy to do so.

Public Health (Ireland) Bill.—Mr. O'Conor asked when the Public Health (Ireland) Bill would be printed and in the hands of members.—Sir M. Beach: I hope it will be printed and delivered on Thursday morning next.

Criminal Lunatics in County Asylums.—In reply to Mr. Paget, Mr. Cross said that it was not the intention of the Government to take steps for enlarging the existing Criminal Lunatic Asylum at Broadmoor or to build others elsewhere; but they were at present considering whether arrangements could be made in order to take away the worst portion of the criminal lunatics from county asylums.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

Scholarships for Natural Science at Trinity College.—Trinity College offers one or more Foundation Scholarships of the value of £100 a year. The examination will be open to all undergraduates of Cambridge who have passed the previous examination.—The same College also offers an Exhibition of the value of £50 a year. The examination will be open to all persons under twenty, who have not commenced residence at the University.—The examination will commence on March 30th. Candidates must send certificates of age and moral character to one of the tutors of Trinity, before March 13th.

Substitute for Previous Examination.—A grace has been passed, by which the certificate of the leaving schools examinations conducted by the Universities of Oxford and Cambridge will be allowed to be accepted instead of the whole or part of the previous examination. This will be a great advantage to those students of medicine and natural science who are well advanced in their school-work, as it will give them the opportunity to pass all the required examinations in classics and mathematics before going to Cambridge; so that they will be able, on entering the University, at once to devote themselves entirely to natural science and medicine by attending the lectures and practical classes on these subjects. One of these certificate examinations will be held at Cambridge in June, open to boys coming from any school. Information respecting it can be obtained from A. Robinson, Esq., New College, Oxford, and J. S. Reid, Esq., Christ's College, Cambridge; and the *Regulations of the Oxford and Cambridge School Examination Board* can be bought at any bookseller's for a shilling.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, May 7th, 1874.

Allden, John Horatio, Woodhouse, near Ely
Ilott, Herbert James, Bromley, Kent
Rayner, John Alexander, Hackney
Shannon, Thomas Edward, Grantham

UNIVERSITY OF ST. ANDREW'S.—The following gentlemen, having passed the required examination, obtained the degree of Doctor of Medicine, on April 24th.

Cox, Richard, L.R.C.P.E., M.R.C.S., Theale, Reading
Ginders, Alfred, L.R.C.P.E., L.F.P.S.Glasg., Normanton
Gregory, George, L.R.C.P.Lond., L.S.A., Bolton
Harris, Arthur B., M.R.C.S.E., L.S.A., Falmouth
Hollings, Robert, M.R.C.S.E., L.S.A., Wakefield
King, William Talbot, M.R.C.S.E., L.S.A., London
M'Carthy, Denis A., L.R.C.P., Staff-Surgeon R.N., Queenstown.
Squire, William, M.R.C.P., M.R.C.S., London
Thomson, William C., L.R.C.P.E., F.P.S.G., Partick
Weaver, James, L.R.C.P., L.S.A., Longton

UNIVERSITY OF ABERDEEN.—At the late Medical Graduation term, the following candidates, after the usual examinations, received degrees in Medicine and Surgery.—Degree of M.D.

Koch, Edwin Lawson, L.M.S.Calcutta, Colombo, Ceylon
Norton, Edward, L.R.C.P.Lond., M.R.C.S., London

At the same time, the following gentlemen received promotion to the degree of M.D.

Adams, George Edward D'Arcy, M.B., C.M., Nailsea, Bristol
Campbell, William, M.B., C.M., Kinellar
Elliott, Frederick William, M.B., Lower Norwood, Surrey
Fasken, William Andrew Durnford, M.B.
Garden, Robert John, M.B., C.M., Aberdeen
Godson, Clement, M.B., C.M., London
Johnstone, Hugh, M.B., C.M., Burmah
Jotham, George William, M.B., C.M., Kidderminster
Lawrence, Alfred Edward Aust, M.B., C.M., Clifton, Bristol
Lightbourne, James Ashburner, M.B., C.M., Preston
Mackenzie, Duncan John, M.B., C.M., Mopley, Manchester
Marshall, Lewis Walter, M.B., C.M., General Hospital, Nottingham
Milne, Thomas, M.B., C.M., Ellon
Wilkin, John Frederick, M.B., C.M., Folkestone
Wright, Francis James, M.B., C.M., County Asylum, Prestwick
Wyness, James Davidson, M.B., C.M., Aberdeen

Degrees of M.B. and C.M.

Alexander, John, Aberchirder, Banff
Allardyce, James, Gartly, Aberdeenshire
Collins, Walter Charles Grosett, Chew Magna, Bristol
Cossham, William Raymond, Clevedon, Somerset
Craig, John Smith, Duncanston, Leslie
Craigmile, Alexander, M.A., Aberdeen
Dantra, Sorabshaw Hormasji, Bombay
Fehrson, James M'Call, South Africa
Gray, Robert Aikman, Aberdeen
Hay, Francis, M.A., Peterhead
Holland, Lucius, Wylam-on-Tyne
Ilott, Herbert James, Bromley, Kent
James, Arthur Culver, London
Laing, James, Grange, Peterhead
Lawrance, Patrick James, Old Deer, Aberdeenshire
Macdonald, Donald John, Madras
M'Combie, John, M.A., Aberdeen
Milne, John, South Bank, Yorkshire
Milne, Robert, Midmar
Morgan, John Theodore, Colombo, Ceylon
Morice, Robert James, M.A., Old Aberdeen
Newman, Alfred Kingcombe, Madras
Robertson, Frederick Marrant, Cape Town, South Africa
Sheppard, William Thomas, Manchester
Smith, Henry Barton Liddell, London
Smith, Robert Gordon, Arbroath
Stevens, Alfred Felix, London
Strickland, Henry George Travers, Isle of Wight
Swaine, Charles Lethbridge, Tirhoot, Bengal
Trail, Alexander Forbes, Pitsligo
Trevor, Frank Wollaston, Welshpool
Williamson, William Herbert, Aberdeen
Willmott, Julius John Eardley, Weston-super-Mare

Degree of M.B.

Cartwright, James Henry, London

Degree of C.M.

Koch, Edwin Lawson, L.M.S.Calcutta, Colombo, Ceylon

MEDICAL VACANCIES.

THE following vacancies are announced:—

BIRKENHEAD BOROUGH HOSPITAL—Junior House-Surgeon: £40 per annum, board, and residence. Applications, 18th instant, to the Chairman of the Weekly Board.

BIRMINGHAM GENERAL HOSPITAL—Resident Registrar and Pathologist: £100 per annum, board, and residence. Applications, 25th instant, to W. T. Grant, House Governor.

CANCER HOSPITAL—Surgeon. Applications, 2nd June, to the Chairman of the Weekly Board.

CARDIFF RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum.

CARLISLE DISPENSARY—Assistant House-Surgeon: £90 per annum, with apartments, gas, coal, and attendance.

COVENTRY URBAN SANITARY DISTRICT—Medical Officer of Health: £100 per annum. Applications, 18th instant, to Thomas Browett, Town Clerk.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodgings, etc., and the privilege of taking two apprentices. Applications, 2nd June, to H. Howells, Secretary.

DARTFORD UNION—Medical Officer for No. 1 District, comprising the Workhouse: £65 per annum, and fees. Applications, 16th instant, to John Hayward, Clerk.

DAVENTRY UNION—Medical Officer and Public Vaccinator for District No. 1: £80 per annum, and fees. Applications, 19th instant, to George Norman, Clerk.

DENHOLME GATE URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum. Applications, 3rd June, to George Burr, Clerk.

DERBY COUNTY LUNATIC ASYLUM, Mickleover—Assistant Medical Officer. Applications to John Barber, Esq.

DURHAM RURAL SANITARY DISTRICT—Medical Officer of Health: £209 per annum.

GATESHEAD DISPENSARY—Resident Medical Officer: £200 per annum, with furnished apartments. Applications to Joseph Jordan, Honorary Secretary.

GLASGOW ROYAL LUNATIC ASYLUM—Resident Physician-Superintendent: £600 per annum, house partly furnished, coal, etc. Applications, 12th June, to J. Roxburgh Strong, Secretary, 110, West George Street, Glasgow.

GRAY'S HOSPITAL, Elgin—House-Surgeon: £55 per annum, board and lodging. Applications, 20th instant, to David Forsyth, Secretary.

HOSPITAL FOR WOMEN—House-Physician. Applications, 16th instant, to the Medical Committee.

LAMBETH, Parish of—Resident Medical Officer and Dispenser for the Infirmary in Princes Road: £100 per annum, board, apartments, etc. Applications, 18th instant, to W. B. Wilmot, Clerk, Brook Street, Kennington Road.

LIVERPOOL DISPENSARIES—Three Honorary Medical Officers to the North and South Dispensaries. Applications, 27th instant, to W. Lister, Secretary.

MARGATE URBAN SANITARY DISTRICT—Medical Officer of Health. Applications, 18th instant, to W. Brooks, Clerk to Authority.

NEWCASTLE-UPON-TYNE INFIRMARY—Junior House-Surgeon: £50 per annum, board, and residence. Applications, 30th instant, to R. Y. Green, Sec.

MOHILL UNION, co. Leitrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rynn Dispensary District: £100 per ann., and fees.

ORMSKIRK URBAN SANITARY DISTRICT—Medical Officer of Health: £25 per annum.

OXFORDSHIRE—Public Analyst.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician. Applications, 4th June, to C. Lowther Kemp, Secretary.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

SOUTHAMPTONSHIRE LUNATIC ASYLUM, Knowle—Assistant Medical Officer.

STOCKTON-ON-TEES FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Surgeon: £100 per annum to commence, £30 per annum for rent and taxes, and Midwifery and Vaccination Fees. Applications to S. Gordon, 14, Sydney Street, Stockton-on-Tees.

SURREY COUNTY LUNATIC ASYLUM, Wandsworth Common—Junior Assistant Medical Officer: £170 per annum, furnished apartments, etc. Applications, 23rd instant, to Dr. Biggs, Superintendent.

UNIVERSITY COLLEGE HOSPITAL—Resident Medical Officer. Applications, 23rd instant, to John Robson, B.A., Secretary to Council.

WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £100 per annum, board, lodging, etc. Applications, 30th instant.

WESTERN INFIRMARY, Glasgow—Superintendent: £250 per annum, with board and lodging. Applications, 15th June, to W. H. Hill, Honorary Secretary, 106, Ingram Street, Glasgow.

WESTMINSTER HOSPITAL—Obstetric Physician.—Assistant Obstetric Physician. Applications, 19th instant, to F. J. Wilson, Secretary.—House-Physician.

WESTMINSTER HOSPITAL MEDICAL COLLEGE—Lecturer on Midwifery and the Diseases of Women.

WESTMINSTER UNION—Medical Officer to the Industrial School: £60 per ann.

WEST RIDING LUNATIC ASYLUM, Wakefield—Clinical Assistant. Applications, 23rd instant, to J. Crichton Browne, M.D., Medical Director.

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, furnished apartments, etc. Applications, 1st June, to the Chairman of the Medical Committee.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ANDERSON, Thomas, M.B.Edin., Assistant Medical Officer, Crichton Royal Institution, Dumfries, appointed Medical Superintendent of the Mid Lothian and Peebles County Asylum, Roslin, near Edinburgh.

SECCOMBE, Edward H., M.B.Lond., appointed Medical Officer to the Royal Pimlico Provident Dispensary, *vice* C. Beviss, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

TRESTRAIL.—On May 10th, at 6, Trinity Terrace, Aldershot, the wife of *H. E. Trestrail, F.R.C.S., of a son.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Pathological Society of London, 8 P.M. Dr. Goodhart: Fibroma of the Ovary; Secondary Cancer of Uterine Mucous Membrane. Dr. Hilton Fagge: Fibroid Degeneration of Heart; Repaired Fracture of Sternum; Bladder after Lithotomy. Dr. Morell Mackenzie: Growth from Larynx and Trachea; Bronchocele from a Dog. Dr. Julius Pollock: Lung-Disease in a Child. Dr. Douglas Powell: Fatal Hæmoptysis in an Infant Dr. Theodore Williams: Double Aneurism of the Thoracic Aorta. Mr. Callender: Femoral Artery which had been tied with carbolised gut, and a series of Gut-Ligatures which had been subjected to action of wound-secretions. Dr. Wickham Legg: Mitral Stenosis with Hypertrophy of Left Ventricle; Cancer of the Portal Vein. Dr. Greenfield: Cylindrical Epithelioma of the Liver. Mr. Pugin Thornton: Syphilitic Narrowing of the Trachea. Mr. Gay: Specimen of Adenoma—Varicose Veins. Mr. Nunn: Photographs of the Effects of Injury to the Ulnar Nerve. Dr. Crisp: Irish Poultry Disease; Diphtheria-like Membrane in Pigeons. Mr. Croft for Mr. James West: Fibro-cystic Tumours of the Neck. Dr. Dowse: Aneurism of the Arch of the Aorta; Aneurism of the Pulmonary Artery.

THURSDAY.—Harveian Society of London, 8 P.M. Extraordinary Meeting for the Election of Trustees, and alteration of the Laws relating to the Expulsion of Members. Clinical Cases, and discussion thereon.

FRIDAY.—Clinical Society of London, 8.30 P.M. Proposed Discussion on Dr. H. Weber's cases of "Communication of Phthisis from Husband to Wife"; Dr. Donkin, "Case of Diabetes treated by Skim milk"; Dr. Buszard, "Case of Tumour of Cerebellum"; Dr. Greenhow, "Case of Cerebral Rheumatism".—Quekett Microscopical Club (University College), 8 P.M. Dr. Hoggan, "On a New Instrument for Cutting Sections, both Hard and Soft Substances, for the Microscope".

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

WESTMINSTER HOSPITAL.—The vacancy caused by the lamented death of Dr. Bird, was, by a clerical error, announced last week as "Physician", instead of "Obstetric Physician".

J. M.—Mr. Hayward, of 14, York Street, Portman Square, is M.R.C.S.Eng., 1857; L.S.A., 1859.

THE JACKMAN FUND.

Clement Dukes, Esq., Rugby £1 1 0

J. E. would be glad to have the addresses of any institutions where boys who have not the perfect use of their limbs can be trained to useful occupations of a sedentary character.

ERRATA.—In Dr. Lithgow's letter on Cremation, in the JOURNAL of May 9th, for "veritable climate", read "variable climate".

H. TOMSSON.—Saccharated wheat phosphates, in doses of one teaspoonful three times a day in milk. To be procured from Morson, or Bullock and Reynolds.

MR. REYNOLDS (Bridgnorth). The letter will appear next week.

NOTICE TO ADVERTISERS.—Advertisements for insertion in the BRITISH MEDICAL JOURNAL, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

SURGEONS TO NEW ZEALAND EMIGRANT SHIPS.

SIR,—The experience I have gained during the past few months, as surgeon to an emigrant vessel belonging to the New Zealand Government, and the unfair persecution I have undergone at the hands of the sub-immigration officer for this port, may possibly be of interest to the profession, and may serve some useful purpose, by exposing the injustice to which I have been subjected.

Last autumn, I resigned certain positions I held in one of the provincial towns in England, in order to proceed abroad; and, having had a wish to visit this beautiful country, I applied for, and soon obtained, an appointment as surgeon to a ship carrying emigrants for the New Zealand Government. It was not so much for the pay, which I regard as poor, but my friends thought the voyage would restore my health; and I had a strong desire to prosecute certain scientific work, for which a voyage or two to New Zealand would furnish abundant opportunities, and I had also a notion of settling here. With my appointment, I received copies of instructions and regulations, etc., as to my duties to the emigrants and my relations to the officers of the ship. Those I endeavoured honestly and strictly to follow. We started from Gravesend about the middle of last August, with emigrants equal to 67½ statute adults; and up to this time I had been treated with the utmost courtesy by Dr. Featherstone and his officers, nor is my respect for them diminished by what has since occurred. We had not been long on the voyage before I found that I had more than ordinary difficulties to contend with, since I had been with emigrants before during my vacations. Thus I had a captain who was decidedly wanting in firmness and decisiveness; whose habits, conjoined with the language he employed, and his general bearing when dealing with the refractory of the emigrants and crew, did not conduce to promote the order and discipline necessary on board-ship. I had also among the emigrants about six who were "not amenable to an appeal to good sense and proper feeling", and on whom mild persuasions and lenient measures were of no avail, since in every case they were resorted to and much forbearance employed. Prior to and after remonstrating with the captain for allowing so much disorder, and for his want of firmness and dignity in dealing with it, the chief officer (who was a very well conducted man, and a cautious navigator) and myself were directly and indirectly told that it was our place to repress misconduct, and that we were in future to manage for ourselves. At last, the misbehaviour of a few became so great, that, with fighting on the quarter-deck, and total disregard of the necessary sanitary observances, health and life were threatened and jeopardised, I conceived it to be my duty, as government officer, to put an end to this state of matters, by making a good example of the ringleaders. Thus at the end of fourteen days' forbearance, and after appealing to the better feelings of one of the single men, he at last became so outrageous that I had him put in handcuffs, and kept him so for two hours, until he apologised and promised to behave better in future, which he had the good sense to do.

My other case was a woman, who for seven weeks had kept the women in the married compartment in a perpetual state of terror; who possessed a tongue that was neither refined nor lazy, and who was in every respect essentially a bad woman. For seven weeks I had suffered from this woman more insolence than ever I had received before, or in the course of my life may probably receive again; but it was not for what she did or said regarding myself that I cared. At last, she became so outrageous, that several of the married couples told me if something were not done to prevent her, they would take the law into their own hands. After this, she attacked a woman whilst we were at tea, and the officer on duty was forward, attending to the sails. She nearly succeeded in throwing the other woman overboard; she tore her dress and pulled a handful of hair out of her head, and finally tried to strangle her. The captain, myself, and officers, ran up on deck, and found she had been prevented by the schoolmaster from doing further mischief, but was glorying in what she had done, and only regretted that she had not been able to accomplish her purpose. The captain having interfered, I left everything to him: nothing was done to the woman, and no means were taken to prevent her from doing further violence. That night, and the following nights and days, up to the day on which she again attempted to do bodily damage, she boasted openly of what she would do, and threatened the lives of many. Within a few days of her last assault, she attempted, to use her own language, "to split another person's head open" with a "wash-kid". I immediately saw temporising with her to be useless; and so, after careful inquiry, had her placed in handcuffs until I could have a place of isolation built for her. Her ungovernable temper now became very furious; she struggled greatly, biting, kicking, striking at any one near to her; and when the handcuffs were on her, she rushed at a woman who was nursing a baby, broke away from the officers of the ship, struck at the woman with the handcuffs, knocked the baby from her knees on to some spars, and bit the woman's hand. I then saw, what I had not foreseen, that she must be more firmly secured. I had no place in which to put her temporarily: not a single cabin was empty, not a single store-room. I could not place her in the hospital, because I had a poor woman there, against whom she had an intense hatred, and whose life she threatened. If I had taken her to the married compartment, I should have had to secure her to some bar; and then she had so insulted and annoyed the people there, that she would have received little assistance in case she knocked her head about and tried to destroy herself, which she promised to do when she found she was foiled in doing harm to others. I had her placed on deck and fastened to the capstan-bar, at a height of two feet seven inches from the deck; but she was so secured that she could either stand, sit, or lie down with ease. I immediately got the carpenter to make an enclosed cabin for her, quite equal in size to one of the saloon cabins, and of about equal cubic space, with a four-berthed compartment. This I expedited by employing other men, whom I paid out of my own pocket, and as soon as it was finished I had her removed to it and the handcuffs taken off her. I kept her locked up in this cabin every night for the remainder of the voyage, and left her door open in the day-time, according to her temper, for a longer or shorter period; but never for less than four hours daily, more frequently from 9 A.M. to 6 and 7 P.M. During the time she was in this cabin, on every favourable opportunity I placed all the other passengers on deck, and gave her full liberty to walk throughout the whole of the married compartment. On two occasions only did she avail herself of this liberty, and on the last occasion she was simply restrained by the interference of the constable of this compartment from committing an assault on two sick women. Frequently she expressed regret that she had not been able to accomplish her object; and on one occasion I was informed that she had a knife secreted in her cabin, with which she had threatened to do myself personal injury. I went into her cabin, and, after a search, found the knife secreted between two boards. Thus nothing could be clearer than that I was justified in doing what I did to this woman, not only by her previous conduct, but still more by her subsequent behaviour.

On my arrival in Auckland, I showed this woman and her cabin to the immigration commissioners. I then informed them that her conduct had been so bad that I had had to take very severe measures with her, and distinctly mentioned that I had used handcuffs. Next day, some investigations were held on board-ship relative to certain complaints of two emigrants; and when these were completed, I desired the commissioners to investigate my charges. I read parts of my diary and general report referring to her conduct, and did my best to persuade them that the case was an unusual one, and ought to be inquired into. It was ultimately agreed by the commissioners, and I was persuaded that, as it was the mutual wish of the woman's accusers and herself, if they were sent to different parts of the colony they would be quite satisfied; only it was distinctly understood by the sub-immigration officer that he was to send her way from Auckland.

A few days after I had landed the passengers, I was asked to sign a certificate stating that the captain had performed his duties satisfactorily. This I declined to do, and stated that it was impossible for me to sign, unless I went contrary to what I knew conscientiously to be the truth. On the Monday following this, the husband of the woman came to me and begged of me to give his wife a testimonial, stating she was well behaved, sober, and industrious, when I knew the contrary to be the fact. This I also refused to do.

Next day, the sub-immigration officer summoned a court of inquiry to ascertain my reasons for refusing to sign the captain's certificate. I gave some of my reasons, but declined to give others, except in the form of answers to questions which I knew the commissioners were capable of putting. The sub-immigration officer and myself then differed in opinion regarding the precise form of a question in which he asked me regarding matters that had been told to him in confidence; the other commissioners supported me. He then lost his temper, and the inquiry ended.

Without any previous written warning, the woman, whom I had restrained on board-ship, her husband and child, were ushered into the room, and requested there and then to make what charges she had against me. She then did make a series of most untruthful charges against me. Not being prepared, I declined to answer them at once, except that generally they were false and malignant; but I asked for a full inquiry to take place as to the whole of my conduct on board the *Chilè*. and I further demanded that a written copy of her charges be sent to me. The other commissioners ruled that it was but fair that the sub-immigration officer should furnish me with a copy of her charges. They treated me, as they have done all along, with courtesy and fairness; but, unfortunately, they did not possess the same executive power as the sub-immigration officer, who was the third commissioner, and who entirely failed to preserve that equanimity of temper and impartiality of manner that was necessary for any one wishing to arrive at a sober judgment on so serious a case.

After two days' consideration and consultation with my friends, I wrote to the sub-immigration officer, desiring him to inform government that I was prepared to meet all Mrs. V——'s charges, and demanded an inquiry into the whole of my conduct, but acquainting the officer that I declined to be bound by his judgment in this case. Within three hours of my reply I got a summons, and the papers I have sent by this mail will inform you of the result of that summons. I refused even to allow my lawyer to defeat the case on legal quibbles, though everybody was against me—one of the newspapers here making most unfounded, libellous, and slanderous statements, which have been transmitted home. So great was popular feeling against me at first, and so great were the untruths that had been told of my conduct, that I could not obtain lunch at some places in town, and was hooted at as a coward and woman-hater. You will see by the papers that I have been honourably acquitted, and I now ask you to do me that common justice which the unmerited injustice with which I have met deserves.

I courted from the first every inquiry. I have defied government to prove either that I did not assist them in giving full information of all those charges in respect whereof I had been accused. I defied them to prove that I had been either intemperate in action or conduct, or inattentive to the sick. Yet in spite of this, because I had quarrelled with their officer, it was sought, before any inquiry was made in the matter, to obtain a warrant from a magistrate at ten o'clock at night and drag me ignominiously to prison on the unsupported testimony of one woman. Further, the crown-prosecutor so far forgot his position that he had to be called to order by the magistrate; and he stated in open court most false assertions, and attempted to justify the stigma he wished to attach to me, as a "maltreater of women", by bringing up as witnesses to prove the above, two coarse men whom I had felt it to be my duty to report to government for beating and otherwise ill-treating their wives. One of these witnesses was ordered out of the box by his worship for his conduct in court.

Indeed, the whole action against me seemed to me to be a concession by government that, whilst by our instructions were told to the contrary, yet surgeon-superintendents are to see lives and persons maimed and jeopardised, the health of the many and the weak imperilled through the action of a selfish and lazy few, and that we are to allow such things to exist without in the least preventing them.

Such are the facts I have hurriedly jotted down to catch this morning's homeward mail, and I pray you to use your powerful influence in exposing the conduct which I have received. I am, etc.,

Millen Coughtrey, M.B., C.M.Edin.; formerly Junior Demonstrator of Anatomy in the Edinburgh University; late Demonstrator of Anatomy in the Liverpool Royal Infirmary School of Medicine; etc.

Auckland, New Zealand, January 13th, 1874.

An Alleged Cure for Hydrophobia.

Sir,—As it appears from reports in the daily papers, that rabies is prevalent in various parts of England, and that cases of hydrophobia may, therefore, be expected to occur at any moment, I am desirous of making known to the profession the recipe for a reputed remedy, upon which, for many years past, I have had reason to place considerable reliance, as a prophylactic against hydrophobia. The more inquiries I make in this country respecting its traditional success, the more clearly it appears to me to be a remedy deserving of careful study and administration. In the British Medical Journal of October 19th, 1872, I reported twenty cases of persons who had been bitten by mad dogs. Of these twenty cases, eighteen had this medicine administered to them, and no ill effects resulted from the bite; but the other persons refused to take it, and both died of hydrophobia. Some years since, a number of cows and twenty pigs were bitten by a mad dog in the parishes of Uckfield and Horsted. All these animals were successfully treated by this medicine, with the exception of one of the pigs, to which it was not given, because there was no evidence to show that it had been bitten; but shortly afterwards this animal died mad—the only one out of the twenty.

By the liberality of a friend, I have succeeded in purchasing the formula. The several ingredients are as follows: A small handful of tree-box, a small handful of toad-flax, three hands of fœtid hellebore or setterwort, a small handful of primrose-roots. These are to be boiled in a quart of new milk down to a pint. The decoction is then to be strained, and, when cool, any skim is to be removed. The following are then to be added: Gascoigne powder, three drachms; and two drachms each of jalap and carbonate of iron. I have ascertained that the handful each of box- and toad-flax means that you are to take about three or four inches of the terminal branches, with the leaves on, of the box-tree, and as much of the stem of the toad-flax as possesses leaves and flowers. This in weight of the dried herbs is, of box one ounce, and of toad-flax six drachms. Three hands of the hellebore mean three entire leaves with the axil, which, when dried, weigh about two scruples. The primrose-roots, I was informed, were not essential, and had been omitted for some years. I would suggest, however, that in place thereof the ground liverwort should be substituted, which alone was held in much repute two centuries ago (see abridgment of *Phil. Trans.*, vol. ix; and *Pharmacopœia* for 1720). In a more tangible form, the formula should appear as follows.

R. Buxi sempervirentis ℥i; antirrhini linariæ ʒvi; hellebori fœtidi ℈ii; lichenis cinerei terrestris ʒiij.

Powder the dry, or bruise the green, herbs in an iron mortar; put them into a quart of cold milk and boil down to a pint; strain while hot, skim when nearly cold, and then add pulv. gascoigni ʒiiij; pulv. jalapæ, ferri carbon, sing. ʒii. M. One-third part of this mixture is to be taken on three consecutive mornings, fasting. The following directions are added: "If working of them too much, make four of it for Christians, but for beasts three times as much. If the person is mad before taken in hand, mix the same quantity of powders as above in a teacup of new milk till a drink can be made. Bleed once or twice in two or three days after the drink is taken. If the sign be high, put in the same quantity of powders as above (in the drink); if low, not quite so much. Half of this draught is considered necessary for a child seven years old. If the wound be bad, apply a clover garlick." Hence it appears to have been considered applicable even after symptoms of hydrophobia had commenced.

With respect to obtaining the herbs, I would remark that as the box-tree and lichen grow probably in every county of England, they can always be obtained; but I find that, unlike the hellebore, the toad-flax is not kept in store by herbalists, and, therefore, cannot be obtained in any quantity until the plant is again in flower. I have a small quantity, however, which was given to me by the vendor of the formula. Gascoign powder can be procured from any respectable chemist, and consists of certain proportions of crabs' claws, hartshorn shavings, and amber. In the same volume of *Philosophical Transactions* mentioned above, are to be found some interesting reports of the value of turpille mineral (hydrargyri oxydum sulphuricum of the *Dublin Pharmacopœia*) as a prophylactic against, and cure for, hydrophobia, by Dr. Robert James of Lichfield, who administered it with much apparent success to both men and animals. In the event of much difficulty of deglutition in a case of hydrophobia, it might at all events be administered in two-grain doses every four hours until symptoms of salivation commence.

I sincerely trust that the above milk-decoction may have a patient and exhaustive trial by the profession as a prophylactic against hydrophobia, and also that it may be administered (as a crucial test) as soon as possible after the commencement of hydrophobic symptoms. I would further urge upon them the great necessity for ascertaining, beyond all possibility of doubt, that the several components are correctly obtained, prepared, and administered—reminding them of the following passage: "Are not Abana and Pharphar, rivers of Damascus, better than all the waters of Israel? May I not wash in them and be clean?"

I am, etc., C. Leeson Prince.

The Observatory, Crowborough, Tunbridge Wells, May 11th, 1874.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, May 9th; The Ayr Advertiser, May 7th; The West County Lantern, May 9th; The Scotsman, May 7th; The Brighton Examiner, May 12th; The Leicester Advertiser, May 9th; The Blackburn Standard, May 13th; The Hull Evening News, May 9th; The Sunderland Times, May 9th; The Auckland Chronicle, May 8th; The Blyth and Bedlington Star, May 9th; The Northern Daily Express, May 12th; The Sussex Advertiser, May 6th; The Newcastle Daily Journal, May 6th; The Bridgwater Mercury, May 6th; The Richmond and Twickenham Times, May 9th; The Brighton Daily News, May 11th; The Sussex Advertiser; The Bradford Observer: The Naval and Military Gazette; The Dorset County Chronicle; The Cork Daily Herald; The Cork Examiner; The Rochester and Chatham Journal; The Yarmouth Independent; The Northern Echo; The Hastings and St. Leonard's Chronicle; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Moxon, London; Dr. Bradbury, Cambridge; Dr. Edis, London; Mr. Lawson Tait, Birmingham; Dr. J. W. Legg, London; Dr. J. R. Wardell, Tunbridge Wells; Dr. Rumsey, Cheltenham; Mr. E. W. Thurston, Ashford; Dr. R. W. Batten, Gloucester; Dr. F. J. Brown, Rochester; Mr. T. P. Pick, London; An Associate; Mr. J. Metcalfe, London; Mr. Cole, Bath; Mr. W. Reynolds, Bridgnorth; Deputy Surgeon-General Gordon, London; Mr. MacSwiney, Ceylon; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Farquharson, London; Mr. T. H. Bartleet, Birmingham; Mr. T. Holmes, London; Mr. Hughes, Carmarthen; Mr. Clement Dukes, Rugby; Dr. W. N. Thursfield, Shrewsbury; Dr. MacDonald, Inverary; Mr. Forbes Winslow, London; Nauticus; Mr. T. B. Bott, Bury; Dr. Robert Barnes, London; An Attached Medical Officer; Mr. I. Harrinson, Reading; Our Dublin Correspondent; Mr. James Hughes, Middlewich; Mr. Walter Hart, Great Baddow; Mr. J. Martin, Redditch; Mr. J. H. Hickman, Swimbridge; The Secretary of the Pathological Society; Mr. E. Bremridge, London; Dr. G. O. Rees, London; Mr. Thorp, Todmorden; Mr. Trimen, Ventnor; Mr. Balmanno Squire, London; Dr. H. M. Tuckwell, Oxford; M.D.Ed.; Mr. Biddle, Merthyr Tydfil; Mr. Eassie, London; Dr. Trollope, St. Leonard's-on-Sea; The Secretary of the Quekett Microscopical Club; Dr. Grey, Cape of Good Hope; Dr. George Johnson, London; Mr. Ewens, Cerne Abbas: Dr. Turner, Keith; Mr. Rendle, London; Dr. Palfrey, London; Dr. Trestrail, Aldershot; Mr. Clark, Dunster; Mr. Ingpen, London; Dr. Sisson, London; Dr. Lithgow, Henfield; Our Paris Correspondent; Mr. Mahomed, London; Mr. Milley, Dundee; Dr. Patterson, Glasgow; Dr. Batten, Gloucester; Dr. Bateman, Norwich: Mr. Myers, Windsor; Mr. Reeves, Carlisle: Dr. Williams, Hayward's Heath; Dr. Fraser, Fife; Mr. Power, Dartmoor; Sir J. R. Cormack, Paris; Mr. Benson Baker, London; Dr. Steele, Liverpool; etc.

CLINICAL LECTURE

ON

THE RELATION OF CLINICAL OBSERVATION TO THERAPEUTIC RESEARCH.

Delivered at King's College Hospital, London.

By J. BURNEY YEO, M.B., M.R.C.P.,
Senior Assistant Physician to King's College Hospital; Assistant Physician to the Brompton Hospital; etc.

GENTLEMEN,—The commencement of a summer session brings to us fresh work. It would be neither pleasant nor wholesome for us, at this season of the year, to pass much of our time in the dissecting-room or the *post mortem* theatre. These are places of winter resort. But, in the official division of our studies, there are many important subjects which claim our attention in the summer session; and amongst these is the subject of therapeutics.

Materia Medica and Therapeutics is the title of the College course; but the time which the professor has at his disposal for dealing with this large subject is so brief, as to enable him to do little more than roughly classify the materia medica into therapeutic groups. Moreover, this course comes at so early a period in your career, that you are not at that time in a position to associate theoretical teaching with any amount of practical clinical observation.

It happens quite accidentally that, by the indisposition of Dr. Lionel Beale, who, I am happy to tell you, will be able immediately to return to his work, I have to give you the first clinical lecture of this session; and I wish to turn that opportunity to the best account I can, by pointing out how the summer clinical work may, and should, be made mainly subservient to the systematic cultivation of therapeutic knowledge and the thorough testing of therapeutic theories. Sound pathology is the basis of all your medical culture; but it is as therapeuticians you go into the world, and it is as therapeuticians you claim credit of your fellow-men. The anatomist, the physiologist, the chemist, the botanist, and the pathologist, all labour in common to make you therapeuticians. It is to this end that all our teaching and all your labours are, or should be, directed. And bear this in mind, that, if you take into the world the latest and fullest knowledge of morbid anatomy and of physiology without that knowledge of therapeutics which is within your reach, you are, if you pretend to be physicians, as much shams and humbugs as the most unlearned charlatans.

I am well aware that most valuable therapeutic teaching is daily given within the wards of this and other hospitals by their physicians and surgeons; but I wish to point out how your clinical observations might, at any rate during one season of the year, be especially devoted to systematic therapeutic work. Some of you are aware how I attempted, under some difficulties, to give to the clinical teaching in our out-patient department last summer a therapeutic direction. I hope to renew the attempt this year. But out-patient practice does not lend itself well to accurate therapeutic observations. We have, in that department, to take too much on trust; we have to make large allowances for the blunders and the credulity of the ignorant; we have to be constantly on our guard against deception; and we know not what counteracting agencies may interfere with the action of our remedies when our patients are beyond our observation. Nevertheless, we do make out a good many rough therapeutic facts amongst our out-patients. We see anæmic women recover their colour and their strength from the administration of preparations of iron; and we observe that this effect is aided and hastened by the combination of aperients with the iron. We find that attacks of epilepsy are arrested or diminished in frequency by the use of bromide of potassium; and we learn that, commonly, when small doses (twenty grains) of this drug do not produce this effect, large doses (sixty grains) will. We see syphilitic nodes and painful periosteal inflammations and thickenings disappear with certainty under the influence of iodide of potassium. Recently we have seen neuralgias of the face and head of long standing remarkably relieved by the croton-chloral hydrate. We see tape-worm expelled, again and again, by the extract of male fern; and the common round intestinal worm by santonine. We see a few doses of lime-water arrest the vomiting of an irritable stomach; and a few doses of carbonate of soda and ammonia the diarrhœa of acidity and excess.

Numerous facts of this kind we can observe amongst the out-patients, but therapeutic problems of any intricacy must be resolved in our clinical wards. It has been too much the fashion—a fashion which I am willing to believe is passing away—to bring a sceptical and a negligent spirit to the consideration of that part of the clinical observation of disease which is especially concerned with its *cure*. I use the word *cure* purposely, and in its widest etymological signification; because I have noticed a remarkable and foolish indisposition of late to use this word, as if it carried with it an unscientific flavour; whereas the *cure* of disease is, without doubt, the purpose of our existence as physicians. You will probably think that I am overlooking the *prevention* of disease; but, on the contrary, I am thinking of that especially, and I am marking a significant fact—viz., that those who devote themselves to the work of preventive medicine are gradually being withdrawn from the work of the practical physician. We are, at this moment, regretting the loss of a distinguished and valued colleague, who has thought the practical work of preventing disease a more attractive occupation than the practical work of curing it. And we shall, I believe, find that these two departments of practical life will become more and more distinct. The prevention of disease will become more and more exclusively a branch of applied science, and be, as a practical art, more and more separated from the work of curing disease.

Do not misunderstand me. The pursuit and progress of pathology and of therapeutics will ever be enabling us to contribute to the principles of preventive medicine; we can never dissociate ourselves from this great work, but it is to cure such disease as exists that is our *raison d'être*. Regard, then, the remedial treatment of disease not as the least, but as the greatest, part of your duty as clinical observers, and avoid a too sceptical, as well as a too credulous, spirit in estimating the influence of the remedies which are used in the treatment of disease. To gain accuracy, precision, and definiteness in the use of remedies—to enable us to teach the principles of the correct treatment of disease with the same certainty and positiveness which we apply to the teaching of the principles of diagnosis—is the end and object of therapeutic research. Could this position ever be attained, we should be enabled to reach uniformity in medical practice, and so remove the chief opprobrium that rests upon our art. My object is to point out how clinical observation may best be turned to account for the furtherance of this desirable end. And it is important to bear in mind that, whatever other methods may be made use of in therapeutic research, the clinical method must ever be the final and decisive test.

Much valuable labour has recently been expended in the investigation of the physiological action of drugs by means of experiments on the lower animals, and much that is helpful and suggestive in our clinical work has been derived therefrom; but there has been growing up a tendency, which seems to me to need reproof, to regard such a mode of investigation as the only one which should be called "scientific"; so that, while no "scientific" reputation is awarded to the most patient and astute interrogation and observation of clinical facts—a process which may call forth all the highest qualities of the mind—a limited number of experiments on the lower animals, the true value of which I shall immediately attempt to estimate, is sufficient to procure a reputation as an original investigator. Let us, by all means, and with all heartiness, give honour to real work of all kinds; but do not let us fall into the serious mistake of estimating the scientific value of an investigation by its remoteness from practical utility. The observation of the action of medicines on the lower animals is a considerable aid to clinical work, but it serves rather as affording hints as to the lines of investigation which should be followed by the clinical physician, than as giving him definite knowledge upon which he can safely act. Unfortunately, most of the animals upon which we are able to perform an experiment are very differently affected by certain drugs from what human beings are. Belladonna, stramonium, and hyoscyamus, for example, potent drugs when admitted into the human body, may be eaten by rabbits with impunity. Goats seem insensible to the action of tobacco, which is, as you know, a fatal poison to man when it is taken into his system even in small quantity. Dogs are singularly insensible to the action of aloes; two or three grains will produce a purgative effect on most of our patients; it takes fifty or sixty grains to act in the same way on a dog. On the other hand, half the amount of our ordinary doses of calomel will produce serious disturbance in the constitution of that animal. Again, opium, and most other narcotics, exert less soporific influence on the lower animals than on man. In the experiments I have recently been making with croton-chloral, the difference in its effect on the dog and the cat were quite remarkable; from fifteen to twenty grains proved a fatal dose to cats, while sixty grains merely sent a dog to sleep for less than two hours. Tartar emetic has scarcely any physiological effect on horses and cattle, but a few grains cause immediate vomiting in a dog. These and other facts of a like kind teach us to be exceedingly cautious in our inferences as to the action of medicines on the human subject from the result of experiments on the lower animals. We may gain, in this manner, approximate information as to dose, and in many instances we may obtain much valuable information as to the physiological action of drugs; but the test of cautious clinical observation is in all cases the essential and corrective complement, as well as the final appeal from all such physiological investigations.

We come, then, to this conclusion, that, although physiological investigation may be a most useful auxiliary, yet the only sound basis of therapeutic research is clinical observation. The clinical physician must not undervalue the work of the physiologist; the physiologist, when he works at therapeutics, must not think himself independent of the clinical physician. The future progress of therapeutics depends upon the union and co-ordination of the two methods.

But we are especially concerned now with this consideration: How can we best turn our clinical observation to the advancement of our therapeutic knowledge? In the first place, we must take a real interest in the treatment of disease. It may seem almost unnecessary to premise this; yet it is unquestionably true that, in hospital practice, the treatment of disease occupies a very secondary place in many of your minds. This is, I am glad to admit, less evident than it was a few years ago; but one of the sins of that time, for the existence of which I hold the so-called expectant method mainly responsible, was a prevailing indifference amongst students of medicine as to the treatment of disease. The natural history of a disease, its careful diagnosis, its morbid anatomy when fatal, were subjects to which your attention was fitly and eagerly devoted; but the idea of attempting to arrest or modify its progress by remedial measures seemed to have but little hold on your minds. The influence of examinations, coupled with the absence of agreement and uniformity in the treatment of disease amongst clinical professors, contributed to this neglect. Most students live with the fear of the examiners constantly before their eyes. In studying the diagnosis and morbid anatomy of diseases, they knew they were on pretty safe ground; but when they were aware that it was a matter of uncertainty whether they met an examiner who would expect them to treat rheumatic fever with alkalies, or lemon-juice, or with blisters, or with hellebore, or with quinine and opium, or with mint-water, it was perhaps not without a touch of practical wisdom that they reserved the consideration of the treatment of disease until the ordeal of examination was overpast; they knew that a little reticence, a little hesitation, a little modest deference to the superior experience of the examiner on this point, was a safe attitude to assume.

You must, then, in the first place, take a real interest in the treatment of disease. Watch the influence of a dose of medicine with the same attention and earnestness as you note the rise and fall of temperature, the situation of a cardiac murmur or a friction-sound, the composition of the urine, or the structural lesions which the *post mortem* room reveals. You will have to do so, if you wish to become a successful practitioner when you pass into private practice; and you should begin to do so in your hospital work; and although I have spoken of these as "little" things, it is by their means that disease, in many constitutions, is kept at bay. Private practice is, to a great extent, made up of little therapeutic refinements, little aids to struggling function, little attentions to individual peculiarities, which it is difficult to teach you in the wards of a hospital; but we might teach you a great deal more of this most helpful knowledge, if you had the desire and the patience to learn.

In the next place, let your clinical observation of the effect of remedies be systematic. Let me point out what your system should be. It is of prime importance, in attempting to draw any valid conclusion from the clinical observation of the effects of a remedy, that such observation should extend to a great number of similar instances. We must always be on our guard, lest we fall into the popular fallacy of judging hastily from results, or arrive at rapid conclusions from a single or only a few observations. If we act so, we shall do what the public are for ever doing with regard to medical practice, *i.e.*, mistaking coincidences for consequences. Besides, it is the great misfortune of our art, to be invariably exposed to those disturbing conditions which logicians treat of as "the plurality of causes," and "the intermixture of effects"; and, since we can scarcely ever get rid of these embarrassing circumstances, we must do what we can to neutralise their effect by the numerical strength of opportune instances. One of the disturbing causes of this kind, which we can never eliminate entirely, is the influence of the mind over the body. It may occur to you, that there is not much "mind" about many of our hospital patients to exercise this disturbing effect, and I am inclined to agree with you; but the little there is is generally of a very superstitious quality, easily imposed upon by others, prone to impose upon itself.

You know very well that we keep two very harmless mixtures in the hospital; one we call mistura flava, and the other mistura cerulea; they are both, I need not say, purposely made quite inert. I have pointed out, again and again, cases amongst the out-patients who, week after week, have made us weary with tedious reiterations of their numerous indefinite symptoms; and when, for some time, we have made many well-intentioned, but fruitless, efforts to relieve, at last we have, in despair, had recourse to our mistura flava, or mistura cerulea, and then, to our surprise and amusement, they have returned, praising our last prescription as the "only thing that had done them any good". Hence I have always been in the habit of recommending you, in dealing with the class of patients we see in hospitals, to follow this brief rule, "Believe what you see, doubt what you are told". I do not mean by this, that you are never to treat subjective states; on the contrary, they require careful management, and will often demand your greatest skill and discrimination; but deal with them always as subjective states, and do not associate them with anything objective, save as the result of your own physical observation, or previous experience.

I cannot too strongly insist on this simple rule in dealing with the ignorant and superstitious; for, not only are they incapable of correctly analysing and describing their own sensations, but, by a mixture of incapacity and exaggeration, their statements will often tend wholly to mislead you; while the *post hoc ergo propter hoc* argument is ever present with them.

You must have seen, many times, how most of the cases of so-called heart-disease amongst the out-patients have turned out, on investigation, to depend on a flatulent stomach; while we are often led to the discovery of real heart-disease, not from any complaint of that organ by the patient, but from other indications, which are perceived by our own senses. We constantly hear patients complain of pain in the "kidneys", or often, most definitely, of the "right" or "left kidney". I have never known such a complaint to be really associated with disease in these organs; but we constantly detect disease in the kidneys, when it is quite unsuspected, from what we see in looking at the patient's face.

A perfectly inert fluid will, as I have said, obtain the credit of curing a patient; but the same fluid will also, by some, be accused of all kinds of ill effects. You will often be told that such a mixture has purged the patient, or caused instant vomiting, or fearful headaches, or made them "tremble all over", or produced various other less definite effects. I have had two patients come into the room, one immediately after the other, both taking the same medicine; and one has declared that the medicine purged her so that she could not take it; the other that she could not take it, it was so constipative; and this of a medicine that possessed neither aperient nor astringent properties. With the large experience of human nature which falls to the lot of every hospital physician, he can never be at a loss to account for all the marvellous evidence which homœopathy, or any other fallacious system of medicine, can produce in its favour. The first step we have to take in the direction of a sound and truthful therapeutic system is to reject evidence of this kind.

The effusive gratitude of a patient relieved from suffering, or the disappointment of another whose pain is unassuaged, tends to make them assume, almost invariably, the attitude of advocates; we, if we have a pure and single regard for the advancement of our science, must maintain the rigid impartiality, the unbiassed reason, of the judge. Therefore, I repeat, "Believe what you see, doubt what you are told". Nor must you conclude hastily from results. If it were safe to do so, therapeutics would be the easiest, instead of the most difficult, branch of medical science. How, then, is it possible to arrive at any definite conclusion in therapeutics? How can we eliminate all the disturbing influences which complicate, or counteract, or intensify, or obscure, the action of our therapeutic agents? Clinically, in two ways: first, by observing a great number of similar cases under varying circumstances; secondly, by a judicious selection of appropriate ones. The second method is as useful and more convenient than the first, but the type of patient we require for this purpose is often difficult to find. We need a calm, intelligent, observant, cautious, and, above all, a sceptical (in the best sense) person, free from habits of self-regard, and not over sensitive; we may learn more from the careful and trustworthy analysis of the symptoms of a disease, and the effects of our remedies, in one such person, than from a hundred average patients. But the first method is a very important one, and it is that to which, in institutions like this, we must chiefly trust.

The opportunity which large hospitals afford for testing the efficacy of particular modes of treatment, on a great number of similar cases, is one of the advantages attending their existence. Yet I would venture to hint, that we do not turn this opportunity to sufficient account. It is necessary, for many reasons, that the care of the patients in a large hospital should be divided amongst a certain number of physicians and surgeons, and it is also necessary that these medical officers should exercise perfectly independent action in the treatment of their cases; but I am disposed to think that, while we estimate highly this power of independent action, we undervalue the benefits which would arise from a greater amount of common action, more *solidarité*, more frequent consultations and discussions amongst ourselves, as to the treatment of special kinds of disease. I take it that one of the objects of institutions like these should be, to teach uniformity of practice; and, in order to teach uniformity of practice, we must first have reached a considerable amount of agreement amongst ourselves. Please understand that I am not speaking of this or any particular hospital, but of large hospitals in general.

Now, it cannot be to the advantage of a student that he should see, except as an experimental observation, the same disease treated by two of his teachers according to opposite methods. It is monstrous to say that the student is to judge for himself. A pupil is not in a position to act as judge, in a question which is often one of considerable difficulty and delicacy, and for the solution of which a certain maturity of experience is essential. If, for example, rheumatic fever be best treated with small quantities of inert aromatic water, we can have no need of alkalies, or acids, or opium, or quinine, or the cold pack, in such cases. The true scientific treatment of a disease, if, as I believe, such a thing exist, must be uniform in principle, so far as the disease itself is concerned, though the variable constitutions of patients will require corresponding variations in the manner of applying it.

I contend, then, that clinical observation is rendered less fruitful in the direction of therapeutic progress than it might be, by the neglect of united deliberation, and by the absence of common agreement amongst the officers of large hospitals, as to the treatment of disease. Moreover, this adherence to independent action neutralises much of the advantage which might be gained to therapeutics, by the observation of the action of any particular remedy or mode of treatment, in a large number of similar instances, and for many purposes practically converts a large hospital into a number of small ones. But in testing clinically the use of a remedy, you must give it not only in a number of like instances, but also, if possible, in cases which vary in recognisable modes or degrees. In this way, you gain both positive and negative evidence of its value, and you are enabled to limit and define its applicability.

Let us take, as an instructive example, the clinical observations we made in this hospital as to the therapeutic use of the croton-chloral hydrate. It came to us with the reputation of being a remedy for neuralgia. We tested its value in a great number of cases. First, we gave it in a number of similar instances—instances which all agreed in this particular, that the nerve affected was a branch of the nervus trigeminus, and that the affection, so far as we were able to discover, was neither rheumatic nor hysterical. I am not aware that it failed to give relief in any of these instances. We then gave it in many cases where the nerve-pain complained of was clearly of rheumatic or hysterical origin; and, in these cases, I am not aware that it gave marked relief in any. But let me remark, *en passant*, that you must not be disappointed to find every remedy fail, when applied to cases in which there exists a hysterical element. Then we gave it in neuralgias occurring in any nerve—the lumbar nerves, the sciatic nerves, the intercostal nerves, etc.—and we found that, in nearly every case, it afforded relief, in many cases very marked relief; but its success was not nearly so complete, or so uniform, as in the cases of trigeminal neuralgia. A case, in which I have recently given it, is, perhaps, worth mentioning. A pale, anæmic man, a tailor, came as an out-patient, on April 6th, complaining of severe shooting pains, extending over the top of the head and the upper part of his face. These had tormented him for five years, and made his life miserable. He stated he had been under all kinds of medical treatment; he had been an out-patient at the German Hospital for ten months, and an in-patient in St. Bartholomew's for two months, but had received no relief. We gave him three grains of croton-chloral twice a day. After taking it for a week, he stated he was much better, and after a fortnight that he was almost well, certainly much better than he had been any time during the last five years. As he was very anæmic, I ordered him some iron, and to leave off the croton-chloral. The last time I saw him, the pains had returned with the discontinuance of the remedy, an useful corroboration of our inference that the relief of his pain was a consequence of the use of the drug. He has now passed into the hands of Dr. Rutherford.

But I ought to mention that this numerical method, as it has been called, is far more useful when applied to the estimation of the influence of remedies in chronic cases than in acute affections; for, in acute diseases, and especially in epidemic diseases, your observations must extend over an exceedingly vast number of instances, before your inferences as to the value or influence of any particular mode of treatment can be relied upon. The reason of this is, that these diseases present themselves at different times, and in different instances, under varying types and degrees of intensity. You will find, for example, that scarlet fever, during many years, appears in epidemics of little severity, which give rise to little alarm. Then it suddenly appears in a terribly alarming and malignant form. Trousseau mentions a striking instance of this. He tells us that Bretonneau, that great French physician, who was Trousseau's master, taught, for nearly a quarter of a century, that scarlet fever was always a mild affection—the mildest of all the exanthemata, and that he had never met with a fatal case. But, in 1824, an epidemic broke out in Tours where Bretonneau practised, and several persons died of the fever with frightful rapidity. At first, he blamed the treatment adopted by his colleagues; soon, however, he himself lost several patients, and he at last learned to regard it as "equally mortal with plague, typhus, and cholera". I believe that cases of pneumonia may vary in type and intensity, in much the same way; so that we should be especially cautious in applying the numerical method to the study of the therapeutics of acute diseases. We need a much larger number of instances than in chronic cases, and it is necessary that they should be spread over a considerably longer period of time.

Another most important use we should make of clinical observation, in connection with therapeutic research, is in the estimation of the proper doses of medicines; and we should associate this with another consideration, and that is, the influence of constitutional peculiarities of temperament in modifying the action of drugs. I think few of us are aware how wide should be the range of dose of certain drugs, in order to affect similarly patients of opposite temperaments. I am inclined to believe that there are human beings, who differ almost as widely in the influence of medicines upon them, as my cats and dogs did in the action of croton-chloral. And this circumstance leads us to do injustice to our remedies; we blame them when they are not in fault. We constantly hear drugs spoken of as very uncertain in their action. This is an incorrect manner of expressing what is, no doubt, a correct observation. Supposing the drug to be the same in quality, it is difficult to believe that its physical and chemical properties, by which alone it can produce its characteristic effects upon our organism, change from time to time. It is more probable that the difference, the uncertainty, lies in the peculiar, and it may be inherited, qualities of the tissues in the different persons to whom it is administered. In certain persons, certain tissues are of extreme irritability; in others, they are equally insensible. We see this daily, with regard to the skin and mucous membranes. There are persons whose intestinal mucous membrane is so sensitive, that the residue of the digestion of ordinary food is sufficiently irritating to maintain a chronic diarrhœa; and it is only by adhering to a diet which leaves scarcely any solid residue that this tendency can be kept under. In our application of counterirritants to the skin, we constantly meet with the same kind of sensitiveness. I have, at this moment, a patient under my care, who attempted to use a mild mercurial inunction—an ointment one-fourth the strength of that of our Pharmacopœia, and it produced an intense dermatitis.

You must have frequently seen most distressing iodism produced by a single small dose of iodide of potassium. You have probably seen others salivated by a small dose of calomel. I have a patient who has again and again, with the best will, tried to take quinine as a tonic, in half-grain doses, but with the invariable result of producing a severe headache in a few hours. I have another patient, in whom a dose of opium or morphia produces an intense, vivid wakefulness, for eighteen or twenty-four hours before it has any soporific effect; and when it was necessary to use morphia suppositories in this case, in order to relieve distressing nocturnal irritability of the bladder, they had to be introduced early in the morning, and then the soothing effect came on soon after bedtime.

Now, I believe we shall find the much neglected question of temperament to be at the bottom of most of these peculiarities, and I do not think it impracticable to turn our clinical observations to account in identifying and systematising such tendencies. It is, on the other hand, quite as important to detect that insensibility to the action of drugs which characterises others, and which is so disquieting and discouraging to us. I have already alluded to the hysterical constitution as especially unfavourable to the correct estimation of the action of remedies. There is a perversity about such cases, which sometimes looks like the evidence of a vicious pleasure in disappointing our calculations. We must remember, therefore, in treating any particular case of illness, that we have two things to keep in view—one the disease itself, the other the individual constitution of the patient. Sometimes one and sometimes the other will demand our chief consideration. But it is of consequence to you to know that it is not safe to conclude, from the want of success in the use of a particular remedy in the cases of hospital patients, that it will be equally inefficacious in all other instances. There can be no doubt that we see the most confirmed and hopeless cases in the wards of our hospitals—constitutions rendered callous by ill-usage and exposure of every kind; and moreover, owing to the abuse of our out-patient system, the poor, as I have remarked elsewhere, become such inveterate drug-consumers, that, in course of time, it becomes difficult to produce any effect upon them with ordinary doses of medicine.

Another therapeutic use to which you can turn your clinical observation is to learn the best means of relieving distressing or dangerous symptoms. A distinguished clinical teacher of this town has denounced the treatment of symptoms, and says we should always try to "get behind the symptoms". Now, I must say this sounds to me like very needless advice and unnecessary denunciation; for I suppose the most ignorant practitioner who ever attended a case of illness tried, according to his light, to discover the causes of the symptoms he treated. It is one of the strongest and commonest tendencies of the human mind to try to "get behind" phenomena, and out of this tendency spring all the absurd theories and hypotheses with regard to the nature and treatment of disease that have ever existed; and bad practice does not lie in dealing with phenomena merely as phenomena, but in assuming and treating some cause of the phenomena which is not a *vera causa*. When we give ether and ammonia to relieve the dyspnœa of a weak heart, we are treating a symptom; and when we give iron and quinine and supporting food in the same case, I suppose we may be said to have got "behind the symptom". But I venture to think the first treatment is as important as the second. I know physicians who carry this avoidance of the treatment of symptoms to the extent of objecting to relieve the cough of phthisis by the use of sedatives. During the last three years, I have attended considerably more than one thousand cases of phthisis, and I have treated them with and without sedatives: and, were I unfortunate enough to be afflicted with that malady, and to have a physician who would not treat my cough, I should do my best to exchange him for one who would.

There is a symptom which we have not yet "got behind"; but we are all, I believe, agreed as to the importance of treating a symptom common to many acute diseases. I allude to the rise of temperature—the pyrexia in such maladies as typhoid and rheumatic fevers and pyæmia. Clinical observation has been latterly turned to excellent account in this particular direction. The influence of large doses of quinine in reducing the temperature of the body in pyrexia requires additional clinical examination; and it would appear that this investigation is likely to offer an appropriate example of the advantage which may accrue from the combination of such purely experimental observations as those of Binz and Geltowsky with the systematic trials of the clinical physician. Of the success of another method of treating the hyperpyrexia of certain fevers—I mean the application of the cold pack—I take it, there can be no doubt. I place before you a temperature-chart of a case of rheumatic hyperpyrexia which was treated in this manner in this hospital, and reported in 1872 by Dr. Kelly; and we have had other examples since in which this treatment of a symptom has undoubtedly been the means of saving life. And this leads me to speak, finally, of the importance and necessity of clinical experiment in therapeutic research. Experiment at the bedside has always been regarded popularly with distaste; and it is only in the wards of a hospital, where we are less fettered than elsewhere by popular prejudice, that we can pursue systematically the experimental method; and yet it is the only method from which we can hope to gain any positive advance in the therapeutic management of disease. All science rests on observation and experiment. All our therapeutic knowledge rests ultimately on an experimental basis. Empiricism, which rules the medical art, teaches that all our knowledge is derived exclusively from experience; and this experience is only the result of the accumulated observation of endless experiments. But, although medical practice is empirical, yet modern medical practice is also undoubtedly scientific. I cannot understand how those who loudly declare that all sound medical practice is purely empirical, and not at all scientific, can overlook the obvious reflection that half a century or even a century ago medical practice had very nearly as great an amount of empirical knowledge to rest upon as it has now. It had the accumulated experience of ages for its foundation and support. If this be the all-sufficient basis of practical medicine, why was the practice of that age so much at fault? Why has there been such a reversal of methods of treatment within the last fifty years? Because, I answer, of the growth of scientific knowledge, and because, therefore, the modern practice of medicine rests on a scientific as well as an empirical basis.

But it is to experiment, and experiment only, that we can trust in our application of clinical observations to therapeutic research. These experiments may be of two kinds. In the first place, we may already be in possession of one or more methods of treating a certain disease, which may be on the whole satisfactory, as, for instance, in the case of ague or dysentery; but we may desire to find out which of these methods is the best, or we may have grounds for believing that a better method is discoverable. In such a case we have fair ground for cautious and careful experiment; but we should not be justified in making trial of anything hastily in such cases, because we have no great reason to be dissatisfied with our present methods. In the second place, we may have to deal with diseases for which we have no method of cure, which steadily tend, with few exceptions, to a fatal termination. We may take, as examples, cancer and other malignant growths, phthisis, and pyæmia. In these cases, an amount of experiment is justifiable—nay, is imperative—which would be wholly improper in the first class of cases; for in these diseases, whatever be the result of our tentative efforts, the patient cannot be left in a worse case than that in which we found him. Considerations like these justified the apparently rash experiment of cold affusion in certain cases of hyperpyrexia. It was known that cases, in which the bodily temperature reached a certain intensity, invariably ended fatally. Whatever might be the result of the experiment, it could not be worse than this; but it happened to prove successful, and we should not now consider ourselves justified in allowing any similar case to pass out of our hands without making this last effort to save life. But it would have required a very unusual amount of courage to make this experiment for the first time in private practice. Hence arises a great benefit to the public from the existence of institutions like these, where our practice is not embarrassed by personal or private considerations, but is directed solely by the desire to further the rational progress of the medical art.

There are many other important points in connexion with the application of clinical observation to therapeutic research to which I should like to allude; but I must not detain you longer now, and I shall take some other opportunity of returning to this subject. I have only to recommend you to let the therapeutic treatment of disease command your earnest attention in the clinical wards of this hospital during the session we are just commencing.

SURGICAL MEMORANDA.

SPONTANEOUS PASSAGE OF LARGE CALCULUS FROM THE BLADDER OF A FEMALE.

A SIMILAR case to that reported by Mr. Stephen Clogg in the JOURNAL of May 2nd was recorded by Sir Astley Cooper in *Guy's Hospital Reports* for 1838, Series I, vol. iii. The patient was under the care of Mr. Harris of Redruth, in Cornwall. She was only eighteen years old. The calculus weighed 651 grains, and measured $2\frac{5}{8} \times 1\frac{3}{8} \times \frac{1}{8}$ inches. The symptoms had existed for seven years.

RICHARD RENDLE, Guy's Hospital.

THE USE OF HOLT'S WINGED CATHETER.

I FEEL that some acknowledgment is justly due to Mr. Holt for his introduction of the "winged catheter", which, I am confident, will be found to be a very great convenience to the surgeon who has charge of a case requiring the constant use of a catheter, as well as a very great comfort to the patient. I have at present in my Infirmary a patient suffering from paraplegia caused by a cart falling on him and fracturing some of the dorsal vertebræ. When raised after the fall, it was found that he had lost all power of motion and sensation of the lower part of the body; and he has never since been able to pass urine naturally, or to retain fæces. Shortly after the accident, he was visited by Dr. Barbor of Carlingford, who drew off the urine, and continued to do so as often as was necessary, until the patient was removed to the Infirmary, about October 31st, three or four days after the injury. For a few days after his admission, I used the ordinary elastic catheter; but, finding some difficulty in its introduction, and the urethra becoming irritable, I had recourse to one of Holt's winged catheters of full size with a stilet, leaving it in the bladder. I did not find the least difficulty in its introduction; on the contrary, I think I never passed a catheter with so much ease. The patient never experienced the least annoyance from its presence, and the catheter retained itself in the bladder without any of the usual fastenings. At the end of five days, I withdrew it with great ease, and found it was not at all corroded, nor was there the least concretion upon it.

My object in reporting this case is to draw the attention of surgeons of hospitals, poor-houses, etc., to the use of this instrument in all cases requiring the retention of a catheter in the bladder, as it will save the surgeon a great deal of trouble and much anxiety, and at the same time will afford the patient great comfort.

E. G. BRUNKER, M.D., F.R.C.S.,
Surgeon to the Louth County Infirmary and Gaol.

ON SOME PRACTICAL GAINS WHICH HAVE RESULTED FROM THE USE OF THE LARYNGOSCOPE.*

By GEORGE JOHNSON, M.D., F.R.S.,
Professor of Medicine in King's College; Physician to King's College Hospital.

THE practical advantages which have resulted from the use of the laryngoscope can be best appreciated by those who, having experienced the many serious difficulties attending the diagnosis and treatment of diseases of the larynx before Garcia and Czermak had introduced the throat-mirror into practice, have subsequently learnt to use that simple instrument, and have thereby placed themselves in a position to contrast the doubt and the difficulty of their earlier experience with the comparative certainty and facility which they now enjoy in dealing with laryngeal affections.

One of the best writers on diseases of the larynx in the prelaryngoscope days, the late Mr. W. H. Porter of Dublin (*Observations on the Surgical Pathology of the Larynx and Trachea*, 2nd ed., 1837), writing in the year 1837, referred to the uncertainties and the difficulties of diagnosis in the following terms. "When a man of experience meets with a case of laryngeal disease, how is he to know whether it is caused by an œdematous condition of the submucous tissue, by a chronic thickening of the mucous membrane itself, by laryngeal ulceration, by destruction of the cartilages, by the presence of abscess or tumour, or by any other of those numerous affections which dissection so frequently shows us to be the occasion of death?" And he goes on to suggest that "perhaps, by reason of the difficulty of the subject, it will be long before we possess the same accuracy of information with reference to affections of the windpipe that has been attained in other diseases". Now, the laryngeal mirror has thrown literally a new light upon these heretofore obscure diseases. The larynx has ceased to be an internal organ in the sense of being hidden from view, for it has been brought within the range of vision; and the answer to Mr. Porter's question now is, that the practitioner has only to look into the larynx, and he will usually see with perfect clearness the seat and nature of those diseases which formerly could at the best be only matter of doubtful and often erroneous inference. It is obvious that the man who has acquired practical facility in the use of the laryngoscope, enjoys the same advantage over one who does not use the instrument, as a seeing man has over one who is blind or who wilfully closes his eyes. Amongst the many causes of hoarseness and aphonia, we can now readily ascertain with which we have to deal in any given case. We can distinguish between organic disease within the larynx and spasm or palsy of its muscles the result of organic disease elsewhere, or of mere functional derangement of the nervous system; and, amongst organic diseases, we can distinguish between the various grades and forms of œdematous or inflammatory swelling and warty, or cystic, or cancerous, or other forms of tumour within the larynx.

Then it is obvious that the treatment of all forms of laryngeal disease has been much facilitated and improved. If we find a warty or a cancerous growth within the larnyx, we see at once the utter inutility of treatment by drugs, and we abstain from giving active medicines. In the dark days of uncertain diagnosis, many an unhappy patient has been bled, and leeched, and blistered, and salivated, and ultimately, perhaps, has undergone the operation of tracheotomy, for what has been found after death to be a simple growth within the larynx, which might now be easily and completely removed; for, since the mirror has illuminated the interior of the larynx, not only do our patients escape the torture of needless medication, but, by the use of safe and suitable instruments, we are enabled often to remove morbid growths and foreign bodies from the larynx, and thus to restore the lost or enfeebled voice, and not unfrequently to save a life which had been imperilled by disease or by accident. There is scarcely a form of disease within the larynx the treatment of which has not been facilitated and improved by the mirror. It is obvious that all topical remedies can be applied with much greater ease and precision. In cases of inflammatory or œdematous swelling within the larynx, it is not difficult to puncture the swollen part with a laryngeal lancet, and thus, perhaps, to reduce the swelling and to prevent the necessity for tracheotomy. And, again, when the question arises, whether there is sufficient obstruction within the larynx to call for the operation of tracheotomy, a good view of the diseased parts often affords most welcome aid in arriving at a decision either for or against the operation.

Passing from these general remarks, I now proceed to indicate some particular additions to our knowledge and some special practical gains which have resulted from the use of the laryngoscope.

It had long been known that spasm and palsy of the laryngeal muscles play an important part in the phenomena of some diseases; but, without actual inspection of the living larynx, the exact share which each of these conditions contributed to the symptoms of any given case could never be known with certainty. Now, while inspecting the larynx in a case, for instance, of functional or nervous aphonia, we see, with absence of structural change, a functional inactivity of the muscles, which results in immobility of the glottis during attempts at phonation, or so feeble a movement as is insufficient for vocalisation. In other cases, we have the combination of nervous aphonia with stridulous breathing; and we see that, through disorderly action of the nervous system, the action of the glottis is the reverse of that which is normal, in so far as it closes during inspiration, which consequently is rendered stridulous, while during expiration and attempts at vocalisation it remains more or less widely open. The more exact diagnosis and improved treatment of nervous aphonia by a general tonic regimen and by direct galvanisation of the larynx, are amongst the practical gains which have resulted from the use of the laryngoscope. We are able to demonstrate now, what before could only be inferred, that, while spasm of the laryngeal muscles is a common cause of transient paroxysmal stridor and dyspnœa—as, for instance, in cases of infantile laryngismus stridulus, and in the earlier stages of an aneurism which compresses slightly and so irritates one of the recurrent nerves—palsy of the muscles on one or both sides of the larynx usually causes permanent stridor, either with or without dyspnœa. The compression of the pneumogastric or its recurrent branch by an aneurism or other tumour within the chest is a common cause of palsy of the laryngeal muscles; and, in several cases of this kind that have come under my own observation, an inspection of the larynx has led to the discovery of a previously unsuspected intrathoracic tumour, which, by its pressure on the nerves, had given rise to the laryngeal symptoms. In illustration of this, I may refer to two cases of aneurism of the aorta which I have published in the *Pathological Transactions* (vol. xv, p. 72, and vol. xxiv, p. 42). In one of these cases, the pressure of an aneurism caused paroxysmal spasm and symptoms resembling laryngitis; while in the other the laryngeal muscles were paralysed, the glottis consequently closed, and there was persistent dyspnœa with stridor.

As a rule, it appears that, when one pneumogastric or recurrent nerve is compressed by an aneurism or other tumour, the laryngeal muscles on that side only are paralysed; but, in a case published by Dr. Bäumler in the *Pathological Transactions*, vol. xxiii, p. 66, an aneurism of the innominata, pressing on the right pneumogastric and recurrent nerve, caused almost as complete immobility of the left as of the right vocal cord; and, in one of my own cases (*Path. Trans.*, vol. xxiv, p. 42), paralysis of both vocal cords resulted from an aneurism of the aorta pressing on the left pneumogastric and recurrent nerve. It is difficult to explain bilateral palsy of the laryngeal muscles resulting from pressure on the nerves on one side only. This fact, which we have learnt from the use of the laryngoscope, we call upon our physiological friends to explain.

It should be borne in mind that aneurism of the aorta may cause stridulous breathing and dyspnœa, not only by pressure on the pneumogastric and recurrent nerves, but also by direct pressure on the trachea. Of this I have seen several examples; but the most interesting case I saw in consultation with my friend and former pupil, Dr. Richards of Winchester. A gentleman thirty-three years of age had suffered from shortness of breath, with noise in the throat, on any unusual exertion, for nearly a year. When I saw him on October 30th, 1871, there was loud stridor on a deep inspiration; but with this the voice was clear and distinct, indicating, as I at once said, that the obstruction which caused the stridor was below the larynx. The laryngoscope showed nothing more than slight redness of the mucous membrane, without swelling. The vocal cords moved freely; and, during a deep inspiration with a widely open glottis, there was loud stridor, evidently originating below the larynx. Suspecting aneurism, I carefully examined the chest. There was no abnormal impulse or dulness on percussion. On auscultation behind, over the upper dorsal spinous processes, there were loud tracheal stridor and vocal resonance. The respiratory murmur was decidedly more feeble over the lower lobe of the right lung than over the corresponding part of the left side. There had been occasional difficulty in swallowing. The pulse was equal at the two wrists. The right pupil was smaller than the left—a result, probably, of iritis some years before. The diagnosis was, aneurism of the transverse aorta pressing on the trachea. I did not see the patient again; but I learnt from Dr. Richards that the symptoms became steadily worse, until he died from apnœa on November 20th, three weeks after his visit to me. An aneurism of the size of a walnut projected from the posterior wall of the transverse aorta, and bulged into the trachea just above its bifurcation. (Fig. 1.) The opening of the right bronchus was somewhat more obstructed than that of the left, thus explaining the comparative feebleness of the respiratory murmur on the right side of the chest. One advantage of an exact diagnosis in this case was, that the patient was not subjected to the operation of tracheotomy, which, on a superficial view of the symptoms, might seem to have been indicated. The operation was not resorted to, because it was known that the obstruction in the trachea was below the point at which an artificial opening could be made, and therefore no relief could have been given by an operation.

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* Read before the West Kent Medico-Chirurgical Society.

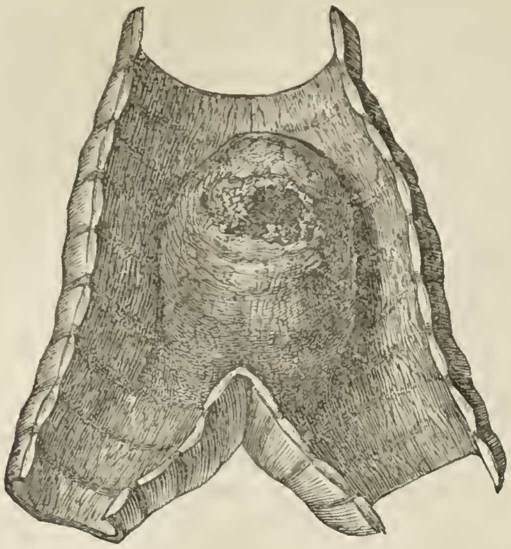
Fig. 1.—The Trachea opened from behind, showing an Aneurism bulging through its Anterior Wall.

The laryngoscope has materially assisted us in recognising the main points of difference between laryngeal and tracheal stridor. Excluding cases of purely spasmodic laryngismus stridulus, we find that, when stridulous breathing is the result of obstruction in the larynx, the voice is always more or less feeble and husky; while in cases of tracheal obstruction and stridor, whether the result of constriction of the trachea by syphilitic cicatrices or the pressure of an aneurism, the voice is unaffected, as in the case to which I just now referred. When tracheal stridor results from the pressure of an aneurism, the trachea being pushed backwards against the bodies of the vertebræ, the stridor and loud vocal resonance are heard most distinctly on auscultation over the upper dorsal spinous processes; whereas, in cases of stridor resulting from obstruction in the larynx, we find that, on auscultation over the spinous processes, the sound is heard most distinctly over about the middle of the cervical region—that is, just on a level with the larynx. This point we have repeatedly verified in the hospital by comparing cases of undoubted laryngeal obstruction with others in which an aneurism has compressed the trachea just above its bifurcation.

One result of my twelve years' working with the laryngoscope has been to assist me to the conclusion, long since arrived at by Bretonneau, Trousseau, and all the leading French pathologists, that those cases of croup which are associated with membranous exudation in the larynx are essentially and specifically diphtheritic; and, on the other hand, that what we, in this country, call inflammatory croup or catarrhal laryngitis, never results in the exudation of false membrane. In studying the morbid anatomy of cases of croup, we have now no need to wait for a *post mortem* examination. We can see the morbid anatomy in every stage of the disease during the patient's lifetime; and we may confidently affirm that an exudation of lymph on the surface of the inflamed larynx forms no part of the history of simple inflammatory croup or catarrhal laryngitis, whether the disease occur in adults or in children of any age.

Another practical lesson taught by the laryngoscopic study of inflammatory croup is that, in children of nervous excitable temperament, when there is but little inflammatory congestion and swelling of the mucous membrane of the larynx, the dyspnœa and stridor are often much increased by spasm of the laryngeal muscles; and, since this fact has been ascertained, our treatment of such cases has become more successful. We have learnt that the chloral hydrate, in repeated small doses—one grain for a child a year old, and an additional grain for every additional year of the child's age—is the best drug remedy for laryngismus stridulus; and we find that a combination of chloral hydrate with nauseating doses of ipecacuanha, in addition to the diaphoretic action of the warm bath, warm fomentations to the throat, and the inhalation of steam, speedily arrests the progress of inflammatory croup.

Laryngitis in adults is far less frequently associated with laryngeal spasm than the same disease in children; but, whenever this complication does occur in older patients, the combination of chloral hydrate with ipecacuanha is as successful in them as in children. Our knowledge of the various forms and stages of strumous or tubercular, and of syphilitic laryngitis, has been much increased by the use of the laryngeal mirror. To some extent, too, although in a less degree, our treatment of these cases has been improved. While strumous laryngitis, in an advanced stage, is one of the most intractable of diseases, the syphilitic form is much more amenable to treatment.

With reference to prognosis and treatment, the increased facility of distinguishing the one form of laryngitis from the other is a real practical gain. We have now occasional opportunities of seeing that, after the healing of a deep syphilitic ulcer in the larynx, the contraction of the cicatrix may drag together the arytenoid cartilages so as to prevent the opening of the glottis; and, in other ways, the contracting cicatrices may narrow the glottis and so cause difficult and noisy respiration. Little or nothing can be done to remedy this state of larynx; but it is something to be able to distinguish it from other morbid conditions which admit of relief, either by medicines or by operation. To continue the employment of mercury or iodide of potassium in the expectation of removing the stridulous breathing which results from a syphilitic cicatrix in the larynx, is as useless as it would be to give the same remedies for the obliteration of the indelible scars left by a rupious eruption on the skin.

The mirror has greatly facilitated the diagnosis and the treatment of foreign bodies impacted in the larynx, by indicating their exact form and position, and so the best mode of dislodging them. My colleague, Mr. Henry Smith, once asked me to inspect the throat of a man who had allowed a half-sovereign to drop into his larynx. I had no difficulty in demonstrating the coin, lying flat across the glottis, with its margins impacted in the ventricle on each side, and its surface partly overlapped by the swollen false cords. Obviously, the coin was too firmly impacted to be dislodged by inverting the body of the patient, and I failed to seize it with the laryngeal forceps, having none at that time the blades of which opened horizontally; but I pointed out to my colleague that a bent probe introduced below through an opening in the cricothyroid membrane, and pressed against the under surface of the coin would thrust it up into the mouth. This operation Mr. Smith performed with ease and rapidity, and the coin dropped out of the patient's mouth. The celebrated case of Mr. Brunel, published by Sir Benjamin Brodie (*Medico-Chirurgical Transactions*, vol. xxvi), is probably familiar to most of you. A half-sovereign, which had passed through the larynx into the trachea and right bronchus, was ultimately expelled by inverting the patient's body. More than once the attempt to dislodge the coin in this way had failed, in consequence of the foreign body striking against the under surface of the glottis and exciting distressing spasm. Inspection of the living larynx suggests an important hint for the management of similar cases. The object is to have a widely open glottis at the moment that the body is inverted for the purpose of dislodging the coin. This we can insure by directing the patient to make a deep inspiration. The inspiratory current of air would have no appreciable effect in retarding the downward movement of a metal coin by its own gravity; and it is essential for its escape that the glottis be open, which it always is during the act of inspiration. When the body is inverted, the patient should be cautioned to make no vocal sound while his head is being lowered. The slightest whisper of the voice implies a closed glottis, which would, of course, prevent the exit of the foreign body.

In conclusion, I venture to give one or two practical hints, in the hope of facilitating the practice of laryngoscopy, and so bringing it into more general use. And first, I maintain that the best position for the concave reflector, by which the light is thrown into the patient's throat, is on the forehead, just above the eyes. It is quite unnecessary, and therefore undesirable, to look through a perforated reflector placed in front of one eye. With the reflector on the forehead, we avoid the discomfort and inconvenience resulting from the effort required to keep one eye applied to the opening in the mirror; we have the free and unimpeded use of both eyes; and we consequently find it much easier to direct a steady light into the throat, to introduce the laryngeal mirror, and to practise any other manipulation which may be required, either for diagnosis or for treatment.

Another great advantage resulting from this position of the reflector is that, by means of a shade attached to the frontal band, we completely protect the eyes from the direct light of the lamp, and thus avoid the fatigue and the confusion of sight which result from exposure to a bewildering glare of light (fig. 2). The practice of using a perforated reflector was borrowed from the ophthalmoscope, in using which instrument it is necessary to look through the centre of the luminous beam; but the conditions which attend the exploration of the interior of the eye through the small opening of the pupil are very different from those which exist when we are looking through the wide open mouth at an image reflected from a mirror of considerable size. In the latter case, nothing is gained by looking through a perforated reflector, and the disadvantages I have already pointed out. I have no doubt that many students have been discouraged by the difficulties attending the attempt to see the larynx through a hole in the reflector.

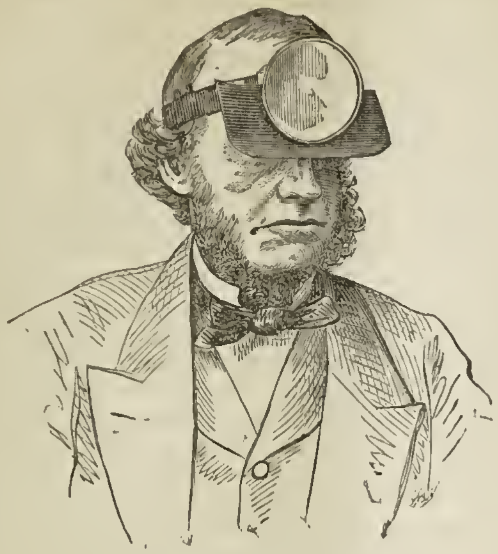
Fig. 2.—Frontal Reflector and Shade.

One of the most useful means of acquiring skill and confidence in the examination of the larynx, is the practice of auto-laryngoscopy, that is, the examination of one's own larynx. The simplest and, on the whole, the most satisfactory method of auto-laryngoscopy was devised by myself eleven years ago. (See *Medical Times and Gazette*, February 14th, 1863, p. 157.) This method of auto-laryngoscopy requires no special apparatus. Sitting at a table of convenient height, I place a common looking-glass in front of me, and a moderator or gas lamp on one side of the glass, but two or three inches further back, so that the light may not pass directly from the lamp on to the face of the glass. Now, with the reflector on my forehead, I direct the light from the lamp, as it were, into the open mouth of my own image in the looking-glass; then, introducing the laryngeal mirror into my mouth, I see the reflection of my larynx in the glass before me, and any one looking over my shoulder can also see the reflected image. If I wish to demonstrate my larynx to several persons at once, I do this by having the mirror in front of me of small size—about three inches by two inches (fig. 3). Thus, while three or four persons standing behind me can see the reflection of my larynx in the mirror in front, three or four others, standing before me and looking over or under or by the sides of the demonstrating-glass, can see the reflection of my larynx from the laryngeal mirror which I hold in my mouth. Those who stand in front of me have a somewhat better view than those who look over my shoulder from behind, for the obvious reason that some loss of light attends the second reflection from the demonstrating-mirror before the image reaches the eye.

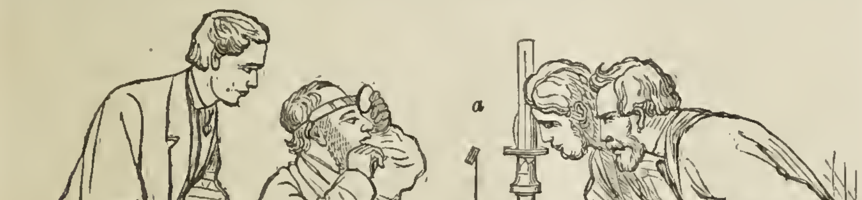

Fig. 3.—Auto-laryngoscopy and Demonstration. *a.* The small mirror on a brass stem.

For beginners in the art of laryngoscopy, this method affords a very useful means of training and practice. One of the chief difficulties at first is to keep a steady light in the patient's mouth while the laryngeal mirror is being introduced. Now the student, after arranging his looking-glass and his lamp, may direct the light into his own open mouth in the looking-glass. This process differs scarcely at all from that which he will have to practise on his patients. Then, having learnt to keep the light steadily and automatically directed into the mouth, he may warm and introduce the laryngeal mirror, and he will soon see his own larynx. The frontal reflector is a very useful means of lighting the throat for the purpose of examining the tonsils, palate, and pharynx. Placing a lamp or a candle by the side of the patient, the operator, with the reflector on his forehead, throws the light into the throat, and has both his hands free to depress the tongue and to apply caustic or other local remedies. In cases of diphtheria and scarlet fever, by this method of illumination a thorough examination of the throat can be made in a much shorter time than by the ordinary method, and without raising the patient's head from the pillow. The operator, too, in this way, runs less risk of infection from inhaling the patient's breath, or from the morbid secretions being coughed into his face.

I had practised laryngoscopy for some years before I discovered that the slight nervousness experienced by most patients on having their throats inspected for the first time causes them to hold their breath; and this suspension of breathing soon distresses the patient and embarrasses the operator. The direction which I now give to my patients is in substance this: "While I introduce the mirror and look at your throat, do not hold your breath, but continue to breathe in and out freely"; and I do not attempt to introduce the mirror until I see that the patient understands and obeys my direction. An analogous instance of nervous apnœa sometimes occurs when a timid patient is about to inhale chloroform. Emotional excitement may so completely suspend the respiratory movements, that the patient has to be encouraged and instructed to continue his breathing before the inhalation can proceed. I was told lately by a photographer, that a nervous subject, when told to remain still, will sometimes, as it were, forget to breathe. The result is, that the sitter soon feels distressed, and has a pained expression of countenance. A medical friend once, when examining with me the photograph of a distinguished surgeon, said—"He looks as if he were passing a renal calculus". He had probably held his breath while sitting for his photograph.

Rhinoscopy.—We may often obtain useful information by an examination of the posterior nares with a mirror. In the practice of rhinoscopy, as it is called, the patient sits erect, while the light is thrown into the mouth by the frontal reflector. The tongue is held down within the mouth by a right-angled metal depressor. The patient is directed to breathe softly. A forcible inspiration draws the soft palate and uvula upwards and backwards, and so interferes with the examination. A mirror, about the size of a threepenny-piece, is warmed and introduced by the side of the uvula, beneath the palate, with its surface directed upwards and forwards, care being taken not to touch the soft palate or

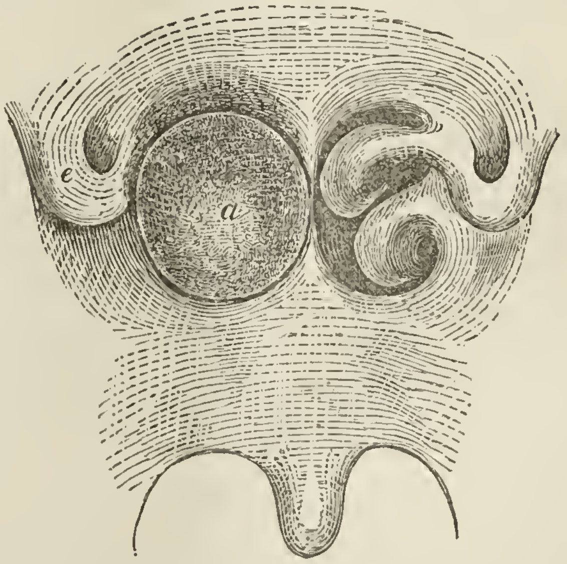

Fig. 4.—Posterior view of the Uvula, Soft Palate, and Nares, as seen by rhinoscopy. *a.* A globular tumour obstructing the posterior opening of the right nasal fossa. *e.* The orifice of the right Eustachian tube.

uvula, so as to excite reflex contraction of these parts. In this way, when the throat is moderately capacious, we may bring into view the posterior openings of the nasal fossæ, the turbinated bones, the opening of the Eustachian tube, the septum narium, and the roof of the pharynx.

In illustration of the practical value of rhinoscopy, I may refer briefly to one case. A gentleman, twenty-four years of age, consulted me on account of an obstruction of the right nostril, which had existed for two years. On examination with the mirror, the posterior opening of the right nasal fossa was seen to be obstructed by a globular tumour (fig. 4), as large as a full-sized marble, and of a yellowish-green colour. I asked my colleague, Mr. John Wood, to devise a plan for removing the tumour. He introduced a slender curved polypus-forceps through the anterior opening of the nostril, and grasped the tumour, which burst, and discharged a glairy fluid like white of egg. The patient felt immediately that the obstruction was removed; and, on rhinoscopic examination, the shreddy remains only of the tumour were seen attached to the middle turbinated bone, which had before been concealed by the tumour. (Fig. 5.) The tumour had evidently been a mucous cyst. This case occurred ten years ago; and I heard only a few days ago that there has been no return of the disease. The practical value of rhinoscopy in this case can scarcely be questioned. It is doubtful whether, by any other mode of examination, the position and nature of the tumour could have been determined with sufficient certainty to warrant an operation for its removal.

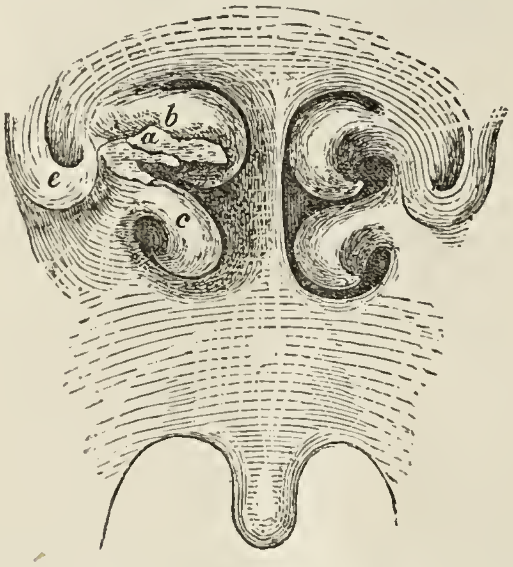

Fig. 5.—The Posterior Nares, after the removal of the Tumour represented in fig. 4. *a*. The abraded surface from which the tumour was torn. *b*. The middle, and *c*, the inferior turbinated bone. *e*. The Eustachian tube.

THE PNEUMATIC ASPIRATOR IN RETENTION OF URINE FROM ENLARGEMENT OF THE PROSTATE GLAND.

By WILLIAM BROWN, M.R.C.S.Eng., Callington.

I THINK the following case will be considered a striking example of the value of the pneumatic aspirator in extreme cases of inflammation and enlargement of the prostate gland, and of inflammation and thickening of the mucous membrane of the bladder—cases which not only cause retention of the urine, but which sometimes absolutely prevent the introduction of the catheter, whether silver or elastic, without great risk or fatal injury. And the case now detailed not only proves the value of the instrument as the ready means of relieving suffering, and of prolonging life temporarily, but even of saving life for an indefinite period. Before going farther, I should state that whatever credit or praise, if any, in the management of this case, is due, is as much due to my partner, Mr. H. Davis, as to myself, as he took a full share in the conduct of the case from beginning to end.

W. C., a tall, swarthy man, in his seventy-third year, a farm-bailiff, came to our surgery on December 29th, 1873, in a state of great suffering. I was out of town. Mr. Davis found him with dusky countenance, dry, coated, striped tongue, febrile pulse, and complaining of great pain in the back and limbs, and especially pain and pricking at the neck of the bladder, inability to stand erect, and with a constant desire to urinate, but with power only to pass a few drops at a time. On examination, he found the bladder to be distended and extremely tender. The patient had been becoming worse and worse in regard to the bladder and prostate symptoms, for a fortnight, having to get out of bed ten or a dozen times of a night—every half-hour, or oftener sometimes. He had had difficulty in, and frequent desire for, micturition ever since Michaelmas. Mr. Davis gently attempted to pass the catheter, but had not succeeded when I arrived. I carefully and patiently tried catheters of various sizes, but could not reach the bladder. The penis itself was turgid, and disposed to considerable erection, the glans penis livid, and the prostate would bleed with the least touch of the instrument. We then sent our patient to his home, giving him a draught containing twenty grains of chloral hydrate and half a drachm of tincture of henbane, to be taken when he reached home, ordering him to have a fire in his bedroom, to go to bed, and to use fomentation flannels or a large linseed meal poultice over the pubes, perinæum, etc. This was at 2 P.M. At 7 P.M., we visited him at his house. I then passed a No. 8 silver catheter after some difficulty, and drew off about thirty ounces of high-coloured, acid urine. We then ordered a mixture of nitrate of potash, infusion of buchu, liquor potassæ, and tincture of henbane, according to my usual custom. At 9 A.M. the next day, a messenger was sent to say that he was again in great agony. Mr. Davis went, but failed to pass the catheter. At 3 P.M., we both went, when, after a time, I again succeeded. The case proved so difficult to operate on, from the enormously enlarged state of the prostate, and the patient was in such a bad state generally, that we tied in the catheter for the night. On the following day, Mr. Davis, after emptying the bladder, removed the catheter, hoping its reintroduction would be less difficult. At 10 P.M., I was enabled, after considerable difficulty, to introduce, instead of the No. 8, a No. 10 long curve, or prostatic catheter. We had Sir Henry Thompson's black elastic catheters, and other catheters, but they proved quite useless.

On the next day, January 1st, at noon, the catheter could not be passed at all, or it seemed to pass into the bladder, but urine did not flow, as if from the blocking up of the aperture into the catheter, and of the end of the catheter also, by clots, mucus, etc.; unless (and this I deem the more probably correct explanation) from the almost disorganised state of the prostate and membranes of the prostatic portion of the urethra and of the neck of the bladder, the catheter passed between the membranes and carried the mucous membrane before it. I did not use force enough to cause complete tunnelling. In further proof of the size and condition of the prostate, I would here say, that we passed our fingers up the rectum, with the view of guiding the point of the catheter, but found the organ to project back like a large hard cancerous tumour, quite obliterating the channel of the gut; and the touch of the finger caused acute pain. We could not in the least feel the catheter or get above the tumour.

From the state of the prostate and bladder, and the patient's handling of the penis in his frequent violent efforts to urinate, the glans penis and prepuce, the whole outward organ, was now in a semi-sloughy state. And the patient, in all other or general respects, was in a most deplorable condition. His countenance was dusky and haggard; the heart's action at times over 140 beats in the minute, at other times alarmingly intermittent; and altogether he was getting into a condition of almost hopeless prostration. At 10 P.M., we used the aspirator, and drew off about twenty-eight ounces of urine.* I then seemed to introduce a No. 8 catheter, but not to my complete satisfaction, and only a few drops of urine passed. We tied in the catheter, but the next morning we found that the patient's efforts during the night had caused it to come out some inches. From this time, January 2nd, we found it absolutely unjustifiable to attempt to use the catheter until the night of January 12th; but we used the aspirator daily, and, on some occasions, the pain was such as to require the operation to be performed twice in the day. Altogether, we performed the operation fifteen times, with immediate relief on every occasion, and without the smallest inconvenience or injury from the punctures or perforations of the needle. By this time, the swelling and sloughy state of the penis had passed away, to the extent of its having nearly reacquired its normal appearance.

On the night in question, 11.30 P.M. January 12th, after pumping off by the aspirator, with the aid of Mr. Davis, the usual quantity of urine, of much more natural colour, I introduced with ease a No. 8 Liston's silver catheter, and drew off from six to eight ounces of urine, very thick and white or mucous at the finish, which showed the quantity the portion of the bladder below the brim of the pubes contained at this stage of the case, thereby affording another proof, beyond that of the easy passing of the catheter, how much the enlargement of the prostate must have abated. We then tied in, and as before carefully plugged, the catheter, and withdrew the plug daily, as also did the patient's wife, until the 15th, when Mr. Davis removed the catheter. The patient then found himself capable of passing small quantities of urine naturally as he lay in bed. On the 17th, I temporarily reintroduced the catheter with case, and again on the 19th.

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* The instrument we used was a Coxeter's Stomach-Pump, converted by him into a pneumatic aspirator as well.

During this period, from about January 2nd, the patient had refused to take any medicine, and, during certain parts of the period, was so profoundly prostrate, that his friends thought it quite useless to attempt to do anything more for him. At times, we found the irregularity and intermission in the action of the heart so great, that there could not be counted at the wrist twenty distinct beats in the minute; and, of course, there were corresponding symptoms of hypostatic congestion of the lungs and congestion from blood-poisoning. On finding him able to be sufficiently raised in bed, on January 19th, we ascertained that the affection of the lower and middle lobes of the right lung had passed through the stage of congestion, or congestive pneumonia, into the state of complete infiltration, or asthenic hepatisation, of the parts. We then ordered the inunction of an ointment composed of compound mercurial ointment, iodide of potassium, and croton oil; and the administration of a mixture of infusion of senega, iodide of potassium, bicarbonate of potash, carbonate of ammonia, tincture of squill, and compound tincture of camphor. But he did not take the whole of one bottle. From this time, he never required any operative proceedings, and did not take any more medicine, except a little castor oil when needed; he slowly improved, gradually increasing in appetite and strength. He could, on February 27th, come downstairs during the greater part of the day, and was about to resume his outdoor duties; he could urinate quite as well as he could before Michaelmas, and merely required to pass urine once or twice in a night: and the blocking up of the lung had also been removed by absorption in a marvellous degree.

Without the aspirator, the poor man whose case is above related must have perished miserably, as, from the size and the projection backwards of the prostate, it would have been impossible to tap *per rectum*, and it is not likely that an ordinary trocar and cannula could have been passed into the bladder, above the pubes, daily and twice a day, during twelve consecutive days, with safety, to say nothing of the pain and shock of so considerable an operation in a patient so profoundly prostrate, with low congestive inflammations and low febrile symptoms, that on many occasions he appeared to be within a few hours only of death; and to have attempted to have kept an ordinary cannula tied in above the pubes during that period would probably have terminated in a fatal result.

CASE OF DROPSY: TREATMENT BY ACUPUNCTURE.

By W. MUNRO, M.D., C.M., Cupar Fife, N.B.

THE following short *résumé* of the treatment, or rather the important part of the treatment, of a severe case of renal and cardiac dropsy, may be of interest. In such a case, of course, life could only be prolonged; but in those, rarely seen in this country, but not uncommon in hot climates in which there is no organic disease, it may be saved.

On May 14th, 1873, I was called to see A. B., and found him propped up in bed, suffering from dyspnœa. Both legs were much swollen. His heart was enlarged. There was albumen in the urine. I tried various diuretics, but he continued to grow worse, the legs swelling more and more until the skin was tense and glistening, and white in colour. There was also œdema of the back.

On May 21st, he was fast suffocating, and could not have lived another day. I began puncturing, first making twenty or thirty holes in each leg with small sewing needles. As the water escaped, he began perceptibly to improve. I now punctured three times a day for some days, watching for any signs of inflammation, and dropping to once or twice a day when it did appear. Whenever I did not puncture often enough, however, A. B. became worse, and care was required in keeping between the two extremes of doing it so often as to produce local mischief, or not often enough to give relief. I found very soon, however, that I could use larger needles, and ultimately preferred a short thick darning needle, which I held between the middle and third fingers and pressed in with the thumb-nail. I found that the thick needles, making larger holes, obviated the necessity of puncturing so often, such holes not closing up soon as smaller ones. I gradually lengthened the period between puncturing to every second day and every fourth day, but three times over was compelled to shorten the time, the water having collected so fast. On these occasions, and on one of them in particular, A. B., who was gasping for breath when I began, to my surprise was much easier *before I had finished puncturing*, and in two hours was relieved entirely of the dyspnœa. I found that the addition of five or six punctures with a lancet-point assisted me in lengthening the intervals, the holes remaining longer open than those from the needles. The patient's health improved so that he was able to get up and walk about, and in September he was able to leave home for a short time. At that time, I was only puncturing the legs once in ten days or so. He became worse again, however, in October, when he had to be much confined to the house. In November, he caught a cold, resulting in pneumonia. At this time, I was forced to puncture about every third or fourth day. He passed through the pneumonia; but it had been too much for his strength, and he died on December 17th from exhaustion, having thus lived seven months, as I firmly believe, by the assistance of acupuncture.

I have avoided giving details; but I may say that I tried all kinds of diuretics, with only temporary increase of the quantity of urine passed, and ultimately gave up the use of any medicines except such as were required to palliate troublesome symptoms.

From all that I saw of the case, I was quite hopeful of getting him over the winter, and consider that in one sense he was prematurely cut off by the exhaustion caused by the pneumonia. Otherwise there seemed to be no limit to the length of time his life might have been prolonged.

I may say that at first there was absolutely no pain caused by the treatment. Afterwards, as the size of the legs fell and the skin became more natural and sensitive, there was soreness, but, in spite of this, the patient insisted on the puncture being done, looking on it as his sheet-anchor.

Five years ago, I treated a negro girl in St. Kitts, suffering from anæmic anasarca (caused by poor living), there being in her case no organic disease, by puncturing the legs with a needle. She was completely swollen all over the body, and had continued so for some time in spite of treatment; but the relief afforded by the punctures, which I only used twice, seemed to assist nature so much that in a week or two the anasarca quite disappeared, and she recovered.

I have omitted to mention that I found bathing the feet in hot water assist the flow of water from the punctures, which was sometimes so great that cloths wrapped round the leg had to be changed every half-hour, being thoroughly soaked.

I have thought it right to publish this case, so that others having such to treat may not give them up whenever they find diuretics and other medicines of no avail, and also to point out how much more irritation the skin can stand than might be expected. When I first began, fears of sloughing of the skin and such like evils used to stand like phantoms before my mental vision, making me, as I now know, more timid than I otherwise might have been in using large needles. But no more mischief was ever done than a slight erythema being brought on, which possibly at the same time might have been caused by the state of the patient, and which was easily got rid of by lead lotion.

THE RELATION BETWEEN ARTERIAL TENSION AND ALBUMINURIA.

By F. A. MAHOMED, M.R.C.S.Eng.,
Resident Medical Officer to the London Fever Hospital.

IN the number of the BRITISH MEDICAL JOURNAL published on May 9th, Dr. George Johnson does me the honour of criticising my paper recently read before the Royal Medical and Chirurgical Society. Assuming that "the increased arterial tension is the result of contraction of the terminal muscular arterioles", Dr. Johnson doubts the possibility of this increased tension being a cause of albuminuria; for he believes that, the tension in the arteries being increased by the contraction of the arterioles, the tension in the capillaries is actually diminished, I cannot, however, admit Dr. Johnson's assumption. On the contrary, I believe that the increased pressure commences in the capillaries themselves, and that it is brought about in the following manner. All physiologists admit an attraction existing between the blood and the tissues when in a normal condition, which varies with altered conditions of nutrition and secretion. This "chemico-vital" attraction for the blood, possessed by the tissues, has been termed "capillary power". It is undoubtedly an important element in the circulation, and its existence has been abundantly demonstrated by experiment (*Principles of Human Physiology*, by Dr. Carpenter, 7th edit., p. 300). Destroy this attraction by a blood-poison of any description, and the difficulty of capillary circulation will be increased; a condition of partial capillary stasis will be produced. The "capillary power" being diminished, the *vis a tergo* must be increased; hence arises high tension in the capillaries and arterial system. If now the action of one of the excretory organs be arrested, as by a chill or constipation, extra work will devolve upon the kidneys, producing congestion; while the condition of blood-poisoning being intensified by diminished elimination, a further increase of arterial tension occurs, and, if sufficiently severe, an albuminuria. Some proof of the truth of this theory will be found in the following facts.

1. In all cases of blood-poisoning, either from scarlatina, erysipelas, or other exanthem, lead, gout, alcohol, or in pregnancy, I have found this condition of high tension to exist.

2. In cases of acute blood-poisoning, such as scarlatina, occurring in persons whose arteries have not been degenerated or thickened by prolonged high pressure, I have found this condition of high arterial tension (produced generally by constipation, sometimes by a chill), accompanied by exudation of hæmoglobine through the capillary walls. This has been discovered by the guaiacum-test, applied to the urine as directed in the paper. In these cases, no albumen can be detected in the urine by the most delicate testing; nor can any trace of blood be found by either the microscope or spectroscope.

3. If the tension be increased still more (as by continued constipation), albumen appears in the urine, in quantities bearing a direct proportion to the amount of high tension existing. If this be still further increased, rupture of the capillary walls ensues, and blood is poured out into the kidney-tubules. Thus, assuming Dr. Johnson's theory to be correct, we should have the lowest possible tension in the capillaries producing rupture of their walls.

4. A condition of contraction of the terminal arterioles, as described by Dr. Johnson, can be produced by the administration of digitalis, and its effects seen clinically in the pulse. It is, however, very different from the effect of arterial tension originating in the capillaries, such as occurs in Bright's disease. In this condition, however, though the arterial tension is somewhat increased, the capillary tension, as argued by Dr. Johnson, is decreased, and the tendency to albuminuria less.

5. If, as Dr. Johnson remarks, venous congestion produce albuminuria by transudation through the walls of the venous capillaries, surely congestion of the arterial capillaries may produce the same effect. In the paper referred to, I have especially endeavoured to distinguish between the two. What I have called *arterial albuminuria* I demonstrated to accompany blood-poisoning, to be accompanied by high arterial tension, and preceded by exudation of hæmoglobine; while *venous albuminuria*, as produced by intense fever, pneumonia, heart-disease, etc., is distinguished from the former by low arterial tension, and the absence of hæmoglobine from the urine, except when it occurs coincidently with blood-cells and colouring matter from rupture of a venous capillary and effusion of blood.

6. A most convincing proof of this theory has lately been afforded by an experiment performed by Dr. Lauder Brunton, in which I had the pleasure of assisting. Transudation of hæmoglobine and albuminuria was produced in a strong healthy dog by ligation of its abdominal aorta below the renal vessels. This experiment requires repetition before the result can be accepted; for in the urine of another dog, on which the same operation was performed, though under extremely unfavourable circumstances, no reaction was obtained with the guaiacum-test.

Again, Dr. Johnson questions the possibility of accounting for the pathological changes in acute Bright's disease by the condition of "congestion under high pressure". But if, as I suppose, high tension exist and commence in the capillaries, and congestion of the kidney be added to it, owing to arrested action of either of the other excretory organs, we not only have good reason for the albuminuria, but, from the fact of increased blood-supply to the kidney, increased cell-production in that part may be expected. This cell-production, moreover, is not that characteristic of an ordinary acute inflammation; for the cells, though produced in increased numbers, not only attain maturity, but exceed it, and pass on to hypertrophy, owing to the rapid proliferation of new cells. These are cast off in great numbers, and, blocking the tubules, form the large white kidney; here they undergo the change common to all cells after their death—namely, molecular disintegration and fatty change—previous to their absorption during the third or contracting stage. Thus, in no stage can I recognise a condition that may truly be called "inflammatory", or that cannot be accounted for by "congestion under high pressure".

Finally, while fully admitting the truth of Dr. Johnson's observations on the muscular hypertrophy of the arterioles, I submit that the effort required to prevent their over-distension by the high pressure within is quite sufficient to account for that hypertrophy, without the introduction of a theory which at least implies a want of unity of action in the muscular portion of the circulatory system that is rarely seen in nature.

OBSTETRIC MEMORANDA.

REMARKABLE TWIN DELIVERY.

E. S. was attended by me on October 12th, 1873, in her second labour. She was delivered about 1.30 A.M. of a small male child, apparently of the eighth month. On examining the abdomen, the uterus was found well contracted, of the usual size after delivery. Towards the left side, but on the right side from the ribs to the ilium, was a large tumour, indicating a second child. Some hæmorrhage occurring, the uterus was found by vaginal examination to contain only placenta and coagula. A dose of ergot was given. The hæmorrhage ceased, but no pains occurred for six hours. Then the patient felt the tumour pass downward and to the centre, when no doubt the second fœtus entered the uterus; and, on examination, I found a second head presenting. Pains shortly recommenced; in half an hour the second membranes were ruptured; and by 9 o'clock a male child, much larger than the first, was born. The double placenta was shortly afterwards expelled, when the uterus was again found well contracted, and no second tumour could be distinguished. The patient, being a tall slender figure, with thin abdominal walls, was most favourable for such to have been detected if it had existed. The second child was still-born. The first and its mother progressed without a bad symptom. H. UMPLEBY, M.D.

UNUSUAL CASE OF PROLONGED LABOUR.

ON Thursday, November 27th, I was sent for to W. S., aged 40, about to be confined with her tenth child. The patient stated that early that morning she had seen the "shows". On vaginal examination, the os uteri was found dilated to the size of a shilling, the lips not rigid, and the membranes protruding. She passed over Thursday, Friday, and the greater part of Saturday, without any unusual symptoms. On Saturday night late, I was sent for, and, on my arrival, found her in great pain. The pains, however, were not confined to the fundus uteri or sacrum, but distributed throughout the abdomen. The pulse was normal; there was no fever; the tongue was clean and moist. On examination, the os was found *in statu quo*, dilatation not having made any progress since the last examination. The posterior wall of the vagina was more resistent than natural. On inquiry, the patient now stated that her bowels had not acted thoroughly for ten days. I ordered twenty grains of compound jalap powder, to be followed in two hours by a full dose of saline aperient; the latter to be repeated every two hours until the bowels acted. On my next visit, a few hours afterwards, the patient informed me that she had vomited everything taken. Under these circuumstances, a pint of warm soap and water was injected into the rectum. After this, she passed a quantity of dark green scybala, which greatly relieved her. On visiting her again a few hours afterwards, she was comparatively free from abdominal pain, but still complained of some uneasiness in the hypogastric region. I therefore repeated the injection, this time passing the enema-tube into the sigmoid flexure. In this way, over a pint of warm water was sent up, and in a very short time the patient evacuated a large quantity of dark green semifluid fæculent matter. The patient was now quite free from pain, and continued so up to the time of her delivery, which took place the Friday following (December 5th)—*i. e.*, eight days after the commencement of dilatation of the os uteri. The second stage occupied eight hours. The uterine pains were feeble, the forceps being required to complete delivery. It is probable that in this case the unusual prolongation of the first stage of labour was attributable partly to feeble uterine action, but mostly, I think, to the distended condition (from accumulated fæces) of the upper part of the rectum and of the sigmoid flexure; and the fact that, at the first vaginal examination, the os uteri was found to be further forwards than normal, seems to strengthen this supposition.

G. HARDY SMITH, M.B.Lond., M.R.C.S., Longton.

ACUTE ALBUMINURIA WITH CONVULSIONS DURING PREGNANCY: RECOVERY.

MRS. B., aged 24, pale and small, but moderately plump, seemed to have a tendency to convulsion, for three years ago she had a fit from some unknown cause. On April 22nd, 1873, she complained of pain in the left hip, and of left facial neuralgia. She was in the seventh or eighth month of her first pregnancy. The bowels were somewhat relaxed, and she was listless. Ten minims of the tincture of nux vomica thrice daily in water, with a teaspoonful of pale brandy, having been ordered, she took (by mistake, only half) the first dose at 10 P.M., after a supper of bread, butter, and coffee. At midnight, she awoke with pain in the abdomen, and afterwards passed a restless night. In the morning (23rd), she vomited her breakfast, and her manner was observed to have become very strange. After going out into her own back garden, she passed very unceremoniously through a neighbour's house, and then knocked for admission at her own front door. On its being opened, she could not tell how she had come there. Very shortly she had a strong convulsive fit. It was ascertained that she had passed no urine for more than twenty hours; but a few hours afterwards (about 3 P.M.) she passed two ounces, of a very dark colour, and which, upon being boiled, became almost solid. She was drowsy, and but half-conscious; her pulse was quick, but remarkably variable both in force and speed. The bowels had acted on the previous day. Her face had a jaundiced tinge, and wore a vacant look. She had been out for some time on the previous evening, in a biting north-east wind.

At 4.30 P.M., she had another fit, apparently without any immediate exciting cause. After the fit, she drank a little hot brandy and water, and this made her very sick. Happening to visit her just at this time, and finding her hot and feverish, and vomiting green and mucous stuff, I gave her four drops of antimonial wine in a teaspoonful of cold water. She instantly had a strong fit, foaming at the mouth, grinding the teeth, turning up the eyes, and twitching the limbs, for a minute or two. All this time the uterus made no sign, so that I determined to treat the case as one of renal congestion and uræmia simply. Measures were taken, first, to antagonise the "chill" of the previous evening, and to procure perspiration, and, secondly, by stopping the supply of urea-forming food, to lighten the work of the kidneys, and to add no further impurities to the blood. The room was made very warm; bedclothes and hot bottles were applied. All nitrogenous food—even milk—was forbidden; she was to have sago, arrowroot, cream, sugar, and (to lessen the waste of the tissues) tea. At 10 P.M., she had perspired very freely, but had passed no urine. She had had only one slight fit; the pulse was uniformly quick and strong; the skin hot; the breath rather offensive. Ten grains of aperient pill were passed into the rectum, and she was ordered to take three minims of antimonial wine every hour in a teaspoonful of warm water.

Next morning, I found her downstairs at breakfast. She had, however, passed no urine since the small quantity on the day before; and the bowels had not acted. She still seemed and felt much dazed, and could remember nothing that had happened. A colocynth pill was given; and in the afternoon the bowels acted freely, and urine of a much clearer colour and much less albuminous was passed. Next day, the urine contained but little albumen; but on the 27th there was more. On May 2nd, I met her walking out, still feeling some confusion, but otherwise declaring herself well. She then left the place. She was confined some weeks afterwards, having had no more fits, and is now quite well.

THOMAS CHURTON, M.R.C.S., Erith.

THERAPEUTIC MEMORANDA.

IMMINENT DEATH FROM CHLOROFORM.

I HAVE read with interest the case of "imminent death from inhalation of chloroform" in a recent number of the JOURNAL. Mr. Davy deserves congratulation for having saved his patient from death by asphyxia by the prompt and admirable manner in which he told off his assistants and conducted the work of artificial respiration. Anyone who has perused carefully the reports of cases of threatened or actual death from chloroform, as reported in the medical papers, must have observed the care with which, more especially in England, the surgeon refers to the *apparatus* employed. This gives the impression that the administrator has largely depended on the instrument used. With all respect for the opinions of those who favour the use of such adjuncts, I think that they are but broken reeds to trust to. With chloroform, as with other drugs, the dose which would scarcely affect one person might poison another, and it is manifestly impossible, before commencing the administration, to know how much may be required. I, therefore, think that any method which tends to make the administrator suppose himself more confident and safe in his position must naturally incline him to feel in a less degree the necessity of carefully watching his patient, and the grave responsibility which he has undertaken. Young and inexperienced practitioners would more especially be liable to trust too much to the dose and the apparatus, and less likely to regard the actual state of the patient. The old Edinburgh practice, that still adhered to, of using simply a folded towel, has been attended—I believe I am correct in saying so—with as much success as any other, if not greater. The surgeon here has no regular dose nor apparatus to share with him, so to speak, the responsibility of the case. He simply watches his patient in the most assiduous manner, and desists at once from the further administration of the anæsthetic on the occurrence of the slightest irregularity of the breathing or flagging of the pulse.

Mr. Davy does not mention whether he pulled out the tongue in resuscitating the patient. This is certainly often of great service in such cases; but the cardinal remedy in this form of asphyxia will turn out to be, although I am not aware it has yet been resorted to, venesection from the external jugular, thus at once relieving the right side of the heart.

JAMES CARMICHAEL, M.D., Edinburgh.

CROTON-CHLORAL IN FACIAL NEURALGIA.

I AM so much pleased with the speedy relief a patient of mine obtained from croton-chloral, that I am induced to send a short note of the case, thinking it may assist a little towards a knowledge of the virtue of the drug.

On February 21st, I was consulted by A. B., a married lady, aged 32, slightly anæmic, suffering occasionally from dyspepsia, and, for the last three or four years, subject to severe attacks of facial neuralgia on the right side (distinctly along the branches of the nervus trigeminus). Three weeks ago, an attack came on. The pain was most excruciating, with but little intermission, causing sleepless nights and rendering the patient almost frantic ever since the first day of this attack. She had other medical advice a week before coming to me. She had been blistered behind the ear, and had three sound teeth extracted, and tried various other means to obtain relief without avail.

I prescribed three grains of croton-chloral, to be taken every four hours until the pain was relieved. After the first dose, a modified attack was felt; after the second, a very slight attack; and after the third dose, perfect ease was experienced. I saw the patient on the 8th of this month. She has had no return of the pain, and has slept well every night since relieved.

FRANCIS B. LEE, M.R.C.P., Heckmondwicke.

COCA: ITS THERAPEUTIC USE.

IN the JOURNAL for February 21st, Dr. Sieveking calls attention to coca-leaves, as used by the natives of South America. We are told that by chewing the leaves the natives are enabled to undergo fatigue for a long time without rest or food. Dr. Sieveking seems to think that coca may prove an useful drug when its effects become better known. In Ceylon and India, the Malays and others chew the leaf of the betel, with areca nut, chunam (a very fine kind of lime), and tobacco. Coca is also chewed by the South Americans with lime and tobacco. It remains to be seen whether there is any resemblance between the two plants or their effects. The Malays seldom set out on a journey without a supply of betel; and I have heard that they would sooner go without their food. Thus it would appear that they use betel when they have to sustain fatigue, just as coca is used in Peru. Again, betel is astringent and narcotic, and coca has similar properties. It appears to me that the betel of the Malays and the tobacco-pipe have very similar effects, and I am inclined to doubt much if either betel or coca will ever be found of any use as drugs.

G. H. MAC SWINEY, M.D., Haldamulla, Ceylon.

CLINICAL MEMORANDA.

NOTE ON FUNGUS MEATUS AUDITORII EXTERNI (ASPERGILLUS).

A FEW months ago, my esteemed friend and master, Mr. James Hinton, addressed a communication to me, in which, *inter alia*, he asked if I had met with a case of aspergillus of the ear. In reply, I had to confess that I had not met with a case either of otitis aspergillosa or of myringomycosis in this country, although I had seen such in continental *cliniques*.

In the communication referred to, Mr. Hinton expressed surprise at the extreme rarity of such cases in England, adding that not only had he not observed an example of either form of this ear-disease in his own practice, but, so far as he was aware, no other aural surgeon in this country had seen such a case.*

My attention was now, however, directed to the subject; and, reflecting upon what I had seen of such cases in foreign *cliniques*, I felt convinced that many cases during the last few years had passed under my notice presenting some at least of their characteristics, and doubtless complicated with one or other of these fungi, which had escaped notice. I therefore determined, on the first opportunity, to seek diligently for the parasitic growth in any case that warranted a suspicion of its presence. Three such cases have come under my notice within the last two weeks; and my object in sending this note for publication is to place on record the fact that in each of them I have found a form of penicillium, which in all the cases appears to be similar. I have not found the head and spores of the plant, but do not doubt that, in other cases of a similar form of ear-disease to those to which I now refer, I may be successful in discovering the mature parasite. Those concerning which I write appear to be Aspergillus flavus, as they answer in general to the description given of that plant by Küchenmeister.

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* There is a figure of a form of ear-fungus in Beale's work, *The Microscope in Medicine*, which was removed from a patient's ear by Dr. Grove.

JAMES PATTERSON CASSELLS, M.D., M.R.C.S., Surgeon to, and Lecturer on Aural Surgery at, the Glasgow Dispensary for Diseases of the Ear.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LONDON HOSPITAL.

HYPERTROPHIED SPLEEN AND KIDNEYS: PERITONITIS: DEATH: NECROPSY.

(Under the care of Dr. RAMSKILL.)

G. L., a boy aged 16, on admission into the hospital, said that when four years of age he had what his sister told him was ague. He spent five years in a workhouse, and was thirteen years of age when he began to work as a farm-labourer and gardener. At that time he had headache and pain in the left side, just below the ribs, which prevented him from sleeping, and ultimately compelled him to leave off work. Two years ago, he was badly squeezed between a horse and a beam, and was compelled to lie in bed for two days; and soon after the accident he noticed a lump in his belly, which slowly increased in size.

His skin had the peculiar yellowish brown tint which is commonly seen when the spleen is diseased. The conjunctivæ were not yellow, as in jaundice, nor were they pearly white, as in anæmia; his lips were red, the reverse of their condition in anæmia; his tongue was red, and the mucous membrane shone as if it had lost its epithelium. The heart was normal, though there was a systolic murmur, which faded towards the apex and top of the sternum, and was probably anæmic. The lung-sounds were normal. His body was badly nourished, though he stated that he had an excellent appetite. The abdomen was not distended, but protruded a little to the left of the umbilicus, as if there were some solid substance underneath pushing it forwards. On the left side of the abdomen there was a firm hard mass, which came down from under the ribs, and passed obliquely across the umbilicus until it reached the middle of Poupart's ligament on the right side, and its lower edge was on a level with the brim of the pelvis. It did not extend backwards to touch the left kidney, there being a space between. The splenic dulness was but very little, if at all, increased upwards; but, like an enlarged spleen, the tumour extended obliquely across the middle line, its edges were well defined, its surface was smooth, and there was a notch on its upper margin. Moreover, there was a history of the patient having lived all his life in a low marshy district in Essex, where, he said, ague was common. The patient did not remember ever having had shivering fits or attacks of vomiting; and the temperature chart did not indicate any periodicity. During the first three weeks, his temperature remained at 99 to 100 deg., pulse about 100, and respiration 30; then the temperature rose to 102 and 103 deg., with the pulse 140, and respiration 40. Quinine was prescribed, and the temperature soon fell to 101 deg. There were no physical signs connected with the heart or lungs to account for this increase of temperature; and the high temperature, morning and evening, showed that the case was not one of ague. Some of the axillary glands were larger than natural, and there was an enlarged one under the trapezius muscle, on a level with the seventh cervical vertebra. The glands in the groin were also distinctly felt. The abdomen was not tender on pressure.

Iodised cotton-wool was applied over the tumour, which, two days later, was certainly smaller; its inner and upper edge was to the left of the umbilicus, and its posterior edge could be distinctly felt. Further improvement having taken place, he was sent to the sea-side. In less than a month, he returned, and said that soon after he had left the hospital his feet swelled, and the swelling gradually extended to the knees. The spleen was not so large as it had been, but the liver was noticeably increased in size. A week later, he was suddenly seized with pain, which commenced at the ensiform cartilage, and rapidly extended all over the front of the abdomen, and was so severe that he could not bear the weight of the bed-clothes upon him. He was then treated for peritonitis, and on the next day he died.

Necropsy.—There was no œdema, but a large quantity of turbid serum in the peritoneal cavity, with congested appearance of the intestines. There were two or three large glands in the anterior mediastinum. The bronchial glands were also somewhat, but not unduly, prominent, but those at the bifurcation of the bronchi were considerably enlarged. The lungs were normal, except that there was a little pleurisy under the lower lobe of the left lung. The heart's valves were normal, the only change being hypertrophy of the left ventricle. The kidneys were large and white, and, in removing the capsule, were seen to have a white nodular appearance: their structure could not be seen, and they were not stained by iodine. The liver was large, but its tissue normal. The spleen was not nodulated; it looked like a lardaceous or sago spleen, but did not stain with iodine. The weights of the various organs were: liver, 6 lbs. 14 oz.; spleen, 4 lbs. 8 oz.; left kidney, 18 oz.; right, 17 oz.; heart, 11 oz.; brain, 65 oz.

Microscopic examination showed, on section of the greatly enlarged kidneys, a large number of spheroidal corpuscles lying somewhat orderly in a double row, and, outside, these were bounded by a fibro-lineal substance, which might have been a very thin wall of a duct or tube. Some of these portions were partly convoluted, and others straight and of various sizes; in fact, at first glance, with a low power, they looked not unlike kidney-tubules; with a higher power, they were very distinctly seen to be not so, for the renal tubules were larger, and their cloudy epithelium, with its large cells, presented a very striking contrast to the morbid growth. The Malpighian bodies were normal. The new growth was seemingly hypertrophied lymphatic structure. A section of the spleen showed a very similar corpuscular tubular arrangement, and the organ presented this appearance in a very striking degree. Well defined tubes lined with these corpuscular bodies were seen winding and cut across in every direction. The brain was much engorged; the vessels were charged with blood-corpuscles; and there was some corpuscular growth, seemingly in both the white and the grey matter, but in the white especially.

RADCLIFFE INFIRMARY, OXFORD.

CASES OF ROUNDWORM.

(Under the care of Dr. GRAY and Dr. TUCKWELL.)

[Communicated by Dr. TUCKWELL.]

THE following cases, in which roundworms are a veritable plague, although not to be compared with the extraordinary instances recorded in some of our medical works, are unusual enough to be worthy of a place in the JOURNAL.

CASE I.—James H., aged 6, living in a village near Oxford, was an out-patient in the Radcliffe Infirmary, under Dr. Gray, in March of this year. Between the 4th and the 21st, he passed *per anum* thirty-two roundworms. He took for ten days a powder containing five grains of santonine and eight grains of rhubarb every other night, followed by a dose of castor-oil on the following morning; and then for another ten days the same powder every third or fourth night. At the end of this time the powder no longer brought away worms, and he left off attending.

CASE II.—Eliza J., aged 48, living in a village near Oxford, was an out-patient at the Radcliffe Infirmary, under Dr. Tuckwell, from the end of January till the beginning of July, 1872, during which time she passed *per anum* thirty-one roundworms, and vomited five. She then ceased to attend. She was likewise treated with santonine and castor-oil, each powder being followed by a discharge of one or more worms.

CASE III.—Emma L., aged 47, living in a village near Oxford, but in a house isolated and at some distance from that of the other villages, came as an out-patient of the Radcliffe Infirmary, under Dr. Tuckwell, in April of this year, and is still under treatment. During the past eight months she has vomited twenty-four roundworms, and thinks it likely that she may have passed others by stool, but has not troubled herself to look. Her husband has also vomited these worms—one very large one a few days ago. All of her children, seven in number, are frequently in the habit either of passing or vomiting roundworms. One child passed four in the previous week, after a dose of senna-tea. The woman herself has an intestine which, in sporting language, would be called a "sure find" for worms. One has only to give her a dose of santonine to bring away, without fail, a certain number of these tormentors. Thus already, since April 11th, she has passed by the bowel, after santonine, twenty-one roundworms.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, April 28th, 1874.

C. J. B. Williams, M.D., F.R.S., President, in the Chair.

A CONTRIBUTION TO THE NATURAL HISTORY OF PULMONARY CONSUMPTION, CONSISTING OF AN ANALYSIS OF ONE HUNDRED MALE CASES OF HÆMOPTYSIS. BY HORACE DOBELL, M.D.

The paper was based upon an analysis of one hundred cases of hæmoptysis in males, recorded on a plan of inquiry so designed that it should as far as possible avoid the chance of prejudice from preconceived opinions and impressions, and include all the facts essential to the inquiry in a tabular form. The author considered that the hundred cases represented an average succession of more than six hundred cases, in consequence of the rigorous system of rejection adopted in collecting them; at the same time, that they formed a fairer basis for statistics than if no selection had been made, because incomplete and unreliable reports were excluded. The plan adopted was fully detailed. Eighteen tables were given. In the principal table was shown "the relation between loss of weight, cough, hæmoptysis, and lung-disease in one hundred male cases of hæmoptysis tabulated under seventy-four headings"; each line in the horizontal direction representing a complete case, and each column giving the answer "yes" or "no" to the question at its head. The primary object of the investigation was to assist, by clinical observation, in settling the important question of the tru position of hæmoptysis in the natural history of pulmonary consumption. The author had arranged and tabulated the facts in such a form that others might work from them. In a statistical point of view, Dr. Dobell considered that, notwithstanding the plan of rejection adopted, one hundred cases was too small a number to form the basis of final conclusions; he, therefore, wished them to be regarded as only a contribution, and hoped that others would follow up and supplement his contribution until the number was sufficiently large. The author observed that his object was to keep as strictly as possible to a simple analysis of the clinical facts presented by the cases. The cases, when tabulated, arranged themselves naturally into groups; first into three large clinical groups characterised by the relation in point of time between the first hæmoptysis and the first loss of weight; into three other groups characterised by the relation in point of time between the onset of first cough and the occurrence of first hæmoptysis; and again into two other groups characterised by the relation in point of time between the onset of first cough and the occurrence of first loss of weight; and others not enumerated. These natural groups formed the basis of some of the supplementary tables, of which there were seventeen. The first of these (Table 2) was an analysis of the conditions of the lungs in the hundred cases. Table 3 was an analysis of twelve cases in which first cough began at the same time as first hæmoptysis. Table 4 was an analysis of eight cases in which first hæmoptysis occurred before loss of weight. Table 5 was an analysis of ten cases in which first hæmoptysis and first loss of weight occurred at the same time. Table 6 was an analysis of eighty-two cases in which first hæmoptysis occurred after first loss of weight. Table 7 was a comparative analysis of Tables 4, 5, and 6. Table 8 gave the total loss of weight and the rate of loss per annum in the three groups of cases analysed in Tables 4, 5, and 6. Table 9 showed the loss of weight, the time in which it had occurred, and the rate of loss at different stages of lung-disease. Tables 10 to 18 analysed the cases grouped under different stages of lung-disease. Details were given of the cases in some of the most interesting of the clinical groups, and commentaries offered upon them, in which the meaning of the hæmoptysis in each case was especially considered.

Dr. Theodore Williams said that the chief point attempted to be established was, that loss of weight always preceded hæmoptysis; but, in order to ensure his cases being those of undoubted phthisis, the author had eliminated all cases of hæmoptysis unaccompanied by loss of weight. A reference to the fortnightly weighings of the Brompton Hospital would easily determine this point. In several instances in which hæmoptysis was not followed by loss of weight, he had noticed patients gain flesh to a large extent after large hæmoptysis. The causes alleged by patients for hæmoptysis were diverse and frivolous, and should not be too much relied upon. The true causes must be sought for in the pathology, and not in the clinical history of the disease. When cavities existed, the hæmorrhage could generally be traced to the bursting of an aneurismal dilatation of a branch of the pulmonary artery. The hæmoptysis of the second stage could be explained in a similar way, the vessels being laid bare and occasionally penetrated by the ulcerating process. The hæmorrhage of the first stage had been accounted for by a fragile state of the arteries, arising either from fatty degeneration or from atheromatous changes. Dr. Rasmussen had assigned minute aneurisms of the branches of the pulmonary artery as a cause. Hæmoptysis prevailed to a greater extent among males than females—in 63 per cent. of males and about 37 per cent. of females; where the hæmorrhage was profuse, in about 35 per cent. of the former to 18 per cent. of the latter. Another form of "hæmorrhagic" phthisis had been recognised by Dr. C. J. B. Williams and Dr. Peacock. It was marked by copious hæmoptysis and very slight physical signs. The general health was at first good, but the after-progress proved the cases to be phthisis.—Dr. Symes Thompson thought that the paper should have contained more pathological details. It appeared that if the cases of hæmoptysis were grouped together, and compared with those in which there was no hæmoptysis, the duration of life was greater in those with hæmoptysis. In cases of hæmoptysis there was not unfrequently an improvement in weight, the breathing being freer and the digestion improved, and thus the weight was increased.—The President said that hæmorrhage was usually preceded by symptoms of ill health, cough or morning expectoration. It might come on without being preceded by these symptoms; but there was always some previous pathological change. He thought the earliest sign of phthisis was some change in the lymphatic system, and a swelling in the glands. He did not think that hæmoptysis ever took place in a healthy lung; there was always some cause of fragility in the lung to produce it.—Dr. Dobell was glad to hear that the President agreed with the statement that there was some constitutional symptom before hæmoptysis. He had drawn attention to the loss of weight before hæmoptysis, and not to that which is met with afterwards. With regard to the quantity of blood spat, he had taken the cases where there was always more than streaks of blood in the sputa—not less than half a drachm.

CLINICAL SOCIETY OF LONDON.

Friday, May 8th, 1874.

Prescott Hewett, F.R.C.S., President, in the Chair.

Mr. Callender exhibited for Dr. Hollis a new Sarcotome.

Palmar Aneurism.—Mr. Cripps gave details of a case in which palmar aneurism was consequent on a punctured wound, and presented itself as a small pulsating tumour between the thumb and second metacarpal bone. On the sac being laid open, it was found impracticable to secure the artery at the wounded point. The wound was plugged. Five days later, sharp hæmorrhage suddenly occurred. Pressure, position, and bandaging were tried; but, after the bleeding had several times recurred, the radial and ulnar arteries were ligatured. On hæmorrhage again taking place two days later, digital pressure on the brachial was resorted to, and kept up for seven full days. Shortly after this was relaxed, the distal end of the ulnar, where tied, bled, and, on the following day, blood once more flowed from the original wound. The brachial artery was then tied immediately below the teres major. All hæmorrhage was thus completely arrested, and the patient made a good recovery. In the notes of seventeen cases of palmar aneurism, the following treatment and results were recorded:—Nine cured by pressure; two by ligature; one by injection into the sac; five in which the sacs were in some way opened, and of which one was cured; three died of hæmorrhage; and one was the above case. In conclusion, cases were mentioned to show the futility of ligature of the radial and ulnar for hæmorrhage from the palm, since these vessels can be easily and effectually commanded by pressure. If bleeding continued notwithstanding this compression, it would point to an abnormally free anastomosis with the interossei, which could only be controlled by pressure or ligature of the brachial.—Mr. Pick related another case which he had seen treated by Mr. H. C. Johnson. A man was wounded in the palmar arch; the hæmorrhage was arrested by a compress locally applied, but recurred upon removal of the dressing. Sloughing ensued, and more bleeding, whereupon the radial artery was ligatured. Hæmorrhage recurred, and the ulnar artery was tied. But, after a time, the bleeding recommenced, and amputation was followed by pyæmia and death. Mr. Pick recommended strongly the forcible flexion of the forearm on the arm in such cases; it controls the pulsation through the radial artery, and if kept up for two or three days, usually succeeds in effecting a cure. In a case of wound of the radial artery just above the wrist, which led to aneurism, such flexion failed, the aneurism was then laid open, and both ends of the wounded vessel were tied.—Mr. T. Smith said that the arm had been flexed, and a pad placed at the bend of the elbow, in the case described by Mr. Cripps; the limb had also been raised, and cork pads applied successively over the radial and ulnar arteries; in fact, all the usual and some unusual measures had been adopted; for example, digital pressure of the brachial artery had been tried and had arrested the hæmorrhage for twelve days. There seemed something peculiar in the patient, such as the hæmorrhagic diathesis, so persistent was the bleeding. Mr. Smith now regretted that the pressure had not been further persevered with, for the literature of the subject seemed to point out that it might have done more good. On two occasions, when the patient's teeth had been extracted, alarming hæmorrhage had followed. In another case, would one tie the brachial, or the radial and ulnar? The text-books said the former; but he (Mr. Smith) thought that he should be rather inclined to ligature the two latter, since, if the operation failed, there was the brachial artery to fall back upon. Such might be bad surgery, but it seemed a common sense plan.—The PRESIDENT referred to a case in St. George's Hospital in which the palmar arch was wounded, the wound healed, but left a large palmar aneurism; this was cured by pressure accurately applied in the palm, the fingers being kept flexed upon the pad, in order to relax the tendons running through the palm.—Mr. CRIPPS said that long-continued flexion at the elbow interfered seriously with the venous circulation of the limb. Pressure on the radial and ulnar arteries might be first tried, and if it did not control the hæmorrhage, why tie those arteries? The brachial could then, and ought to be, ligatured.

Pyæmia, the Cause of which was undiscovered: Termination by Thrombosis of the Veins of one Leg.—Dr. OGLE described the case, and exhibited the patient, aged 20, who was engaged in stable-work, and who had never had syphilis, or gout, or rheumatism, or, in fact, any disease or any injury. He was admitted into St. George's Hospital on the 14th of January last. He was then suffering from pyrexial symptoms, with pain in the head and abdomen, and had a temperature of 105 deg. On the day following, the temperature had risen to 105.8 deg. It appeared that all the thoracic and abdominal organs were free from disease, and the patient had only been ill and left off work four or five days. After being in the hospital a few days, albumen was found in the urine, which had hitherto been free from it. At first, it was surmised that the case might prove to be one of continued fever; but, as days went on without the occurrence of diarrhœa or the appearance of any spots on the surface of the body, and as at the same time the temperature was reduced, so that on two days it was even below the normal, this estimate of the case was abandoned. About ten days after admission, pain came on in the right shoulder, along with swelling, but no redness; and, four days later, pain came on (followed by swelling) in the wrists, which gave rise to the suspicion that there might be a rheumatic element in the case. There was, however, at this time no increased perspiration, and no acid odour about the skin; nor was the urine high coloured. Two or three days later, great perspiration (though not acid) came on; and a considerable rigor occurred, the temperature reaching 105.8 deg. This gave a very decided character to the case. Subsequently, during the course of three weeks, he had five rigors and effusion into the wrist-joints, with very great pain, requiring, at the suggestion of Mr. Pick, who saw the case with Dr. Ogle, the use of a splint. During this period, the patient was well supported by generous diet, and took three-grain doses of quinine every four hours for a length of time; and the pain in the joint was relieved by poultices and anodyne applications. The temperature fluctuated immensely, on some occasions reaching as high as 106.2 deg., and at others being as low as 96.4 deg. The pulse was by no means high in any direct proportion to the temperature. The temperature by no means followed the course ordinarily observed either in rheumatic or typhoid fever. The pain and swelling in the shoulder-joint had departed as that in the wrist-joints came on; and this was diminishing when, on March 1st—that is, six weeks after admission into hospital—pain began to be complained of in the upper part of the left thigh and about the hip-joint; and the swelling and pain so increased, that it appeared evident that an abscess was in process of formation. To this Mr. Pick agreed; and, as the pain and swelling increased, and fluctuation was clearly recognised, it was expected that shortly it would be necessary to interfere by operation. In a short time, however, relief to pain was obtained; the swelling greatly subsided; but the entire left leg was obviously enlarged, and not merely the thigh. The patient improved, and began to get about the ward, and soon wished to go home. From time to time his movements had to be checked, owing to increased pain and swelling, which were produced by standing or walking. On the whole, no serious drawback to convalescence took place; and, when shown to the Society, the only points about his condition worthy of notice were the general enlargement of the entire left leg and thigh (its circumference measuring one inch more than the corresponding part of the opposite limb, both in the thick part of the thigh and at the calf), and a certain degree of hardness in the region of the large vessels under Poupart's ligament, as also some thickening and tenderness of the parts about the left wrist, which prevented free use of the joint. Dr. Ogle pointed out specially that the patient had never sustained injury, had had no suppurating disease or phlebitis, or known disease (as syphilis, gout, or fever) in any organ which could have led to the above affection; and was desirous to learn whether the Society considered that it might have been "spontaneous" in origin. A comparison of dates showed that it was many weeks after the setting in of the disease that any trouble about the thigh began: an occurrence which no doubt indicated that plugging of the veins of the part had come on. Dr. Ogle exhibited a chart of the temperature and pulse, showing that the former often rose as high as above 104 deg., on two occasions almost as high as 106 deg., and on one occasion above that degree, often descending immediately even below the normal. The pulse by no means corresponded in frequency with the height of temperature, at one time being 61 when the temperature was above 105 deg.—Dr. B. YEO remarked that there seemed to be decided plugging of the veins in the affected leg; he thought this had been rather a common affection this past winter.—Mr. B. CARTER gave particulars of the case of a lady who was exhausted from nursing her sick child. She jumped out of bed in the cold, whereupon the catamenia ceased, and the temperature shortly rose to 104 degs. Fahr. Pain and swelling of several joints came on, with copious perspiration, which was not, however, of the ordinary rheumatic character. The attack came to be one of phlebitis of the superficial veins of the right arm, followed, a fortnight afterwards, by a similar condition of those in the left arm. After which the temperature fell to the normal point.—Dr. SOUTHEY said that, in cases of thrombosis, accompanied by high temperature and simulating rheumatism, the symptoms were not always alike. A female patient had thrombosis of one leg, then of the other, then of one arm, and lastly of the other arm. Dr. Southey examined her chest most carefully, thinking there must be something pressing on her vena cava and retarding the current of blood. After a time, a mediastinal tumour was apparent; it turned out to be cancer, of which she died. Dr. Greenhow had also related a case in which thrombosis had occurred during the course of syphilis, first in one leg, then in the other, and then in the inferior cava. Great anasarca of the lower part of the body ensued; of these symptoms she was cured. She then had nodes of both tibiæ and syphilitic iritis.—Dr. GREENHOW remarked that there was no remarkable rise of temperature in that case. Thrombosis might occur from various causes. A lady had thrombosis in the right arm from gout. There was no rise of temperature in either of these two cases. Retardation of the circulation for a time did not always produce plugging of the veins. A lady, with a blue countenance, had consulted him, in whom no disease of the chest, although suspected to be present, was discoverable. However, she had died rather suddenly; and, at the *post mortem* examination, a cancerous tumour was found in the mediastinum, pressing on the vena cava superior. But, in that case, there was no thrombosis.—The PRESIDENT had seen several cases of thrombosis both this and last winter. One case was that of a gentleman of the medical profession, who had thrombosis of one leg, of which he recovered; then of the other, from which he also got well. He next had great pain in the head, apparently without a cause, followed by weakness of the left arm and leg; but eventually recovered. Having known his case, the President thought the latter symptoms might be due to thrombosis of some vein or veins about the brain. The pulsations of that patient's heart were so feeble as to be inaudible, except when the doctor's head was placed sideways on the bed, and the patient's body lowered from above, so that the front of the thorax rested upon the doctor's exposed ear.

The Communicability of Consumption from Husband to Wife.—Dr. H. WEBER read cases illustrative of this point. He had tested the question in his practice during more than twenty years, his attention having been first directed to it by some striking cases. He had the history of the results of twenty-nine marriages between women with more or less marked signs of consumption, who married healthy men, and of fifty-one marriages of tainted men who married healthy women. While only one of the husbands of the twenty-nine diseased wives became consumptive, eighteen of the fifty-one healthy women married to diseased husbands died from consumption. The eighteen women were the wives of nine husbands, one of whom lost four wives, one three, four two and three one each. Dr. H. Weber gave an abstract of the histories of these nine husbands and eighteen wives, and then discussed the following points. 1. The communicability of consumption from husband to wife he did not regard as established, but as rendered probable; he could scarcely consider the results of his experience as merely accidental, although the risk of communication was probably not quite so great as it would appear from his cases. 2. The means of communication between husband and wife seemed to exist only rarely in the inhalation of the breath, though he did not regard this as impossible, but more frequently in the seminal fluid, either by direct absorption of the latter, or indirectly through the fœtus. 3. The suggestion made to him, that possibly the infecting husbands were tainted with syphilis, was not supported by the examination of the facts, either those relating to the husbands or those relating to the wives, including the *post mortem* appearances. 4. The rapid course of the disease in the wives manifested more or less the character of galloping consumption, while the affections of the originally diseased husbands were in all cases chronic and quiescent, but well-marked, and leading in all cases but one to a fatal termination, though long after the deaths of the wives.—The discussion of this paper was adjourned to the following meeting.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 23RD, 1874.

THE COMPARATIVE STUDY OF DRUNKENNESS.

II.

IN concluding our remarks on this subject last week, we commented on the influence of drunkenness in causing "reduction". The principle is also exemplified even in dreams, in which plainly there is what is practically a normal reduction to a more automatic condition of mind. It has long been said that people are more immoral in their dreams than in their waking hours. This is in effect saying that the lower faculties are then in play, because uncontrolled by the higher, But it has also been said that a person may judge of his natural disposition, of his propensities, by his dreams. The dreams of a very sensual man will be representations of coarse scenes, such as those in which he would take a part when awake, if unhindered by social restraints, his own higher feelings, or by a fear of the results of self-indulgence.

We may further illustrate this principle by a slight case. When a reduction comes to a child's brain, it comes to a brain in which the highest processes are undeveloped, the lower being comparatively well developed. The following quotation from Spencer's *Psychology*, vol. ii, shows the principle fairly, there being in the instances he adduces only a slight interference with the genesis of what may be called metaphorically nervous fluid. "The highest co-ordinating plexuses being in them the least developed, children betray more quickly than adults any defective action of these plexuses; and they habitually do this when the general nervous pressure is below par. Sluggishness of the alimentary canal, implying partial failure of nutrition and decreased genesis of energy, is accompanied by a display of the lower impulses uncontrolled by the higher." In general harmony with these statements, and with the principle we are at present enunciating, is the experience of our highest English authority on children's diseases (Dr. West), that children are more subject to moral than to intellectual aberration. And we presume that insanity occurring in those whose intellectual and emotional development never reaches a high degree, who in a sense remain children all their lives, will partake more of moral than of intellectual aberration.

In the above principle—viz., that the mental automatism varies according as the brain varies "to which the reduction comes"—is contained, we believe, the principle of hereditariness of insanity. What is transmitted is not any disease, but a brain easily reduced by morbid processes varying infinitely in kind, from such as cerebral tumour to such as great strain of mind or prolonged over-excitement of feelings.

Here let us recapitulate. We see that by drink, by epileptic discharges, and by other means, a patient is reduced to a more automatic condition of mind. The mental automatism will vary, not only according to the "depth" of the reduction, but according to the normal peculiarities of the person to whose brain the reduction comes. Hence there will be complex differences. No two patients' mental automatism can be quite alike. In the first place, they would be reduced to different depths, as we have illustrated by three arbitrary degrees of reduction by epileptic discharges; and, even if we could show that two patients were reduced to the same depth, their personal differences of mind and temper would assert themselves; the irascible man, when "reduced", would swear and strike; the sentimental man would show a weak silliness. We have made this recapitulation in order more conveniently to introduce a third complicating factor—the element of *suddenness* of reduction. We regret that we can only allude to this most important factor, and especially that we cannot find space to consider the influence of suddenness as an element in the gravity of various kinds of nervous lesions. It is the custom to over-estimate the effects of *extent* of damage to nervous centres, and to under-estimate the effects of the suddenness with which that damage occurs. We are obliged to take note of this latter element, in order to make clear the nature of the resemblances of certain kinds of chronic insanity to the acute conditions already considered. In chronic insanity, there is reduction to a more automatic condition of mind, as there is in the acute and temporary insanity after epileptic attacks. But in the former the process of reduction is a very slow one, and it may be a very gradual change indeed; in the latter, it is exceedingly rapid. Next to the influence of the two factors, the depth of reduction and the natural disposition, the suddenness with which the reduction is effected is the most important factor for consideration in accounting for the degree of violence of the mental automatism of some patients after their epileptic fits. The effects of sudden reduction are well exemplified by the effect of large doses of alcohol. "When," says Macnish, "a large quantity of intoxicating fluid has been suddenly taken into the stomach, the usual precursory symptoms of drunkenness do not appear. An instantaneous stupefaction ensues, and the person is at once knocked down."

There is yet another factor in the causation of the mental automatism of persons who are "reduced", of which we can only speak in merest outline. Let us state it from a very common case. A dream is often excited or influenced by some local and peripheral physical state. For example, a slight sore-throat makes the sufferer suppose in his dream that he has a spoon in his throat. Numberless such illustrations could be given. We may refer to the results of artificial experiments of M. Maury, or rather on him, when asleep. "His neck was slightly pinched. He dreamed that a blister was applied; and then there arose the recollection of a physician who treated him in youth." (*Medical Critic and Psychological Journal*, April 1862.) Here may be mentioned a qualification of the statement that obscene dreams partly show the character of the dreamer. They may result from, or be developed by, certain excentric irritations and physiological processes.

Starting from the facts of so simple or rather so common a condition of brain as that in dreams, we submit the generalisation that an external impression, acting on a person who is reduced, developes subjective states of mind, which, *because he is reduced* (because, in other words, he has lost his most special, or, as we have said, highest faculties), cannot be corrected by objective states. Dreaming is a physiological insanity; and insanity, says Comte, "is definable as that state of mind in which subjective impressions are stronger than objective judgments". Dreaming, however, is so common, that it is difficult to give weight to it as an illustration. Let us take a case in which the reducing agent was morbid. An eminent member of our profession took belladonna by mistake, and became delirious. According to our hypothesis, he was "reduced". In this state, external impressions produced elaborate subjective states very like those in dreams; for example, bromide of potassium given him made him suppose that he was drinking a mineral water. The ludicrous mistakes of drunken persons are probably misinterpretations of the same order. Slight external impressions rouse elaborate subjective states which cannot be corrected. A man lying drunk in a pigstye objects to being disturbed by the snouts of the pigs, but shows the delusion under which he is labouring by remonstrating in the words "Don't tuck me in". It is difficult to give illustrations showing that the doings of a person reduced by an epileptic discharge are modified by external circumstances. Probably their accusations of being struck by attendants are founded on dreamlike states developed by hurts received in falling. If we take the chronically insane, we can best trace the influence of local bodily states. Thus what are called subjective sensations of smell may make an insane man believe that poison is put in his food. What in a sane person would be merely a noise in the ear, perhaps provoked by coarse disease of the auditory apparatus, may make an insane person "hear voices". In these instances, there are practically external impressions. Many of the so-called hallucinations of delirium tremens are probably illusions. It is a striking peculiarity of the delirium of this disease, that the patients most often see little animals, as rats, mice, and snakes. Helmholtz's speculation is, that such spectres can be developed by intraocular muscæ. These, in healthy persons, are projected externally, and recognised as sparks, black dots, etc.; but, in persons who are "reduced", they give rise to the spectres of rats, mice, snakes, or lice. It is probable that abnormal visceral states give rise in the insane, not merely to general hypochondriacal depression, but to belief in the existence of local organic disease, and even to such notions as that the patient has the devil in his belly. Of course we do not say that there are no hallucinations properly so called. Whether we have to do with illusions or hallucinations, we should study the relations of particular hallucinations to the degree of mental reduction. Before we can do this methodically, we must classify the senses in their order, from the most objective, impersonal, and intellectual, to the most subjective, personal, and animal. It is a very significant fact, that visual hallucinations are commoner than auditory hallucinations, and occur more often in acute cases of insanity. The significance is, that hallucinations are most commonly referred to the more intellectual of the two most intellectual senses. Sight is that sense of which the impressions are most revivable in healthy mental operations, and of ideas derived from which dreams are chiefly made up. We rarely dream of sounds, unless some external sound develope the dream.

The consideration of the several factors we have mentioned in the causation of mental automatism supplies, we conceive, a basis for the scientific classification of insanity. On this point, and on the equally important empirical classifications, we may have to speak shortly.

CRIMINAL LUNATICS: BROADMOOR AND DUNDRUM.

The English criminal lunatic asylum at Broadmoor, and the Irish criminal asylum at Dundrum, formed the subject of an interesting debate in the House of Commons last week. It is now two years since Mr. Mitchell Henry drew the attention of the House to the inadequacy of the payment given to the staff of the criminal lunatic asylum for Ireland. On that occasion, he drew a contrast between the salaries and wages allowed in Broadmoor and in Dundrum for the performance of the same class of duties—duties, by the way, attended with considerable danger, involving great responsibility, and necessitating constant association with some of the worst specimens of humanity. That Mr. M. Henry made out a case which was unanswerable, was evident from the facts he then submitted for the consideration of the Government. It is unnecessary to quote his figures; but any one acquainted with the management of asylums is aware that, upon the mode in which the attendants, male and female, perform their duties, depends the character of the institution, the success of the medical treatment, and the comfort and well-being of the inmates. The hon. member for Galway asked upon what principles of justice or fair play the Irish male attendants could be expected to be satisfied with a minimum pay of £18 a year, rising to a maximum of £25, when the same class in Broadmoor received a minimum of £45, rising to £70, the same differential scale applying to the female attendants and to the staff of officers. This statement, however, would appear to be inaccurate, since the pay of the head attendant at Dundrum is stated in the printed estimates to be £40, besides which, that officer is supplied with board, which is not the case with the chief attendant at Broadmoor. The Government promised that the question should receive consideration. If it received consideration, the reflections of the executive bore no fruit. The staff at Dundrum continued dissatisfied—trained attendants resigned one after another, some went to America, some into the police, some into private service—all left with the avowed motive of improving their position. The constant changes in the staff were felt to be most inconvenient, and the difficulties of administration and management were thereby much enhanced. At length, in December of last year, the departmental commission appointed by the late Government visited Dundrum Asylum, and, after a searching investigation into the duties of the various officers and servants, recommended an improved scale of salaries and wages, which, we believe, was satisfactory to the staff, although it was very far from fulfilling the dream of Irish civil servants—viz., equalisation with their English brethren. It was, however, accepted as a vast improvement upon the former scale of remuneration; and, if carried into effect, would, we are assured, have arrested the constant tide of change in the staff, and have enabled the medical superintendent to secure a much superior class of applicants for vacancies that might occur. The Commission, however, acting on the principle laid down by the late Chancellor of the Exchequer, reaffirmed by the late Prime Minister, and accepted by Mr. Plunket on behalf of the Irish civil servants generally, recommended that certain offices, which were attended with very trivial duties, should, at the same time, be abolished, or combined with others. This proposal to increase the pay of the working staff, and to dispense with unnecessary officers, has not, we believe, proved acceptable to the Irish Government; and, as the Treasury adheres to the recommendations of the Commission, the matter is still under consideration.

In Committee of Supply, last week, Mr. M. Henry again raised the question, by moving the reduction of the vote for Broadmoor by a sum sufficient to bring down the expenditure at that asylum to the same level as the expenditure at Dundrum. We may here remark that the cost per head at Broadmoor is £59 odd, the cost per head at Dundrum being £42 odd (calculated on the votes for 1873-4). The cause, however, of the difference in cost between the two asylums, is the larger staff of better paid attendants at Broadmoor; but it has been found practically impossible to obtain good service for less pay whilst the number of attendants, which is in the proportion of 1 to 5.5 patients (2 to 11), is found to be only barely enough to do the work required. In addition to this, the vote for Broadmoor includes some votes for fuel and furniture, which, when the two estimates are adjusted, brings the difference between the two asylums to about £14.

We cannot but think that Mr. M. Henry adopted a very circuitous, and somewhat questionable, method for the accomplishment of the object he had in view; but it will probably succeed in securing for the staff at Dundrum that increase in their pay and position which, upon the barest principles of common justice, has been too long denied to them. Unquestionably, the staff at Broadmoor is not overpaid, although, in some departments, it may be overmanned. This last point seems to have attracted the notice of Mr. Floyer, who, in the course of his remarks, was led to the verge of a joke, and missed a rare opportunity for establishing his reputation as a wit. He complained that the clerks and storekeepers at Broadmoor were too numerous, and he presumed "the stores were not more dangerous than the stores in an ordinary asylum". Why did he not go one step farther, and ask whether the *genius loci* so far prevailed at Broadmoor as to make the figures refractory and the stores insubordinate? One's imagination presents the picture of two clerks steadying and controlling a column of figures, while a third takes advantage of such temporary restraint to tot them up.

Mr. Walter's speech was well deserving of attention, inasmuch as he drew attention to the peculiar difficulty of managing criminal lunatics; and he recognised a practical distinction to be made in the treatment of the two very distinct classes that find their way into Broadmoor and Dundrum. In different terms, he pointed out that the inmates of a criminal lunatic asylum may be divided into two classes. The first, and by far the more numerous, comprises those unfortunate persons who, in their various callings, have acquitted themselves blamelessly of their duties up to the period when they have become insane; then, under the influence of delusion, and perhaps not watched by those around them, or under a sudden impulse, they commit a crime. The important point to be observed is the sequence of events: first insanity, then crime, the crime being as clearly traceable to the insanity as effect is to cause. The second class comprises persons whose histories are widely different. It is made up of those who for many years have been habitual criminals, have frequently been the inmates of gaols, whose lives have always been antagonistic to the laws that govern and restrain the rest of mankind. While in prison, these persons are difficult to manage, suspicious of those placed over them, impatient of discipline, insubordinate, and destructive. Sooner or later they are certified to be insane, and they are sent to the criminal lunatic asylum. This constitutes the truly dangerous class in Broadmoor and Dundrum—a class to all appearance congenitally deficient in conscience, reckless of consequences, the opprobrium of prison officials, undeterred by fear, uninfluenced by kindness, untaught by experience, and with the potential capacity for every outrage. This class forms a large proportion of the inmates at Broadmoor, and requires a larger staff of attendants to prevent mischief than would be the case if the two classes were separated. At Dundrum, they admit as few lunatic convicts, and send back to prison as many as they conveniently can.

The question of the separation of the two classes of criminals—those who were lunatics before they rendered themselves amenable to punishment, and those who have become insane since their conviction—is one which requires consideration, and to which we shall take an early opportunity of recurring.

EXPERIMENTS ON THE HUMAN SUBJECT.

An American physician has recently (*American Journal of the Medical Sciences*, April 1874) gone a step beyond Dr. Ferrier, and in a direction in which Dr. Ferrier is never likely to follow him. He says that "nothing has hitherto been done to subject the human brain to a course of experiment in order to determine the nature of its functions"; and presents us with certain researches, after the manner of Hitzig and Ferrier, on the cerebrum of a woman. The heading of the case he reports is, "Epithelioma of the Scalp of Thirteen Months' duration: Exposure of the Dura Mater: Experiments on the Functions of the Posterior Lobes." He gives us the results of observations on excitation by galvanic and faradic currents. Irritation of the dura mater did not cause pain. Faradic excitation of the exposed dura mater on one side of the head was followed by muscular action on the opposite side of the body. "The arm was thrown out, the fingers extended, and the leg was projected forward. The muscles of the neck were thrown into action, and the head was strongly deflected to the right." For more reasons than one, we give Observation 3 as it stands in the original.

> *Observation* 3. *To Test Faradic Reaction of the Posterior Lobes.*—Passed an insulated needle into the left posterior lobe, so that the non-insulated portion rested entirely in the substance of the brain; the other insulated needle was placed in contact with the dura mater, within one-fourth of an inch of the first. When the circuit was closed, muscular contraction of the right upper and lower extremities ensued, as in the preceding observations. Faint but visible contraction of the left orbicularis palpebrarum, and dilatation of the pupils, also ensued. Mary complained of a very strong and unpleasant feeling of tingling in both right extremities, especially in the right arm, which she seized with the opposite hand and rubbed vigorously. Notwithstanding the very evident pain from which she suffered, she smiled as if much amused. The needle was now withdrawn from the left lobe and passed in the same way into the substance of the right. When the current passed, precisely the same phenomena ensued in the left extremities and in the right orbicularis palpebrarum and pupils. When the needle entered the brain-substance, she complained of acute pain in the neck. In order to develope more decided reactions, the strength of the current was increased by drawing out the wooden cylinder one inch. When communication was made with the needles, her countenance exhibited great distress, and she began to cry. Very soon the left hand was extended, as if in the act of taking hold of some object in front of her; the arm presently was agitated with clonic spasms; her eyes became fixed, with pupils widely dilated; lips were blue, and she frothed at the mouth; her breathing became stertorous; she lost consciousness, and was violently convulsed on the left side. The convulsion lasted five minutes, and was succeeded by coma. She returned to consciousness in twenty minutes from the beginning of the attack, and complained of some weakness and vertigo.

It will be observed that the general results of this experiment accord with those obtained by Dr. Ferrier in his experiments on animals; Dr. Ferrier's observations are, however, far more delicate and more precise. Two days after a repetition of the last described experiment, but with a current too slight to produce a convulsion, the poor woman was found to be weak of the right side: there was, indeed, partial hemiplegia. She had been brought down into the electrical room for another experiment, but the experimenter considered her too ill for it. She had, without experiencing irritation, a fit of partial convulsion, starting in the right arm.

> As she sat in the chair answering my questions, I observed rhythmical movements of alternate contraction and relaxation of the muscles of the right arm. These soon extended to the shoulder and neck, so that the head moved synchronously with the arm. She became very pale, her eyes closed, and she was about to pass into unconsciousness, when we placed her in the recumbent posture, and Dr. Steeley gave her, at my request, chloroform by inhalation. The movements soon ceased.

This is called the fifth observation. Now for the sixth and last.

> The day after observation 5 was made, Mary was decidedly worse: she remained in bed, was stupid, and incoherent. In the evening she had a convulsive seizure, lasting about five minutes, confined to the right side. After this attack she lapsed into profound unconsciousness, and was found to be completely paralysed on the right side. This paralysis involved both motion and sensation, for no movements of any kind could be excited by strong irritation of the skin of the paralysed side. There was convergent strabismus, and the pupils were dilated and motionless.
>
> At the necropsy, there was found a thick layer of greenish yellow pus over the whole of the left hemisphere, and an intense degree of vascularity over the whole brain.

As the results of his examination, the author concludes that "The convolutions subjected to electric irritation are anatomically most intimately connected with the commissural fibres of the posterior and middle lobes of the hemispheres and with the posterior portion of the optic thalami. (Luys, *Recherches sur le Système Nerveux Cérébro-Spinal, etc.*, p. 175; and *Atlas de Planches*, pl. xxii, xxiii, xxiv, and xxv.")

We must conclude our account by letting the author tell, in his own words, what he considers the cause of death to be in this case.

> Although it is obvious that even fine needles cannot be introduced into the cerebral substance of man without doing mischief, yet the fatal result in this case must be attributed to the extension of the epitheliomatous ulceration to the sinus, and the formation of a thrombus, and to the inflammation of the arachnoid, set up through the invasion of the dura mater by the epithelioma at its point of greatest depth—the centre of the ulcer.

Our readers may ask, "Is nothing to be said from quite another point of view which is not physiological?" Nothing at present: we have special reasons for our silence.

THE NAVAL MEDICAL SERVICE.

Among the causes of dissatisfaction of the naval medical department, none, perhaps, has had a more dispiriting effect than the manner in which its officers were treated under the retirement-scheme of Mr. Childers in 1870. The avowed objects of that scheme were to reward officers of good service whose chances of promotion were remote, and to establish a steady flow of promotion by inducing older officers to resign the active list on the inducement of an increased retired-pay. This principle was liberally carried out towards all but medical officers, forgetful of the justice, as far as concerned them, that retired-pay should bear relation to the full-pay with which active employment is requited, and to the half-pay which is given as a reward for past services, and to retain those services for the future. Thus, when the said scheme provided a retirement-pay for many kinds of officers, very superior to the half-pay which they received when unemployed, offering them great inducements to resign active service, the inspectorial officers were restricted to the same scale of pay when unemployed and when in retirement. Consequently, the action of optional retirement was precluded for them, to the manifest disadvantage of their juniors, by checking their promotion; it being evident that the compulsory retirement of this class of officers, who had gained their position by selection on account of meritorious services, or of superior professional standing, at any age junior to that of compulsory retirement of the same ranks in the army, especially as the emoluments of office are considerably less, would present such a disparity between the sister services as to prevent young men of the most moderate professional standing from entering the navy. Taking, for instance, the deputy inspectors-general ranking with captains, the scheme provided that the latter should retire on their full-pay at fifty-five years of age, while the medical officer of the same rank, aged sixty, was allowed merely his half-pay on retirement. So, again, the staff-surgeons, ranking with commanders, found that the latter would retire on their full-pay at fifty, while themselves, retiring at fifty-five, did so by sacrificing £147 *per annum* of their full-pay. And the same scheme deprived them of optional retirement after twenty years' full-pay service, or at about forty-five years of age, compelling them to remain until fifty-five on the active list.

The existing rules have worked much evil, and we are sure that others must be substituted for them. Naval medical officers cling to the right of optional retirement after twenty years' service, and ask for the half-pay earned by that length of service; and the scale of retirement beyond that period must be modified in accordance with the principles acted on for other officers with whom staff-surgeons are ranked—viz., so that they may be capable of retiring on their full-pay within the age prescribed for compulsory retirement.

As it is certain that no department can exist in an efficient state if deprived of its objects of ambition and higher rewards, so we consider it necessary that the scale of retired-pay of the inspectorial grades should be advanced to induce more frequent optional retirements from them without compulsory retirement at any age earlier than that in use in the army, unless it be deemed desirable by men in authority to place the Royal Navy entirely beyond the pale, as far as concerns young members of our profession, of moderately high attainments and reputation.

Disappointment must result from the policy pursued by the Admiralty, as young men of the present day are keenly alive to the prospects of their distant future; and the demands for their services by the mercantile steam marine, by foreign railway works, and other enterprises offering good salaries, with freedom from the restraints of a royal service, are such as to render naval life a *pis aller*, attractive only to students who are actuated by a desire to visit distant countries.

THE PUBLIC HEALTH (IRELAND) BILL.

THIS Bill has been printed; and we are afraid that, unless it be much modified before passing into law, it will do for Ireland what the unfortunate English Act of 1872 has done for England. In the main, the Bill may be said to be for the extension to Ireland of all such provisions of the English Act as are applicable to that country. The defects of the Bill are, in nearly every respect, the same as those in the English Act. We scarcely think that the Government will venture to impose upon Ireland a law which has so signally failed in England, and which has been declared by all authorities upon the question to be, if possible, less suitable for Ireland.

In the first place, the Bill creates, by section 3, no fewer than 120 urban districts, each district with its town authority as the sanitary authority. Now, of these 120 urban districts, more than 100 have populations of less than 10,000 inhabitants. Even if there be a necessity for urban sanitary districts and authorities, surely there can be no reason why such a number of little towns and villages, each with its little petty authority, should be constituted urban districts when each must be situated in a respectably sized rural sanitary district. The authors of the Bill, indeed, seem to have some idea of the absurdity of such a proceeding, for clause 5 provides for the abolition and rooting out of the various little districts established by clause 3. This, however, must be done by provisional order of the Local Government Board after petition from the inhabitants, and the order must be confirmed by Parliament. Thus, in order to undo the mischief which will be caused by clause 3, one hundred petitions from inhabitants, one hundred inquiries and one hundred provisional orders must be made under section 5. Can anything be more absurd than such legislation? Why not leave out urban districts and authorities altogether, and only constitute them by provisional order, when deemed necessary. The Bill will really constitute two sanitary authorities in each urban district—one for the cure, the other for the prevention, of disease. The former will, as heretofore, remain in the hands of the Poor-law guardians, but the town authority will be charged with the latter duty; and, as if this confusion were not sufficient, it is provided in clause 8 that, where the Diseases Prevention Act is in force, the administration of that Act will rest with the Poor-law guardians. Thus, in a large town, it will be the duty of the town authority to make all provisions necessary for providing against the spread of epidemics; but, the moment an epidemic does appear, all these duties are to be discharged by another authority, who, until then, had not even the power to make suitable arrangements. The result, of course, will be confusion at the time, above all others, when all sanitary machinery should work smoothly and quickly. This is the result of having urban authorities. Why lawyers think urban authorities a *necessity*, we must say we are at a loss to see.

Under the Bill, the central authority does not seem to have sufficient power for the alteration and union of districts. The central authority should be able, of its own motion, to issue a provisional order without waiting for the petitions of the inhabitants. The inhabitants will rarely (if ever in Ireland) petition, and the little sanitary authorities themselves will be too proud of their small local power to ask the central authority to diminish it. We feel certain that the result will be that very few, if any, conjoint districts will ever be formed, a state of things much to be regretted, especially in Ireland, with its rural population scattered over large areas.

There is no provision whatever in the Bill for professional supervision by the central authority. The Irish Local Government Board has no medical department as the English Board has; and no power is taken in the Bill, either for the creation of such a department, or for the appointment of medical inspectors. Are we to have the old story over again of half-pay officers and gentlemen of that class supervising matters purely medical?

Clause 10 provides that "every medical officer of a dispensary district shall be a sanitary officer for such district". The section, we are happy to see, provides for the payment of this officer for his additional services, and does not leave the fixing of the salary to the local authority. But what is a sanitary officer? Is he to be an inspector of nuisances or ash-pit cleanser? Surely not; he must be medical officer of health or nothing. The same clause provides for the appointment of other sanitary officers; among others, "superintendent officer of health". There is no provision that these are to be medical men. These are to be appointed in such districts as the Local Government Board may direct. Now, if the Local Government Board had only the power to form the districts, these officers might probably answer the purposes of the rural district medical officer of health, as proposed in Dr. Grimshaw's recent pamphlet. We cannot commend too highly the establishment of the principle that each dispensary medical officer is to be the health-officer of his district, and that he is to have proper remuneration for his services. This provision did not exist to the draft of the Bill proposed by the late Government. The provisions for the formation of united districts is excellent, if only the Local Goverment Board had the power to issue the provisional order of its own motion. This must add but little to the real power of the central authority, and certainly affords the only means of framing proper areas for sanitary administration.

THE HOSPITAL FOR WOMEN, SOHO SQUARE.

IN compliance with a pressing request from Lord Cholmondeley, we give insertion to the following remarks in reply to the pamphlet of the retiring members of the medical staff of this hospital. Although consenting to make this sacrifice of space, we consider the matter practically closed. The committee say:

Although unwilling to prolong the disputes which have unhappily arisen between a part of the medical staff and the general committee, yet, as the above-named pamphlet has been largely circulated amongst the subscribers and supporters of the hospital, the committee feel called upon in their own defence to make a few remarks in reply to some of the statements which, uncontradicted, are calculated to produce an erroneous impression.

The representations respecting the nursing question contained in the first two pages of the pamphlet would, doubtless, lead the reader to suppose that complaints had often been brought to the notice of the general committee by the medical officers, and that such complaints had been disregarded.

The minutes, both of the medical staff and of the general committee, for a period of five years have been searched, and searched in vain, for any such communications (with one exception) on this all-important subject, until Mr. Heath's letter of the 27th of November last.

The exception referred to was the following medical report received by the general committee on the 2nd of February, 1870: "The medical committee have been for a long time very much dissatisfied with the nursing department of the hospital, there being only a few good nurses, the greater part being not only inefficient, but also neglectful. This is caused partly by the low rate of wages given, which can never secure the services of superior nurses, and partly by the very inadequate means provided for their accommodation, rendering them uncomfortable, and consequently discontented. The latter evil is by far the greater, as if comfortable quarters were provided it would always be easy to get good nurses. The committee are making inquiries with the view of organising a scheme for the efficient nursing of the whole hospital, but they cannot proceed in the matter until some definite arrangement is made for the reception of nurses. The medical committee consider this question a very important one, as they deem it right on the score of health, and therefore of efficiency, that those who work hard all day long in the wards should have sleeping rooms with a sufficient supply of fresh air, as much quiet as possible, and no crowding."

In this report, the medical committee also recommend the following remedy, namely, "to take the adjoining house in Bateman's Buildings, make a door of communication to it through the out-patients' room, and fit it up as a dormitory for nurses. It has eight or ten available rooms."

It will be observed that in this statement the cause of the inefficiency of the nurses was principally attributed to the low rate of wages, and to the inadequate means provided for their accommodation and comfort in the hospital.

The desire of the committee to amend these evils is seen in a resolution at once passed with a view of carrying out the recommendation of the medical officers, as regarded the purchase of the adjoining house for the purpose of supplying additional bedrooms for the nurses. This was accomplished, although some time elapsed before this resolution could be effected, owing to certain obstacles in the way of making the purchase, and of getting rid of the tenant.

As regards the question of increased wages, a scale for the future was recommended by the medical officers on the 30th April, 1870, and was at once adopted at the next meeting of committee. From that period until the 27th November last, no fresh communication as respects defective nursing was made to the general committee.

The letter, referred to in page 8 of the pamphlet, was received from Mr. Heath, on the 5th of December, enclosing a communication from Dr. Gairdner, the house-physician (then on the point of leaving his situation), with regard to the defective state of the nursing department. The allegations in that letter were inquired into at some length by the committee, and the matron, the head-nurse, and an under-nurse were examined respecting the various charges. Some of them appeared to the committee to be incorrect, and several to be only partially proved. Dr. Gairdner appeared before the committee, and was questioned by them with regard to certain complaints of a general kind made by him in his letter, but that gentleman declined to furnish the committee with specific instances of such complaints.

The committee would remark that the expression in their letter in page 10 of the pamphlet regarding the matron—viz., that the charges "do not in the least weaken their confidence in her"—referred to *ex parte* evidence given to the medical officers by one of the nurses respecting the matron, which evidence was totally irrespective of the nursing question, and the committee considered that such an investigation was beyond the province of the medical staff, and ought to have been referred to them.

In forwarding the resolution (referred to at page 11) to the medical staff, the committee regret an omission which was calculated to cause a misunderstanding. Owing to the neglect of the clerk, temporarily employed on the occasion of the sudden death of the secretary (Mr. Hay), the first part only of the resolution was sent to the medical officers. The omitted portion was as follows: "That upon receipt of the specific charges from the medical staff the following members do investigate the matter with the assistance, if deemed expedient, of one of the medical staff, and, if necessary, do form themselves into a subcommittee for that purpose—namely, Sir R. Alcock, Dudley H. Ryder, Esq., J. Watson, Esq., and Major Dundas."

In closing their remarks on the nursing question, the committee consider that they have been unjustly dealt with in the pamphlet, which appears to charge them with having neglected the interests of the hospital, as regards its internal management.

If the statements in the pamphlet are correct; if cases of severe internal inflammation were directly traced to gross neglect in the nursing; if the whole hospital became unhealthy from dirt and mismanagement; if loud complaints of neglect were made by the patients; if all these things were known to the medical staff, the committee would ask—why were they so long kept in ignorance of these serious defects, and why was no communication made to them on the subject until the letter of Dr. Gairdner was forwarded to them only at the end of last November?

In conclusion, the committee would emphatically deny the correctness of the assertion that they have treated the staff with discourtesy or want of consideration. Their wish has ever been to work harmoniously with them for the benefit of the hospital and for the welfare of the patients committed to their charge.

WE are glad to learn that Prince Leopold is going on quite well.

THE President and Fellows of the Royal Medical and Chirurgical Society have issued invitations for a *soirée* on Tuesday, June 9th.

THE Mayor of Hastings has convened a public meeting at the Town Hall on Tuesday next, for the purpose of taking into consideration the establishing of a provident dispensary.

THE customary notices relating to the vacancies in the Council of the Royal College of Surgeons will, we believe, be issued on the 29th instant. Nomination-papers of new candidates must be forwarded within ten days from that date.

THE Council of the Pathological Society of London propose, if they obtain sufficient promises of support, to re-issue those volumes of the Society's *Transactions* which are out of print. These are at present Vols. I, Part 2; II; III, Part 1; VI; VIII; IX; and XIII. A limited number of the remaining volumes are still in stock, and can be obtained at the original prices. It is intended to commence by reprinting Vol. I, Part 2, and Vol. II; and the Council are prepared to receive subscriptions for these two volumes at 5s. a copy for Vol. I, Part 2, and 7s. 6d. for Vol. II. The prices will be considerably raised to non-subscribers. Subscribers' names will be received by Mr. B. R. Wheatley at 53, Berners Street.

THE OUTBREAK OF TYPHOID IN LORD CADOGAN'S FAMILY.

MUCH sympathy is felt in London society at the outbreak of typhoid fever in Lord Cadogan's family, and the circumstances are not without an important public lesson. The conditions under which it occurred resemble in a remarkable degree those which gave rise to the outbreak of typhoid fever among the visitors at Londesborough Lodge, of whom the Prince of Wales was one of the sufferers. There are six children in the family; and they had been for a few weeks in occupation of Lord Elcho's town house, 23, St. James's Place, when three of them were seized with typhoid fever within a few days of each other. Lord Chelsea, who had a severe attack, is progressing favourably, although still very weak. The other children are doing well. Tracing the cause of the outbreak, it appears that the house has the characteristic sanitary defects of many of our town and country houses. The closets, situated in the centre of the house, open on the bedroom landings; the soil-pipes are not ventilated; and, as there are sometimes downward currents through the ventilating shafts of the closets, sewer-air easily finds its way into the house. The waste-pipes of the water-cisterns pass directly into the soil-pipes. The lessons of the most impressive events are speedily forgotten; and so it would appear that, in many of the most luxurious mansions of this country, "the teachings of the Prince's illness", which at the time were echoed by a thousand tongues, have passed unheeded.

THE EXAMINERS OF THE COLLEGE OF SURGEONS.

THE natural amiability of a well known medical paper was abused, last week, by a writer who announced that the Council of the College of Surgeons of England had in contemplation arrangements to annul its resolution to appoint distinct examiners for the fellowship in anatomy and physiology and in surgery, and that it was plotting to perpetuate the old system. Our contemporary will be glad to learn that it may confidently disabuse the minds of its readers of the impression that the Council has, "with its habitual regard for its own interests", followed the inculpated course. Nothing has occurred, or is contemplated, which will interfere with the tenour of the resolution in question; a formula of bye-laws to carry it out has, indeed, been framed. There are, however, some legal difficulties in the way of appointing examiners for the conjoint scheme, after the method previously agreed on, and means of surmounting these difficulties are under consideration.

MEDICAL BENEVOLENT COLLEGE.

AMONGST the names on the list for election to the benefits of this institution, are two which will not fail to awake the interest and sympathy of the profession; those of the sons of the late Mr. Baker Brown and of Dr. Webb.

"THE ROLL-CALL."

THE subject of the position of the limbs in the movement of horses is one of very considerable difficulty, about which there has been much discussion amongst men of science as well as artists. The matter has attracted the attention of Mr. A. H. Garrod, the able Curator of the Zoological Society, who has made it the subject of the most accurate investigations by means of graphic instruments. By this method, the actual movement of the animal is defined by compelling it to record them by means of these self-registering instruments. The controversy aroused by Miss Thompson's now celebrated picture of "The Roll-Call" has induced us to refer the question in dispute to Mr. Garrod's skilled arbitration, and we have pleasure in making known his remarks on the subject, which are as follows.

> "The horse in 'The Roll-Call' is 'walking', and not 'ambling'. It is correctly drawn, except in a point too minute to deserve criticism. The right hind foot, instead of being on the point of *leaving* the ground, ought to have just *left* it, because, in the walk, never more than two feet are ever on the ground at the same moment. The general direction of the legs is perfectly correct; and the mistake of comparing it as it stands with an ambling horse depends on the fact that, at the moment at which the painting is taken, the two steps very closely resemble one another. If it had been ambling, the left hind leg would have been off the ground, which it is not."

ST. GEORGE'S HOSPITAL.

IT is much to be regretted that, in closing St. George's Hospital temporarily for repairs, the board have failed to keep their hospital at Wimbledon open. The original cause was, we believe, a misunderstanding about their legal powers to send patients there who are not strictly convalescent. There was, however, it is now found, no ground for any such idea; and it is, we believe, now ascertained that this hospital is a small "St. George's in the Country", and not a mere convalescent asylum. It may be hoped that much more use will be made of it in that direction than has been done in the past.

HYDROPHOBIA.

IN a very able clinical lecture delivered some time since at St. George's Hospital, but recently reprinted in his collected works for private circulation, Mr. Cæsar Hawkins mentions that the late Mr. Youatt told him that a great many persons, in consequence of his peculiar practice, consulted him after they had been bitten by dogs, and that he always used lunar caustic, which he had applied to himself and his servant every time, and, in round numbers, perhaps to 400 others; and that, out of the number, one had died of fright, but none had hydrophobia. The early and complete application of caustic to the part bitten is the one only means which can be relied on. It must, however, be remembered, for the comfort of persons bitten, that a considerable proportion of persons bitten by rabid dogs have escaped any symptoms of the disease, that when the dog bites through clothing the poison is commonly arrested by the clothes, and that many vicious dogs are supposed to be rabid without cause. The symptoms of rabies in the dog have been recently very succinctly stated by Dr. Burdon Sanderson; and the proper and safe course is ruthlessly to exterminate dogs suspected of rabies.

OPIUM EATING IN THE UNITED STATES.

ACCORDING to the *Cincinnati Gazette*, the use of opium, as a stimulant, is becoming pretty general throughout the United States. Women appear to be more addicted to the habit than men, and it prevails to a larger extent among the richer and better educated classes than among the poor. The Custom-house returns show that the quantity of opium imported into the country (reaching now nearly 250,000 lb. annually) is ten times more than it was thirty years ago, and it is the opinion of physicians and druggists that not more than one-third of the quantity is used for medical purposes.

INFANT LIFE PROTECTION ACT.

THE Metropolitan Board of Works admit, as the *Local Government Chronicle* points out, their failure to secure a compliance with the provisions of the Infant Life Protection Act, and attribute their failure to the defective provisions of the Act itself. It was intended that all houses where infants are taken in should be placed under proper registration and inspection, but the actual number registered has been only ten, and the number to which registration has been refused only five. These figures, it is stated, "must represent only a small portion of those who receive infants for hire in the metropolis"; and, certainly, this statement must be safely within the mark. The efforts which have been made to enforce the Act have not been very costly; for out of a total expenditure by the Metropolitan Board of Works of nearly two millions and a half sterling, Infant Life Protection is only debited with £36 12s. 6d.

ALLEGED FREAKS OF MEDICAL STUDENTS.

ON the 12th instant, a report appeared in the daily journals of the appearance at Bow Street of some persons charged with rioting in a public-house in Tottenham Court Road, who were described as medical students. On making due inquiries, we are happy to find that the description was a mistaken one; no persons of the names given in the police reports having been registered as medical students by the proper authorities.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

THE annual meeting was held on May 15th. The report showed that the Society was in a flourishing condition, there being at present 159 members. The following gentlemen were elected office-bearers for the ensuing year. *President:* Dr. Heaton. *Vice-Presidents:* Mr. Wheelhouse and Dr. Myrtle (Harrogate). *Treasurer:* Dr. Heaton. *Honorary Secretaries:* Mr. A. F. McGill and Dr. Symes (Skipton). *Committee:* Dr. Clifford Allbutt, Mr. E. Atkinson, Dr. Bell (Bradford), Dr. Crichton Browne (Wakefield), Mr. Chaffers (Keighley), Dr. Eddison, Mr. S. Hey, Mr. Jessop, Mr. Leak (Hemsworth), Mr. Nunneley, Mr. Scattergood, and Mr. S. C. Smith (Halifax).

THE DWELLINGS OF THE POOR.

THE reception accorded by the House of Commons to Mr. Kay Shuttleworth's motion, respecting the improvement of the dwellings of the working classes, can scarcely fail to be gratifying to all those who have promoted this movement. In particular, we may congratulate the College of Physicians upon the opportuneness of their memorial, and the attention which it has commanded. Its importance was fully recognised by the Home Secretary, Mr. Cross, who said that no question out of the whole range of those which were likely to come before the House was nearer or dearer to his own heart than that which his hon. friend had brought under discussion. He had ventured to observe some time ago, that the most effectual way to put down drunkenness was to improve the dwellings of the poor. If anything could have brought the question more home to him, it would have been the important deputation which he had received from the Charity Organisation Society, and the memorials presented by that body and by the Royal College of Physicians. In those memorials, the state of the case was very fairly put, and the condition of London was adverted to in terms which were, perhaps, rather within than beyond the bounds of truth. After entering somewhat into detail respecting the difficulties of the subject and the measure of success which private individuals and philanthropic companies have attained, the Home Secretary said that he hoped that the House would be satisfied that it was the earnest desire of the Government, the moment they could settle not only the principles, but the details, of the measure, to carry out the spirit of the motion. The subject was engaging their serious attention, and the moment they could do so they would introduce a measure with the full intention of carrying it, with the view of securing to the people of the metropolis dwellings equal to those in other parts of the country, in which they could grow up, not like slaves, but like free men and women, in the enjoyment of happiness and comfort. After such an encouraging statement as this from a responsible minister, it was wisely determined that Lord Napier and Ettrick's notice of motion should be withdrawn, and that the subject should not be pressed in the House of Lords. We await the issue with hope. It is evident that the matter is ripe for legislation, and we have no doubt the new Ministry will be glad to mark their tenure of office by dealing with a subject which has such a direct bearing upon the welfare of the working classes, and which is so intimately connected with the foundations of our social system.

DR. CHARLTON OF NEWCASTLE-ON-TYNE.

We deeply regret to have to announce the death of Dr. Charlton of Newcastle-on-Tyne, a much esteemed Vice-President of the Association. The high qualities which he displayed as President of the Newcastle meeting must be fresh in the memory of every one who was present. The same qualities had already secured for him a commanding position in the respect and affection of the profession throughout the northern counties, and have since given him great and deserved influence in the councils of the Association, to the affairs of which he devoted much time and attention.

ST. MARYLEBONE GENERAL DISPENSARY.

At a meeting of the Directors, held on May 20th, 1874, at 77, Welbeck Street, it was resolved to convert this institution into a partially provident one; and an energetic subcommittee have been appointed to carry out this desirable arrangement, and to submit their matured scheme to the General Meeting of Governors at an early date.

EDINBURGH UNIVERSITY CLUB.

The quarterly general meeting of this club was held at the St. James's Hall Restaurant on Monday, May 18th, 1874, at half-past 6 P.M. Dr. Percy Boulton and William Carruthers, Esq., F.R.S., were elected as members. The dinner took place at 7 P.M. Professor Gairdner of Glasgow acted as Chairman during the dinner, until the arrival of the Lord Advocate of Scotland. Fifty-six members and guests were present. Amongst the latter were Professor Huxley, Secretary to the Royal Society; Mr. Faed, R.A.; Professor Callender, F.R.S.; and Mr. John Gay, F.R.C.S. After the loyal toasts, the Lord Advocate proposed "Success to the University of Edinburgh and her London Club." He mentioned that the prosperous culture of the University of Edinburgh drafted men from all quarters of the globe; that, although the House of Commons was opposed to the advanced education of women individually, he was not, provided that women were not admitted to the same classes as men. He further argued, that the London University, as an examining and not a teaching body, might possibly solve the present difficulty of women, "who feel that they have a mission"; and thus, by admission of females to degrees, the London might save the Edinburgh University a great deal of trouble, and welcome was she to bear the brunt of the settlement. He advised medical men not to fan the flame of female ambition by too set an opposition.—Professor Huxley and Mr. Faed, R.A., returned thanks on behalf of the visitors.—Professor Gairdner proposed "The Health of the Lord Advocate", who stated that his office, though not uncoveted, was discharged for the love of his country.—Dr. Cobbold, Mr. Harry Leach, Dr. Cock, and Dr. Halley, sang some Scottish airs during the evening; and this successful meeting broke up after the national rendering of "Auld Lang Syne".

THE PHARMACEUTICAL SOCIETY.

The annual dinner of the Pharmaceutical Society took place on Tuesday, May 19th—T. H. Hills, Esq., in the chair—about 2 P.M. About two hundred and seventy members and friends were present. The usual loyal toasts were proposed by the President, after which "The Medical Profession" was proposed by Mr. Bottle, one of the Vice-Presidents, and acknowledged by Mr. de Méric. "The Pharmaceutical Society of Great Britain", coupled with the name of the President, was proposed by Dr. Greenhow. The last toast, "The British Pharmaceutical Conference", was given by Dr. Richardson, and acknowledged by Mr. Schacht of Clifton. The next evening, a brilliant *conversazione* took place at the South Kensington Museum, at which three thousand guests were present. The band of the Royal Horse Guards performed a selection of choice music on both occasions.

MAD DOGS.

Dr. Burdon Sanderson addresses to the *Times* a brief and popular summary of the symptoms of rabies in the dog, which will be of great value to the general reader, and is not without instruction to most medical men. We therefore reproduce it.

During the last few months, an unusual number of dogs have been affected with hydrophobia in the metropolis, as well as in other parts of the United Kingdom. From the circumstance that several cases of the disease have very lately occurred in the practice of the Brown Institution, as well as from information received from other sources, there seems to me to be some reason to fear that it is still rather widely prevalent.

As the danger to the public which arises whenever this is the case, however horrible in itself, is one which can be avoided by the possession of the requisite information, it is clearly desirable, even at the risk of exciting alarm in the minds of a few sensitive persons, that such information should be communicated for the general good. I have, therefore, put down in as plain words as possible what appear to me to be the most useful criteria for the recognition of rabies in the dog. In doing so, I have been assisted by the experienced Veterinary Surgeon of the Brown Institution, Mr. Duguid, and by my friend Mr. Hunting, of Derby Street, Mayfair, who has paid special attention to the disease. I have also the advantage of writing with an actual case under my observation.

Persons are liable to be bitten by mad dogs under two sets of circumstances—first, when a rabid animal escapes from home and is at large; and, secondly, when a dog not supposed to be infected is caressed by its master or those who have to do with it at home. Consequently, it is quite as important that the public should be aware of those slight indications which afford ground for suspicion that the disease is impending, as that they should know the characteristic signs by which it may be recognised when it has declared itself.

The premonitory indications of rabies in a dog are derived almost entirely from the observation of changes in its demeanour; consequently, although they may be too trifling to be noticed by a casual observer, they are fortunately sufficiently striking to arrest the attention of anyone who is about a dog, and is familiar with its habits and individual peculiarities.

A dog about to become rabid loses its natural liveliness. It mopes about as if preoccupied or apprehensive, and seeks to withdraw into dark corners. From the first, there is usually a foreshadowing of that most constant symptom of the disease—depraved appetite. Mad dogs not only devour filth and rubbish of every kind with avidity, but even their own excrement—often immediately after it has been passed. Indications of this tendency appear early, and are more than suspicious.

Along with this peculiarity of behaviour, it is of equal importance to notice that an infected dog, from the first, snaps at other dogs without provocation. This snappishness in most dogs is very striking. If a dog previously known to have no such habit, snap indiscriminately at the first dog it meets in the yard or in the street, it is probably not safe.

So far, I have had in mind chiefly what is to be observed in dogs tied up or at home. A dog which is at large is also to be recognised as in a dangerous state by its demeanour. A healthy dog in its progress along a street or elsewhere shows at every step that its attention is awake to the sights and sounds which it encounters. The rabid dog, on the contrary, goes sullenly and unobservantly forwards, and is not diverted by objects obviously likely to attract it. This statement, however, is subject to the important exception already referred to, that it is excited both by the sight and sound of an animal of its own species.

Of the symptoms which accompany the final stage of the disease, the most important and characteristic are those which relate to the organs in which it localises itself—the mouth and throat. Attention is often drawn to the condition of the mouth in an animal supposed to be healthy, by the observation that it tries to scratch the corners of its mouth, as if attempting to get rid of the ropy mucus which is seen to be discharged from it. In dogs that are tied up, it is noticeable that the bark has entirely lost its ring, and acquires a peculiar hoarseness, which can be recognised by the most unobservant. As the disease progresses the discharge increases, the lower jaw hangs as if paralysed, and the animal has evident difficulty in swallowing. Along with this there is often loss of power of the hind limbs. If now the dog be watched, the peculiarities of behaviour which have been already noticed are seen to present themselves in a much more marked degree than before. It is observed, first, that it is subject to paroxysms of excitement, in which it makes often repeated efforts to bite or gnaw all objects (such as woodwork, straw, etc.) within its reach, while at the same time it continues to exhibit the tendency already mentioned to devour its own excrement; and, secondly, even during the remissions, its excitement is at once renewed by the sight or sound of another dog.

It may be well to note that the disease occurs at all seasons, that the mad dog continues to recognise its master and to manifest pleasure when kindly spoken to, that it does not shun water, and that in many cases from first to last that wild fury which is commonly supposed to belong to the disease is conspicuously absent.

The most effectual means for checking the spread of hydrophobia are —1, to circulate information on the subject; 2, to enforce existing regulations as to licences and as to the destruction of ownerless dogs. It is to be regretted that the wise proposal of Mr. Fleming, that a short description of the disease should be printed on the back of each licence, has not been adopted. The disease originates, whether in man or beast, exclusively by contagion. The carriers of contagion are the ownerless dogs of large towns.

THE ADULTERATION OF FOOD COMMITTEE.

ON Monday last, this committee, which was recently appointed to inquire into the working of the Adulteration Act of 1872, resumed its sittings with a good number of members, though Mr. Brady, who is on the committee, was not present. The first two witnesses examined gave evidence as to the question of tea, pointing out generally that green tea, which undergoes an artificial colouring, must not be considered adulterated, merely because it is "faced"; that the analysts greatly differed in the results at which they arrived after the analysis of tea, and did not seem to be much acquainted with the article; that teas should be examined in bond to see if they were adulterated, and that the Government should not take the duty upon spurious tea as at present, but should stop such tea and not allow it to enter into consumption. This, it was stated, would be striking at the very root of the evil. Mr. Cadbury, of Birmingham, was next examined as to the adulteration of cocoa. He considered that the manner in which the ordinary soluble cocoas are now made is not the best manner possible, and he condemns the use of starch, sago-flour, arrow-root, etc. as unwholesome and indigestible. The cocoa, in his opinion, should be sold pure, unmixed with such ingredients, though he used them himself in order to meet the public demand. He also urged that the proportion of starch used should be stated on a label, as was the case in France. As to the percentage of the different ingredients which enter into the manufacture of soluble cocoa, he mentioned that there are about fifty per cent. of cocoa, twenty per cent. of starch, and thirty per cent. of sugar. He did not think that the percentage of sugar should be stated on the label. Many persons found soluble cocoa indigestible, which he attributed to the starch being uncooked—that was to say, not boiled. In suggesting an amendment of the present Adulteration Act, he proposed that the percentage of starch should be stated, and that nothing but perfectly pure articles should be sold as cocoa. The committee then commenced to hear evidence as to milk. The manager of the Express Country Milk Company gave his opinions about the matter. He was in favour of prohibiting the sale of skimmed milk, if a clause were inserted in the Act by which the honest dealer might be protected against the carelessness of servants. He also mentioned that there was a great difference in the milk of different cows—that was as to the percentage of water it contained. He complained that the analysts knew little about milk, and required more thorough education. The milkmen were desirous of having some certain standard of purity fixed by which they could be guided, but the analysts did not seem to be able to fix upon any such standard. Whatever people might say to the contrary, pure milk could be obtained. It would be advisable to take samples of milk at the railway stations for analysis, and he thought a duly qualified inspector should be appointed for that purpose, so that the source of supply might be kept pure. He thought the retailer should not be punished for selling an article which he had bought as pure, and which he had not subsequently tampered with. He could not deny that the retailers adulterated.

IRELAND.

ROYAL COLLEGE OF SURGEONS OF IRELAND.

THE election for the Council for the ensuing year will take place early next month, and, at present, a considerable amount of excitement is exhibited relative to those who shall be selected for the vacant places. Dr. Martin of Portlaw has announced his intention to come forward, and Mr. McDowell of Mercer's Hospital, we understand, will also be a candidate. It is also rumoured that Mr. Stapleton, lately an examiner in anatomy and surgery, who was displaced by Mr. O'Leary, may seek the votes of the fellows for the office of councillor; and it is not very improbable that Mr. Mason of Mercer's Hospital may also be among the candidates. At present, when it is expected that more names may be added to the above, it is impossible to say who will be successful; but outsiders believe that the school of the College is too largely represented with the present constitution of the Council, and it is thought that newer blood infused among its members would be desirable in more ways than one.

DUBLIN PATHOLOGICAL SOCIETY.

THE subject selected for this year's competition for the Gold Medal of the Society was "On the Diseases of the Articular Cartilages". Two gentlemen only competed; and Mr. Kendall M. Franks, B.A., has been declared entitled to the medal. The essay of the other, Mr. George Forsythe, was, however, so creditable, that he was awarded a Silver Medal.

SANITARY STATE OF DUBLIN.

WE regret that last week, in making extracts from a quarterly report of the Dublin Public Health Committee (we believe the first), we were led astray by the incorrect figures given in the report. The deaths from zymotic disease in Dublin for the first quarter of this year were not 143, as stated in the committee's report, but 385, according to the return of the Registrar-General. How such an error could have been made in the most important element in the statistics of the Committee we are at a loss to divine. The fact is, that the sanitary condition of Dublin is not so excellent as the report of the Dublin Health Committee would lead the public to believe. During the first seventeen weeks of this year, the mortality from zymotic disease, in the city of Dublin, has shown alarming proportions. The deaths for the corresponding period of 1873 were, from zymotic disease, 351; for 1874, 513: from fever, 1873, 73; for 1874, 114: from scarlatina, 1873, 25; for 1874, 274. This is a truly alarming increase of preventable disease and requires the immediate attention of the authorities.

PROSECUTION UNDER THE MEDICAL ACT.

At the Clerkenwell Police Court on Wednesday, May 20, Mr. Matthew Bass Smith appeared before Mr. Cooke, in answer to an adjourned summons, charging him, under the fortieth section of the Medical Registration Act, in that he did "unlawfully, wilfully, and falsely pretend to be, and take and use the names and titles of, doctor of medicine and surgeon." Mr. Beard prosecuted, and Mr. Ricketts defended.

Mr. Henry Osgood stated that he had a child who died on March 27. Before its death, it was attended by the defendant, whose charges were duly paid. On the death of the child, the defendant handed him a certificate (which was produced) on which appeared the title of surgeon after the defendant's name.

Mr. Ricketts said that the summons charged his client with unlawfully, wilfully, and falsely pretending to be, and taking and using the names and titles of, doctor of medicine and surgeon.

Mr. Cooke said there was no evidence as to the defendant having used the title of doctor of medicine.

Mr. Beard said there was evidence of his having acted as a surgeon.

Mr. Ricketts said that no doubt it was true his client's name did not at the present time appear on the *Register*, but, he contended, the registration was not necessary except for certain purposes. The Act did not compel a surgeon to register. A person might hold a diploma from either the College of Surgeons or the Apothecaries' Hall, but there was nothing in the Act which compelled him to register his qualifications, in order to enable him to practise medicine or surgery. All the Act did was to provide that, if registered, he should have certain privileges, and that, if unregistered, he should be subject to certain disadvantages. Almost every section of the Act contemplated the practice by persons, otherwise duly qualified, of medicine and surgery, but who were not upon the *Register*. The twenty-eighth section provided that "If any of the said colleges or the said bodies, at any time, exercise any power they possess by law of striking off from the list of such college or body the name of any one of their members, such college or body shall signify to the General Council the name of the member so struck off". That clearly recognised that there might be a surgeon a member of these bodies, holding a diploma which entitled the holder of it by law to practise, without the person's name appearing on the *Register*; and it also clearly recognised the right of these bodies to strike off from their list, independently of the Medical Council, the names of any persons they thought proper to strike off. In the present case it was not pretended that the name of his client had been ever struck off from the list of the College of Surgeons or Apothecaries' Hall, and last week his qualifications were produced before the Court.

Mr. Cooke asked what was the date of the certificates.

Mr. Ricketts said they were all prior to the Medical Registration Act of 1858. The thirty-first section pointed out one of the privileges of registered persons. There was nothing, either in that section or any other, which he could find, which compelled registration; and that was the view of an able writer, Mr. Glen, who had written a treatise on the subject. The thirty-second section pointed out one of the disabilities of an unregistered practitioner. It was to the effect that, after the 1st day of July, 1859, no person shall be entitled to recover any charge, in any court of law, for any medical or surgical advice, attendance, or for the performance of any operation, or for any medicine which he shall have both prescribed and supplied, unless he shall prove, upon the trial, that he is registered under this Act. That section recognised the practice of an unregistered person. The thirty-sixth section pointed out that no person shall hold certain specified appointments, unless he be registered under this Act. There was only one section on which any reliance could be placed, as prohibiting altogether the practice of medicine and surgery by an unregistered practitioner—the thirty-fourth section, which was that, "after the 1st day of July, 1859, the words 'legally qualified medical practitioner,' or 'duly qualified medical practitioner,' or any words importing a person recognised by law as a medical practitioner, or member of the medical profession, when used in any Act of Parliament, shall be construed to mean a person registered under this Act." He submitted, however, that the section did not apply to any expression used in that particular Act, but it must be held to apply to an expression used in any other Act of Parliament, or any other section. That section did not make the Act retrospective, and was intended to apply to any future Act of Parliament that might use any of the expressions mentioned in that section. He contended that that section, therefore, did not bring his client under the terms of the Act. With regard to section forty, under which the summons was issued, he thought it would be admitted that there had been no evidence whatever to show that the title of Doctor of Medicine had been used by his client; and, if it were, he did not use it falsely, because he had, at that moment, an existing qualification, which had never been cancelled in any way, which entitled him to use the prefix "Dr." to his name. The only charge against his client, of which any evidence had been given, was, that he falsely and wilfully pretended to be a surgeon. Mr. Smith was the holder of a qualification from the College of Surgeons, which, by the twenty-eighth section, possessed the power, by law, of striking off from the list of its body any member; and it had not exercised that power, and the name had been allowed to remain on the roll. Could it then be said, that while his client's name appeared on the list, kept subsequently to the occurrence before the Medical Council, that he was falsely representing himself to be a surgeon; or that he was falsely stating himself to be what he really was not? He (Mr. Ricketts) contended that the registration did not, in the least, affect his client's qualification. The most that the want of registration could do, was to put him in the same position as he was in before he was put on the *Register*. The body that admitted him as one of its members could remove him, by law, if they thought proper. They had not thought proper, and the Medical Act did not give the Medical Council the power to interfere with the diplomas or the certificates which had been granted by any of the licensing bodies. He contended, therefore, that his client was, in point of fact, still a surgeon, not upon the *Register*, it was true, and, therefore, subject to the serious disability of being unable to recover his charges, but still possessing that knowledge which, it was assumed, he must possess. He had subpœnaed the Secretary of the College of Surgeons, who would produce the list of members, showing that Mr. Smith's name still appeared on the *Register* as surgeon.

Mr. Cooke said he wished to call the attention of Mr. Beard to the fact that the summons had been most vaguely drawn. As it stood, the law of evidence did not support the words; and the impression he had from the evidence was, that Mr. Beard's intention was that the summons should charge the defendant with using certain words implying that he was on the *Register*.

Mr. Beard said that that was his intention.

Mr. Cooke said that the summons was entirely distinct from that. The words of the section of the Act of Parliament created different offences. The first offence was that which seemed to have been taken in the summons, namely, a person wilfully and falsely pretending to be a surgeon; that is, supposing a man had no title whatever to be a surgeon, and used the word surgeon, that would be a false pretence. The next offence under the Act was totally different—that of using the name of surgeon, implying that he was on the *Register*. As the case now stood, the evidence did not support the wording of the summons.

Mr. Beard asked for leave to vary the summons, as he was not quite sure who was responsible for the wording of it.

Mr. Ricketts objected, seeing that the case had gone so far.

Mr. Cooke said he would have to dismiss the summons. It amounted to a case of nonsuit, on the ground that the evidence did not bear at all upon the allegation of the summons. His opinion was quite clear upon the subject. While a man was upon the *Register*, and the ordinary diplomas were in existence, it could not be said that he was not a surgeon.

Mr. Ricketts produced the certificates. He said they were under the seal of the corporate body, and would speak for themselves.

Mr. Beard said there were other instances where defendant had used the title of surgeon, and also that of M.D. If he were forced to it, he would take out as many summonses as there were cases against the defendant.

At the request of the magistrate, Mr. Trimmer, Secretary of the Royal College of Surgeons, produced a list of surgeons up to the present time, which comprised in it the name of the defendant. He stated that the diploma was issued under the seal of the College, and was dated June 25th, 1852. The name of Mr. Smith was still upon the *Register* of the College as a surgeon and a person entitled to practise surgery.

Mr. Beard, in cross-examination, asked witness if, since the diploma was granted, the conduct of the defendant had been brought before the Council of the College?

Mr. Ricketts objected to the question, as, if anything had been done, there would be some writing or document on the subject which could be produced.

The Witness said he had a copy of the resolution.

Mr. Ricketts said that the Council had passed the resolution, and then found that they had no authority to do so.

Mr. Cooke said he had no other course but to dismiss the summons, and grant another if asked.

Mr. Beard said that he fully intended to do so.

ASSOCIATION INTELLIGENCE.

EAST YORK AND NORTH LINCOLN BRANCH.

THE annual meeting of the above Branch will be held at the Hull Infirmary, on Wednesday, May 27th, at 1 P.M.; Dr. G. F. ELLIOTT, President, in the Chair.

Dinner at the Vittoria Hotel, at 4.30 P.M. Tickets, exclusive of wine, 7s. 6d.

ROBT. H. B. NICHOLSON, *Hon. Sec.*

Hull, May 18th, 1874.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH.

THE annual meeting of the above Branch will be held in the Corn Exchange, St. Ives, on Wednesday, May 27th, at 3 P.M.; W. R. GROVE, M.D., President.

Gentlemen intending to read papers, or be present at the dinner, are requested to communicate with the Secretary without delay.

The dinner will take place at the Lion Hotel, at 6 P.M. Tickets, 10s. 6d. each.

J. B. BRADBURY, M.D., *Honorary Secretary.*

Corpus Buildings, Cambridge, May 4th, 1874.

YORKSHIRE BRANCH.

THE annual meeting of this Branch will be held in the Cutlers' Hall, Sheffield, on Wednesday, May 27th, at 2.30 P.M.

The members will dine together at the Royal Hotel. Tickets (exclusive of wine) 6s. 6d. each.

Gentlemen desirous of bringing forward communications, or attending the dinner, are requested to communicate with the Secretary.

W. PROCTER, M.D., *Local Secretary.*

York, May 4th, 1874.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE next meeting of the above District will be held on Wednesday, May 27th, at the Castle Hotel, Hastings, at 3 P.M. The Chairman to be chosen at the time.

Notice has been received of the following communications.

1. Mr. J. T. Penhall: Practical Observations on the Use of Plaster Splints, and on some recent Surgical Cases.

2. Mr. E. Smith: Case of Typhoid Fever.

Dinner as usual, at 5 o'clock. Tickets 5s., exclusive of wine.

THOMAS TROLLOPE, M.D., *Honorary Secretary.*

35, Marina, St. Leonard's-on-Sea, May 12th, 1874.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE next meeting is appointed to be held at the Infirmary, Gravesend, on Friday, May 29th, at 4 P.M.; ALFRED SHEWEN, M.D.Lond., in the Chair.

Dinner will be provided at the Old Falcon Inn, at 6 P.M.

Papers are promised by W. Buchanan, Esq., on the Treatment of *Post Partum* Hæmorrhage by the Perchloride of Iron; and by the Chairman, on Hydatidiform Mole. Further papers are desired.

FREDERICK JAMES BROWN, M.D., *Hon. Sec.*

Rochester, May 11th, 1874.

CUMBERLAND AND WESTMORLAND BRANCH.

THE spring meeting of the above Branch will be held at the Keswick Hotel, Keswick, on Thursday, June 4th, at 12.30 P.M.; ROBERT TIFFEN, M.D., President, in the Chair.

Gentlemen intending to read papers, or be present at the dinner, are requested to give early notice to the Secretary.

HENRY BARNES, M.D., *Honorary Secretary.*

Carlisle, May 5th, 1874.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.

THE next meeting of the above District will be held on Tuesday, June 9th, at Worthing; WM. J. HARRIS, Esq., in the Chair.

Gentlemen desirous of bringing forward any communications, or relating cases, are requested to inform me of the same *at once*, in order that they may be inserted in the circular convening the meeting.

WM. J. HARRIS, *Honorary Secretary.*

Worthing, May 16th, 1874.

BATH AND BRISTOL BRANCH.

THE sixth ordinary meeting of the session will be held at the College Green Hotel, Bristol, on Tuesday evening, May 28th, at 7 o'clock; E. L. FOX, M.D., President, in the Chair.

EDMUND C. BOARD,
R. S. FOWLER, } *Honorary Secretaries.*

Bristol, May 20th, 1874.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETINGS.

THE annual meeting of the above District will be held at the Fleur-de-Lis Hotel, Canterbury, on Thursday, May 28th, at 3 o'clock; H. G. SADLER, Esq., in the Chair.

Dinner at 5 o'clock precisely; charge, 5s., exclusive of wine.

The Chairman kindly invites members and their friends to lunch at his house, from 1 till 3.

Notices have been received of the following communications to be read at the meeting.

1. Mr. H. E. Hutchings: Case of Intestinal Obstruction.

2. Mr. Rigden: On the advantage of the Obstetric Forceps in some cases in which they are not considered absolutely necessary. (Adjourned discussion.)

3. J. Braxton Hicks, M.D., F.R.S.: A method of Paracentesis Abdominis in Ascites, complicated by Tumour, or much Tympanitis.

4. J. Braxton Hicks, M.D., F.R.S.: The Local Treatment of Cystitis in Women.

5. Mr. Arthur Long: Case of General Paralysis after Injury to Head; Recovery.

6. Mr. Arthur Long: Case of Strangulated Hernia; Symptoms Masked by Patient taking a large dose of Opium; Operation; Death.

Gentlemen who intend to be present at the dinner, are particularly requested to inform me on or before Tuesday, the 26th instant.

EDWARD W. THURSTON, *Honorary Secretary.*

Ashford, May 18th, 1874.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting will be held at Blackburn, on Wednesday, the 17th of June, at 1 P.M.—CHARLES WHITE, Esq., President; JOHN SKAIFE, Esq., President-elect.

Dinner at half-past four. Tickets, 7s. 6d., exclusive of wine.

Members intending to read papers or exhibit specimens, etc., are requested to communicate at once with the Honorary Secretary of the Branch.

A. B. STEELE, *Hon. Sec.*

54, Rodney Street, Liverpool, May 20th, 1874.

MIDLAND BRANCH: SPRING MEETING.

THE opening meeting of this Branch was held at the President's house, Leicester, on April 28th, at 7 P.M.; H. LANKESTER, Esq., President, in the Chair.

Five new members were elected.

Papers.—The following papers were read and discussed.

1. A Case of Intestinal Obstruction, with Treatment. By John Barclay, M.D.

2. A Case of Double Popliteal Aneurism cured by Flexion. By T. W. Benfield, Esq.

3. Four Cases of Fissure of the Rectum, with Treatment. By C. W. Marriott, Esq.

4. A Case of Chronic Erysipelatous Inflammation of the Arm (patient shown).

5. A Case of Acute Farcy.

6. A Case of Sudden Death, with Remarks. By T. Blunt, M.D.

7. Mr. Dolman of Derby discussed the desirability of having Day Rooms in our Infirmaries for the use of convalescent patients.

A vote of thanks was then passed to the President, who, after responding, invited the members to stay and partake of supper.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT MEETING.

A MEETING of the East Surrey District of the South Eastern Branch of the British Medical Association was held at the Crystal Palace Hotel on Thursday, May 14th; J. SIDNEY TURNER, Esq., in the Chair.

Fifteen members and six visitors were present.

The Secretary.—Dr. Lanchester having resigned the office of Secretary, it was proposed by Dr. Holman, and carried by acclamation :

"That this meeting accepts with sincere regret the resignation of their Secretary, Dr. Lanchester. The members would offer to him their heartfelt thanks for eight years of unwearied devotion to the best interests of the East Surrey District, and would beg to assure him that he carries with him, on his retirement, the well-earned warm personal regard of many attached friends."

It was then proposed by Dr. Holman, and seconded by Dr. Strong, and carried :

"That Dr. Galton be elected secretary."

Communications.—1. A paper was read by Mr. Howard Marsh on Retropharyngeal Abscess. The author referred especially to the disease occurring in children from two to four years old. He described five causes : 1. Disease of bodies of vertebræ ; 2. Injury ; 3. Sequel to exanthemata ; 4. Suppurating glands ; 5. Spontaneous (in this class he included the majority of cases). The symptoms he described were difficult breathing, without stridor, and with perfect vocalisation. He described abscess behind the œsophagus, with attacks of noisy breathing and spasmodic cough. He recommended opening with a narrow-bladed knife, and turning the child over to avoid suffocation. He had found pus at times so thick as not to run through a good sized aspirator-tube.

2. A paper was read by Mr. Sidney Turner on a Case of Extrauterine Fœtation. A discussion followed, in which Messrs. Howard Marsh and Stilwell (Epsom), and Drs. Lanchester, Holman, Hearnden, and Galton took part.

3. Dr. Strong exhibited a specimen of long-standing Aortic Obstruction.

4. Dr. Lanchester read a case of Acute Tuberculosis of two weeks' duration. Mr. Galton described a similar case of six days' duration.

5. Dr. Galton showed an Instrument for the treatment of Anteflexion of the Uterus, and described a case in which it was used with complete relief.

A discussion ensued, in which Drs. Lanchester and Holman took part.

Dinner.—Twenty-one members and visitors sat down to dinner ; and the cordial thanks of the meeting to the retiring Secretary again found warm and general expression.

CORRESPONDENCE.

THE ADMISSION OF WOMEN TO THE UNIVERSITY OF LONDON.

Sir,—Having found myself in a minority of the medical graduates by signing the memorial to the Senate of the University of London in favour of the admission of women to degrees, I have been placed in an apologetic position before my friends, who maintain that the measure was carried by enthusiastic and theoretic artsmen, whilst the experienced members of the medical faculty were uniformly opposed to it. I will not attempt to gainsay this, but give my reasons for supporting it by my name. I need not reiterate, nor even mention, the arguments constantly used by the women's rights advocates, but simply state why, as a medical man, I was favourable to this and like proposals ; it is, in fact, because I regard the question from a professional point of view that I support the effort made for the higher education of women ; and it is for this reason I venture to trouble you with my opinion.

I have been in the habit of looking at the matter in this way, referring only, as I said before, to reasons suggested by my calling. I see in England a superabundance of women, a very large excess over men—families with numerous unmarried daughters—and, therefore, it is certain that these cannot possibly (unless bigamy became legal) fulfil the first functions of the sex. I look upon these human beings as so many powerful and active machines developing large forces which must operate upon and influence everything surrounding them. If they do not work for good, they will for evil ; or, if restrained, work out their own destruction. The trite rhyme, of the devil finding something for idle hands to do, cannot be too often reiterated in the youthful ear, whether it be male or female ; and it is equally true that, if action of all kinds be restrained, the bodily force operates as a canker-worm and devours its producer. Activity, however, which is fruitless is better than no action at all, and the woman who makes pleasure her occupation, and all the little affairs of the society in which she mixes the business of her life, and as "idly busy rolls her world away", preserves at least her health. But let her have no object placed before her to stimulate her to exertion, and she falls a prey to the operation of those powerful nerve-forces which are constantly being produced within her, and which ought to find their correlation in some outward active pursuit. My own experience is, that a large number of girls' ailments are due to idleness and the consequent *ennui ;* and that the nerve-forces are as self-destructive as an unrestrained locomotive engine would be, which, if not properly directed, would injure everything with which it came into contact, or soon cripple itself. I have seen lamentable instances of girls amongst the middle classes whose bodily and moral health has been destroyed by wrong-headed parents, who, under a mistaken view of religion, have deprived them of every amusement except the chapel on Sunday and Exeter Hall during the month of May, at the same time enforcing upon them lessons of self-reflection. These poor creatures have become fretful, peevish, dyspeptic, and nervous, with all energy washed out of them, and at last die piously of consumption. If they have been fortunate enough to dwell in a village, they may have found work in the church or the school ; but that their devotedness had no higher aim than occupation is borne witness to by many a clergyman, who finds how his church decorations fail when the young ladies get married.

My own experience is, that the strong, active, right-minded girls are those who have been well educated at school or college, and who are constantly engaged in work for themselves or others ; who are employed at drawing, sculpture, languages, or even science ; whilst the sickly, complaining creatures, who are ever in the doctors' hands, are those who are doing nothing. One of the most and worst chronic cases of hysteria I have ever known was cured immediately upon the young lady being required to take charge of her father's house.

Seeing, then, all these evil consequences of want of occupation, and seeing the young women themselves asking for work and to be allowed to follow various pursuits for their livelihood, it seems to me hard and unjust to deprive them of the opportunity. In the lower classes, when the man dies, the wife keeps the shop, or even conducts a large business requiring considerable management. If she unfortunately belong to a class of society above this, she is prevented from supporting herself and family from want of legal qualification.

I have no intention of advocating the desirability of women entering the professions of medicine or the law, but it seems to me that, if they were allowed to do so, the numbers would be so small, that they would in no way alter the present aspect of society. At the same time, I would not limit all the privileges of endowed universities, colleges, and schools to one sex, but let the other participate in them. The arguments in use at the present time against the physical disadvantages of overtraining of girls, and the sapping of their health, must, of course, receive due attention, in the same way as would the injurious training of boys or young men fitting themselves for any special sphere of life. At present, it has not been my lot to have learned from those connected with girls' colleges that any injurious effects to health have ensued ; but I have frequently heard of the marked good which has followed full occupation and emulation. My own experience has been exactly of the same kind. In a word, the great argument against women's work is, that they are not fitted for it ; their answer is, they are able and willing if no impediments be placed in their way. I for one would remove all restrictions, and let the field be open. I am, etc.,

Samuel Wilks.

London, May 1874.

DR. SNOW BECK'S CASES.

Sir,—Some of your readers, remote from London, have probably felt some surprise that I have taken no notice of Dr. Beck's arguments against the use of perchloride of iron to arrest *post partum* hæmorrhage ; and that, disregarding alike these arguments and his personal attacks, I have simply persisted in challenging him to publish his "cases". Now that he has published his "cases", I beg permission, in vindication of the course I have pursued, to show how far his statements are to be trusted.

1. *Dr. Beck's "nine or ten cases seen by himself".* In the discussion at the Obstetrical Society on March 5th, 1873, Dr. Beck stated that "he had met with several cases where death had followed the injection of perchloride of iron into the gravid uterus to arrest *post partum* hæmorrhage, all the women presenting symptoms quite analogous to those known under the name of puerperal fever". Dr. Beck had also stated that he had never injected the perchloride himself. "Dr. Playfair asked Dr. Beck how many cases of death resulting from the injection of perchloride of iron he had personally seen. It would be interesting to the Society to know, inasmuch as many Fellows had repeatedly injected the iron without ever witnessing any bad results ; while he, who confessedly had never used the remedy himself, had had the bad fortune to witness several fatal cases." "Dr. Snow Beck answered, that *he had seen nine or ten cases.* The symptoms were similar to those of puerperal fever, but he felt convinced that death was caused by the injection of iron." This, then, was the statement which Dr. Beck was called upon to substantiate. I repeatedly challenged him to publish these "nine or ten cases". The result is as follows.

In the JOURNAL of January 31st, 1874, Dr. Beck writes: "In the previous JOURNAL, page 661, Dr. R. Barnes endeavours to convict me of having stated something which is inaccurate; but I am unable to perceive that I have done so. It is quite correct that I have 'seen nine or ten cases' where death has followed the injection of the perchloride of iron, and also that I have examined the uterus in four cases." Thus he reaffirms his original statement, but still does not publish the cases. In the JOURNAL of this year, p. 189, you, as editor, appended a note to a further challenge from me, to this effect: "Dr. Snow Beck will now, no doubt, feel bound to forward us the short particulars of the cases."

Dr. Beck then promised the cases; and this is how he kept faith. In the JOURNAL of February 28th, he republished at great length Dr. Heywood Smith's case, in which secondary hæmorrhage and septicæmia followed on the retention of a piece of placenta, and in which, instead of pursuing the standard rule of dilating the uterus and removing the offending placenta, perchloride of iron was repeatedly injected. To this case, which illustrates something more than the action of perchloride of iron, Dr. Beck at great length added another history, beginning on "March 14th, 1872." He himself saw the case on the 28th. "He expressed the belief that the perchloride had been taken up into the system, and that death would result."

In the JOURNAL for March 7th is a communication headed "*Concluded from page* 269 *of last number*". It contains the histories of two more cases. The history of the first begins with "May 19th, 1872". Dr. Beck saw her on the 31st. Death took place on the "7th June". The second case in this paper, or No. 4 of the series, Dr. Beck did not see. He describes the appearances of an uterus sent to him by "a medical friend in Yorkshire".

Challenged by me to produce the "five or six cases still due to make up his tale of nine or ten", Dr. Beck sends to the JOURNAL a communication no doubt beside the mark, for you accord to it the following notice. "If Dr. Snow Beck can complete his promised list of nine cases, we shall be happy to publish them. It seems to us useless to continue the discussion in any other form than on the basis of published facts."

Thus, all Dr. Beck has done to bear out his statement that he "had seen nine or ten cases", is the publication of *three* cases. And upon these a further remark is not inappropriate. Dr. Beck says he has never used the injection himself: therefore all his nine or ten cases have occurred in the practice of other persons. But there is no reference, except in Dr. Heywood Smith's case, to the names of his associates; and not a word from any one of spontaneous confirmation.

Why are the "cases" withheld? Is it Dr. Beck's memory, or his imagination, that is at fault? If so, surely those who saw the cases with him might help him. Is it tenderness for these persons that compels him to silence? Such weakness is belied by the dastardly stab in the back which Dr. Beck deals to a "professor of midwifery in one of the largest medical schools", in the *Obstetrical Journal*, vol. i, p. 724, whose conduct of a case he grossly misrepresents, whom he points at with ambiguous description, but whom he dares not name.

2. *His candour.* In the *Obstetrical Journal* for February 1874, p. 722, Dr. Beck relates in romantic fashion the history of a woman whose death followed on the fortieth day after labour and the injection of perchloride of iron. He never saw the case; and I have it from direct authority, that his information was drawn from the monthly nurse who attended. In his eagerness to accumulate cases, at p. 726 he quotes from the report of the proceedings of the Obstetrical Society, published at p. 45, vol. i, of the same journal, a case briefly referred to by one of the speakers. Now this case is one and the same. It is another example of Dr. Beck's incurable tendency to make two cases or more out of one. Perhaps he did not know it was the same case. But then what confidence can be placed in his care in the investigation of facts, or in his knowledge of the cases which he relates with such apparent preciseness?

3. *His arithmetic.* Conscious, no doubt, of the "difficulty" into which he had fallen, yet failing in the honest courage to avow his error, in a postscript at the end of his four cases (p. 302, BRIT. MED. JOURNAL, March 7), he thus seeks to cover his disgrace: "In the last volume of the *Obstetrical Transactions* . . . . I find that eleven cases of death, and 'one unsuccessfully', after the injection of the perchloride, were mentioned by different Fellows of the Society. . . . These cases, with the four now recorded, make a total of fifteen or sixteen cases of death."

I have gone carefully through the reports, and I can only count up ten cases in which death followed the injection of iron. These are: 1, Dr. Heywood Smith's case; 2, Dr. Routh's; 3, Dr. Graily Hewitt's; 4, 5, and 6, Dr. Murray's; 7, 8, Dr. Phillips's; 9, Dr. Bantock's; 10, Dr. Protheroe Smith's. But these cases call for a little analysis. Cases 4, 5, and 6, were referred to by Dr. Murray, who says he had not used the injection in ten cases; in seven, recovery ensued; and in the three others "the patients certainly died after the uterus had been washed out with the solution of iron, but most decidedly this had nothing to do in causing death; indeed, it might have saved these lives, had it been at hand and used earlier." Cases 7 and 8 are thus referred to by Dr. Phillips: "In the one fatal case, he could not in the least degree connect the death with the injection"; and in a note he says "he has since called to mind a case of placenta prævia which he saw in the country, in which the patient died of the labour, notwithstanding the use of the perchloride." No. 10, referred to by Dr. Protheroe Smith as one he had heard of, is the same as No. 3, described by Dr. Hewitt; so that this case has been made to do double duty. This reduces the actual number of deaths from eleven to nine; and, of these nine, four are distinctly affirmed by the observers not to have been due to the perchloride, whilst another explanation certainly applies also to some of the others. But take the nine cases, and add Dr. Beck's four: what appears? Again, that he has counted Dr. Heywood Smith's case twice over—once in his summary from the Society's report, and once in his own four cases. Thus he has thrice been guilty of counting one case as two. Dr. Beck's arithmetic may be summed up in the following formula.

$$9=11, \text{ and } 3=4; \text{ therefore } 9+3=15.$$

It is impossible to reason with a man who manipulates facts in such a manner. One might as well beat the air.

Detraction is the homage that Envy pays to honourable success. I accept that homage with the more satisfaction, that it is shared by Robert Lee, Braxton Hicks, Graily Hewitt, and others whose good work will not shine the less brightly because a Beck has tried to tarnish it. If *laudari à laudatis* be the highest testimony to merit, *culpari à culpatis*, albeit the lowest, is scarcely less real.

Here, then, I dismiss Dr. Snow Beck. In closing this correspondence, I beg leave to remind your readers that it was not provoked by me. I have never attacked any one. Dr. Beck, in his blind fury, has rushed upon his fate. To a series of diatribes which, for audacity in the production and manipulation of facts, for licentiousness of style, for recklessness in personality, are unprecedented in modern medical literature, my only answer is to set forth a few of their author's more flagrant self-contradictions. I have resolutely refused to mix up with this personal question any scientific discussion. I shrink with irrepressible loathing from such a desecration of science. The question as to the value of the topical use of perchloride of iron in *post partum* hæmorrhage can only be decided by experience. Cases in illustration have been gathering together in profusion in your pages and in those of your contemporaries. I recognise the duty of recording my own experience, and of weighing the objections of others. This duty I shall try to discharge in due time and place. In the meantime, I shall have done some service in eliminating from the discussion Dr. Snow Beck and his worthless or non-existent "cases". I am, etc.,

Grosvenor Street, May 1874. ROBERT BARNES.

MAINTENANCE OF LUNATICS.

SIR,—I have just received the enclosed note, confirmatory of my letter to you on the above subject in last week's JOURNAL. I shall be obliged if you can find room to publish it.

I am, etc., S. W. D. WILLIAMS, M.D.

County Asylum, Hayward's Heath, May 13th, 1874.

"Fife and Kinross Lunatic Asylum, Cupar, May 11, 1874.

"Dear Sir,—Permit me to say I entirely agree with your letter in this week's BRITISH MEDICAL JOURNAL.

"I have already an instance showing the effect of the grant from the Consolidated Fund. I intimated the other day to a parochial board, that a patient chargeable to their parish was fit to be boarded out with safety. The reply I got was, that at present it was *inexpedient* to do so, and that the Board declined to remove the patient.

"In Fife there are no lunatic wards in any of the poorhouses; but in lieu of that, there is a system of boarding out harmless though insane patients with cottagers of certain villages.

"I visited a good number of boarded-out patients the other day, in company with Dr. Sibbald, deputy commissioner. They all seemed very happy, and well cared for. They all answered me in the negative when I asked them if they would like to return to the asylum. I quite understand pauper patients preferring a cottage life to the routine and discipline of a large though grand asylum. They are at home. This year I have sent out twenty-six patients of this sort, and they are all doing well. If my predecessor, Dr. Batty Tuke, and I, had not had this method of eliminating the population of this asylum, a necessity for further building would ere this have arisen.

"Our pauper rate is 10s. a week. The allowance for patients boarded out is six shillings for men, and five shillings for females, besides which they have to be provided with clothes and any extras.

"Inspectors of poor have oftentimes informed me that it is little or no saving to board out patients. If this be the case when ten shillings is the rate per week, of course it will be an increased expense to the parishes to board out patients when the asylum rate is four shillings less. It must be plainly evident that this four shilling grant to asylum patients only, will cause parochial boards to strenuously oppose the boarding out of these harmless lunatics, and to send back, on the least pretext, those already boarded out. I have given you an instance of the first, and I feel sure it will not be long ere I have many of the second.

"Boarding out causes trouble to the inspector, and this has often been the mainspring of any opposition to this system. When increased expense is coupled with this, then there will be no getting out of harmless lunatics.

"You can make what use you choose of this letter.

"I am, yours truly,
"JOHN FRASER, M.B., Medical Superintendent.
"Dr. Williams, County Asylum, Sussex."

THE HOSPITAL FOR WOMEN.

SIR,—I trust you will allow me space enough to give a most emphatic contradiction to the last sentence of the paragraph about the Hospital for Women at page 654 of your issue of to-day. Until the annual meeting on the 4th instant, I was in ignorance of the alterations that were going to be made in the rules of the Institution. It is, I believe, to my father, Dr. Protheroe Smith, that credit is due for many of the suggestions embodied in the "improved constitution".

I am, etc., HEYWOOD SMITH.
Portugal St., Grosvenor Sq., May 16th, 1874.

MILITARY AND NAVAL MEDICAL SERVICES.

THE next examination of candidates for the Naval Medical Service will be held at Burlington House on the 10th of August.

THERE is a vacancy for an Admiralty Surgeon and Agent at Portmagee and Knightstown, co. Kerry, in the room of the late Mr. Blennerhassett.

DEPUTY SURGEON-GENERAL W. MUNRO, M.D., C.B., has taken up the appointment of Head of the Sanitary Branch in the Director-General's office at Whitehall Yard. Sir William Muir performed the duties of this branch of the office prior to his becoming Director-General of the Army Medical Department. Dr. Munro returned from India in 1872, and has since been acting in the capacity of principal medical officer at Devonport.

THE APPROACHING SUMMER MANŒUVRES.

IN addition to the large body of troops already stationed at Aldershot, a force consisting of four regiments of cavalry, eight batteries of artillery, ten regiments of Militia, two companies of the Royal Engineers, two sections of the Royal Engineer Train, and detachments of the Army Service Corps, have been ordered to assemble at the camp towards the end of the present month. The hospital arrangements are being made on a proportionately large scale. Surgeon-General C. H. Gordon, M.D., C.B., has taken over the duties of the principal medical officer of the camp at Aldershot, relieving Surgeon-General Fraser, C.B., who has proceeded to Netley. The preparation of the field medical arrangements for the approaching summer manœuvres has devolved upon Dr. Gordon.

RETIREMENT IN THE ARMY AND NAVY.

THE Order in Council of February 22nd, 1870, promulgating the scheme of naval and marine retirements, was expected by its framers to produce universal contentment in the navy, but unfortunately it has done nothing of the kind. There are nearly 450 medical officers directly affected by it, and the whole medical profession is indignant at the invidious and damaging distinction it has made between the medical and the other branches of the naval service. It would be curious to discover the principle on which it was framed; for, whilst it substantially benefits every other class in the navy, it excludes three out of the five grades of medical officers altogether, and gives to the other two grades only about half the advantages accorded to the other branches of the service. In fact, we cannot believe that the framers of this scheme acted in this matter on any logical or intelligible principle whatever, for the awards are neither based on the relative ranks of the officers concerned, nor on the amount of their full or half-pay; that is to say, on the money value of their respective offices.

Excluding flag officers, and the rare instance of chaplains completing their full service time in the double capacity of chaplains and naval instructors, all other classes but medical officers gain by retiring from £37 to £136 per cent. on their half-pay. Four out of fourteen lose from £1 to £25 per cent. on their full-pay, five receive an income equivalent to their full-pay, and the remaining five are awarded retiring pensions from £10 to £65 per cent. in excess of their full-pay. Two out of the five grades of medical officers receive no advantage on retiring in addition to their half-pay, but lose from £24 to £29 per cent. on their full-pay. The staff-surgeons and second class staff-surgeons gain only £18 and £19 per cent. respectively on their half-pay, and lose £27 and £25 respectively on their full-pay on retiring, while surgeons, who, like the inspectorial ranks, have no addition to their half-pay, actually lose £35 per cent. on their full-pay, when from age or illness they are no longer eligible for active service.

Thus, taking the retirement scheme in any way, it is a clear and indisputable fact that the medical branch gains less and loses more on retiring than any other branch of the navy, as the annexed table explains.

Nor is it alone in the absence of any increase to half-pay on retiring where the medical inspectors and deputy-inspectors are so invidiously and unfairly treated, in comparison with other officers with whom they respectively rank. They are made to serve five years longer than officers of the executive branch before they are allowed to retire, and the effect of this is to debar them in a great measure from making that permanent provision for their families by commuting, which others have an opportunity of doing. A rear-admiral may, at 55 years of age, commute his pension for a capital sum of £7,154; an inspector-general cannot do so before he is 60 years old, and then for only £6,212. A deputy inspector-general, who ranks with a captain, can commute his retiring allowance on attaining the age of 60 for £4,421, whereas a captain at 50 years of age might receive £6,727. A commander at the age of 45 can commute his retiring pension for about £4,950, whilst his compeer the staff-surgeon, whose education has been solely and entirely at his own charge, is bought out with nearly £950 less.

These are glaring instances of the inequality of the regulations in their applications to officers of the same relative rank, and, as long as they are permitted to exist, it is in vain to say that there is contentment in the naval medical service.

Classes holding Relative Rank.	Full Pay.	Half Pay.	Retired Pay.	Retired Pay. Less than Full Pay.	Retired Pay. More than Full Pay.	Retired Pay. More than Half Pay.	On retiring, the Officer Gains on Half Pay.	On retiring, the Officer Loses on Full Pay.
Class 1.	£	£	£	£	£	£	£ per ct.	£ per ct.
Admirals	1825	766	950	875	..	184	24	48
Vice-Admirals......	1460	593	800	660	..	207	35	45
Rear-Admirals......	1095	456	650	445	..	194	42	41
Inspector-General of Hospitals & Fleets	912	693	..	219	..	The same.	*Nil.*	24
Class 2.								
Captains	602	301	600	2	..	299	99	*Nil.**
Staff-Captains	511	292	450	61	..	158	54	12
Inspectors of Machinery..........	456	292	450	6	..	158	54	1
Deputy-Inspector of Hospitals........	693	492	..	201	..	The same.	*Nil.*	29
Col.-Commandant..	702	264	600	102	..	336	127	15
Ditto 2nd ditto	365	264	600	..	235	336	127	*Nil.*†
Lieut.-Colonel	310	200	450	..	140	250	125	*Nil.*‡
Class 3.								
Commanders	365	182	400	..	35	218	120	*Nil.*§
Staff-Commanders..	401	292	400	1	..	108	37	*Nil.**
Chief Engineers ..	401	292	400	1	..	108	37	*Nil.**
Chaplain or Naval Instructor	401	292	400	1	..	108	37	*Nil.**
Chaplain and Naval Instructor	602	401	450	152	..	49	12	25
Paymasters	602	292	450	152	..	158	54	25
Staff-Surgeons	547	337	400	147	..	63	19	27
Class 4.								
Lieutenants........	182	155	300	..	118	145	94	*Nil.*‖
Navigating ditto ..	401	292	300	101	..	8	2	26
Second Class Staff-Surgeons........	401	255	300	101	..	45	18	25
Captain of Marines.	211	127	300	..	89	173	136	*Nil.*¶
Surgeons..........	310	200	200	110	..	The same.	*Nil.*	35

* Retires on full-pay.
† By retiring, gains 64 per cent. on full-pay.
‡ By retiring, gains 45 per cent. on full-pay.
§ By retiring, gains 10 per cent. on full-pay.
‖ By retiring, gains 65 per cent. on full-pay.
¶ By retiring, gains 42 per cent. on full-pay.

COMBATANT OFFICERS IN HOSPITALS.

THE *London Gazette* of the 13th instant contained the following announcement :—"Royal Victoria Hospital, Netley. Captain Bolton James A. Monsell, from half-pay, to be adjutant." This is a new addition to the military establishment of the hospital at Netley. The combatant staff has up to the present time consisted of a lieutenant-colonel as commandant, and of a brevet lieutenant-colonel as staff-captain and assistant-commandant. We are curious to know the nature of the duties to be performed by the newly appointed hospital adjutant, or, seeing that the hospital has existed without an adjutant all the years it has hitherto been receiving and treating patients, what has now occurred to make such a functionary necessary. Captain Monsell was aide-de-camp to General Sir Richard Airey during the period of that officer's command at Gibraltar.

NAVAL APPOINTMENTS.

THE following appointments have been made during the past week at the Admiralty.

Surgeon George James Gray, of H.M.S. *Duke of Wellington* (additional for Haslar Hospital), has been appointed additional Surgeon of H.M.S. *Flora*, for service at the Royal Naval Hospital, Ascension, *vice* Warren, invalided.

Surgeon Charles Lyon Vasey, of H.M.S. *Duke of Wellington* (additional for Haslar Hospital), to H.M.S. *Druid*, *vice* O'Keefe, resigned.

Staff-Surgeon (second class) E. B. Broster, from half-pay, to H.M.S. *Barracouta*, *vice* Moore, promoted.

Staff-Surgeon (second class) Robert Nelson, from half-pay, to H.M.S. *Boscawen*, additional for temporary service, in lieu of Surgeon Waring, lent to the *Seaflower*.

Staff-Surgeon (second class) W. Reid, M.D., from half-pay, to H.M.S. *Pembroke*, additional for Melville Hospital, Chatham, for temporary service during the absence of Surgeon Hambury, on leave.

Staff-Surgeon (second class) Robert Humphreys, from H.M.S. *Wolverene*, to H.M.S. *Amethyst*, *vice* Thomson, invalided, in order to enable him to complete a commission, not having served quite twelve months in the *Wolverene*.

Alexander Pole, M.D., of Greenbank, Shetland, has been appointed Admiralty Surgeon and Agent at Lerwick, *vice* Dr. Robert Cowie, deceased. Dr. Cowie had held the appointment since 1866.

OBITUARY.

EDWARD CHARLTON, M.D., D.C.L., NEWCASTLE-ON-TYNE.

IT is with profound regret that we have to announce the death of Dr. Edward Charlton of Newcastle-on-Tyne. The grief which the occurrence must cause will be intensified by the suddenness of the sad event. On Tuesday, May 12th, Dr. Charlton became ill, suffering from spasmodic pain in the præcordia, which was attributed to suppressed gout. The urgency of the symptom gradually subsided on the following day; on the evening of the 14th, however, he was suddenly seized with a recurrence of the spasm, and almost immediately afterwards expired.

The deceased occupied a very prominent position not only in Newcastle, but throughout Northumberland and Durham and the north of England generally, and his death will leave a blank in society, in the medical profession, in learning, and in religion, which will not be soon filled.

Dr. Charlton was the second son of the late William John Charlton of Hesleyside, Northumberland, where the family has been seated since the early part of the fourteenth century; and was born in the year 1814. He received his early education at St. Cuthbert's College, Ushaw, Durham, along with Archbishop Eyre, the Bishop of Hexham and Newcastle (Dr. Chadwick), and other ecclesiastical Roman Catholic dignitaries. To the last, he maintained a close friendship with his early schoolmates. He was firmly attached to the religious faith of his forefathers, was one of the leading members of the Catholic body in Newcastle, and took a prominent part in all matters relating to the members.

Dr. Charlton was senior physician to the Newcastle Infirmary. He was connected with the School of Medicine, which was begun in Newcastle in 1834, and subsequently took a leading part in founding the present College of Medicine. He has ever since its foundation, in the year 1851, held the position of Joint Lecturer on Medicine in the College, of which also he was the President. He was likewise Professor of Medicine in the University of Durham.

Dr. Charlton was too actively engaged in the practice of his profession to find time for literary labours in connection with it, but he was the author of several brochures on particular maladies, one of the most important being entitled *A History of the Scarlatina Epidemic in Newcastle in* 1847. His leisure, however, was devoted to antiquarian and literary pursuits, in which he took a deep interest. He was a Vice-President of the Newcastle Literary and Philosophical Society, and of the Natural History Society, and was one of the leading members of the Newcastle Society of Antiquaries, of which body he was Secretary for many years, and to the proceedings of which he was a frequent and valuable contributor, many of the papers which he read having acquired more than a local fame. His special field in relation to the study of antiquities was Scandinavian lore, in which he was a learned and profound scholar; and his acquirements in this branch of learning procured him the honour of election to the membership of several of the learned societies of Europe, of which may be particularised the Royal Swedish Academy of Medicine in Stockholm, and the Medical Society of Christiania.

Dr. Charlton was an ardent supporter of the British Medical Association. As early as the year 1845, at the thirteenth anniversary meeting, held at Sheffield, he delivered the retrospective address on medicine. On the occasion of the thirty-eighth annual meeting, held at Newcastle, in 1870, he occupied the position of President, and so admirably did he conduct the deliberations of the Association during the meeting, that he was justly complimented at the close. If for no other reason, the memory of Dr. Charlton will be long revered and warmly cherished, not only by his more immediate professional friends, but also by his fellow-members of the Association. Truly may it be acknowledged that he was a noble representative of an English gentleman, and possessed of every qualification the profession could desire to find in one of their high calling.

On the morning of the funeral, the medical and surgical staff of the Newcastle Infirmary, several of the officials of the University of Durham, the Lecturers of the Newcastle College of Medicine, the past and present students of the College, and the members of the profession, the majority of whom were habited in academical costume, walked in procession from the Infirmary to St. Mary's (Catholic) Cathedral, where a Requiem Mass was celebrated, previously to the removal of the body by railway to Bellingham, North Tyne, where the interment took place.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, May 14th, 1874.

Pauper Lunatics.—In reply to Mr. O'SULLIVAN, the CHANCELLOR of the EXCHEQUER stated that the allowance for pauper lunatics would not be paid to pauper inmates of workhouses in Ireland, but only to those in lunatic asylums.

Registration of Births and Deaths Bill.—Mr. SCLATER-BOOTH moved the second reading of this Bill. It was, in its main features, identical with that which was before the House of Lords last Session, and which was founded upon the recommendations of a Royal Commission. Dr. Playfair had given notice of his intention to oppose it on the ground of its permissive character, but on receiving an assurance from Mr. Sclater-Booth, who had charge of the Bill, that a compulsory clause should be introduced in committee, the right hon. gentleman withdrew his amendment.—After some discussion, in which Mr. PELL, Mr. HENLEY, Lord ESLINGTON, and Mr. STANSFELD took part, the Bill was read a second time.

The Destruction of Infected Clothes.—In reply to Lord C. J. HAMILTON, Mr. SCLATER-BOOTH stated that the Act authorising the authorities to order the destruction of infected clothes did not extend to the metropolis; but he proposed in a Bill, which he would shortly introduce, to give that power to the authorities of the metropolis.

Public Playgrounds.—In answer to Sir F. PERKINS, Mr. CROSS said he had not pledged the Government to introduce any measure in relation to industrial dwellings in the metropolis this Session, but when he dealt with that subject he would consider the advisability of enabling the municipal authorities to provide public playgrounds for children.

Friday, May 15th.

Demolition of Dwellings by Railways.—In reply to Mr. KAY-SHUTTLEWORTH, Mr. CROSS said a standing order on the subject had been draughted, and would shortly be submitted to the House, either before Whitsuntide or immediately after.

Monday, May 18th.

Sewage Manure.—Mr. HICK asked the President of the Local Government Board whether he had any information in his office showing the quantities and varieties of manure which had been made from sewage in this country through municipal corporations or sanitary boards, and the average prices each kind of manure had commanded in the market.—Mr. SCLATER-BOOTH said that there was no information at the Local Government Board upon that subject.

Factories (*Health of Women, etc.*)—Mr. CROSS obtained leave to bring in a Bill to make better provision for improving the health of women, young persons, and children employed in factories, and affording better means for the education of such children.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen have recently passed the Primary or Anatomical and Physiological examination.

F. G. H. Whiteley, W. J. B. Clarke, G. W. Hambleton, R. Hasleden, W. F. Feltham, C. P. B. Clubbe, G. Hindle, A. C. B. Smyth, G. M, Tuke, R. H. Baillie, E. W. Livesey, A. E. Dicks, St. Bartholomew's Hospital; L. F. H. Birt, Charing Cross Hospital; J. W. C. Merriman, J. A. Vasey, F. C. Compton, B. F. Zimmerman, H. E. Friend, A. W. F. Street, W. E. Collins, F. G. D. Drewitt, P. M. Ellis, F. F. Glanville, S. W. Vasey, J. H. Ross, E. P. Apthorpe, S. H. Edgelow, G. A. W. Cones, H. Collier, St. George's Hospital; D. B. Lees, C. E. Bell, P. E. Wallis, E. H. Williams, A. C. Brock, A. Bain, T. S. Sheldon, F. A. Hyne, E. G. Dutton, T. F. Pedley, H. Wright, T. Jones, R. R. W. Gram, R. O. Cusack, F. G. Stewart, L. Jones, C. E. Perry, A. J. Rowbotham, W. Phelps, G. W. Lacey, P. F. Gilbert, C. P. Creed, A. W. Green, W. P. Turner, D. D. Malpas, S. V. Instone, A. M. Turner, E. H. Paddison, Guy's Hospital; H. R. Vachell, R. Clarke, S. L. Richardson, L. Druitt, M. Gainsford, A. S. Underwood, J. Price, D. P. H. Taylor, C. C. E. Beddoes, E. O. Scallon, King's College; A. J. Popert, A. Thompson, A. W. W. Dowding, P. M. Richards, F. G. Hayman, London Hospital; P. K. Cree, W. Walker, H. B. Ellis, Middlesex Hospital; S. G. Parkinson, H. Wickham, P. G. Young, St. Mary's Hospital; J. Gill, R. R. Harpur, E. H. Hare, V. G. Wride, H. C. Noot, C. De L. Brock, F. N. Hume, W. Morgan, C. C. Smith, H. Nutty, E. Ramsbotham, T. G. Cape, M. H. Green, F. M. Sandwith, C. W. Evans, W. P. Ashe, St. Thomas's Hospital: G. S. Bayley, J. F. Trafford, E. S. Smith, J. T. Buncombe, R. Walford, E. Martyn, P. S. Spokes, C. F. Middleton, J. Todd, B. G. Godfrey, W. H. Blake, G. L. Coombs, W. H. Williams, A. Hodge, A. W. Kempe, E. T. Chamberlain, University College; W. R. Basham, A. H. Collier, J. J. F. Barnes, Westminster Hospital; C. C. Jones, C. C. Crupps, Bristol; W. H. Beverley, J. Corrie, M. C. Sweeting, Leeds; A. A. Mouritz, Liverpool; G. L. Lennon, A. Galland, H. C. Smale, A. Richardson, J. E. Looker, J. W. Ashworth, J. N. Cooper, W. Armstrong, Manchester; H. Mackay, J. B. Emmerson, M. Duggan, S. Braithwaite, Newcastle-on-Tyne; J. W. Scott, Sheffield; E. O. Jones, C. S. Watson, J. H. Hay, J. C. Eames, O. W. Smith, H. Dobson, T. Harker, W. J. Dodds, Edinburgh; A. W. Watkins, W. H. Sutcliffe, A. S. Currie, Glasgow; J. Sherburn, Glasgow and Edinburgh University; G. R. Armstrong, J. M. Edwards, H. Prytherch, J. Kilbride, Dublin; G. Whelan, Montreal and St. Thomas's Hospital; J. M. McCarthy, Aberdeen and Guy's Hospital; J. M. Jones, Edinburgh and Liverpool; G. R. Cundells, University College and St. Mary's Hospital.

The total number number of candidates admitted to the primary examinations for the membership during the last and present months was 442, of whom 133 were rejected. The next primary examination will be held in July.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH: Double Qualification.—The following gentlemen passed their first professional examination during the May sittings of the examiners.

James Eld Hiffernan, Mallow; Edward William Thomson, India.

The following gentlemen passed their final examination, and were admitted L.R.C.P.Edinburgh and L.R.C.S.Edinburgh.

Frank Hokins Pedrosa, Madras; James Henry Tyrrell, Madras; Thomas Inglis, Edinburgh; Thomas Burke Walsh, Limerick; Posthumous Walter Hughes, Flintshire; Hugh Frazer Hurst, Belfast: Louis Conrad Jockel, Edinburgh; John Alexander Gailey, Annan; Tom Johnston Irvine, Lancashire; Benjamin Williams, Cardigan; Thomas Kearney, Dunmanway; Wm. Wynne, Merionethshire; Charles Edward Sharpe, Coleraine; Patrick Charles Gorham, Clifden; John Malcolm Scott, Mid Lothian; James Harries Davies, Llansawel.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their final examination, and were admitted Licentiates of College during the May examinations.

Alexander Robert Coldstream, Edinburgh; William Carey, India; John Young Pithie, Kirkcaldy; Alexander William Reid, Ceylon; Alexander Kenneth Stewart, India; William George Lemuel Law, Samoa, South Pacific; Andrew Denholm, Duddingston.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examination meetings of the College, held on May 12th, 13th, and 14th, the License to practise Medicine was obtained by the following candidates.

Billing, James Pymar
Dixon, Henry George
Langan, Francis
Limrick, Osborne Edward Barber
Longford, Henry
Patterson, Alfred
Taylor, James

The License in Midwifery was granted to:

Dixon, Henry George
Limrick, Osborne Edward Barber
Longford, Henry
Patterson, Alfred

MEDICAL VACANCIES.

THE following vacancies are announced:—

BIRMINGHAM GENERAL HOSPITAL—Resident Registrar and Pathologist: £100 per annum, board, and residence. Applications, 25th instant, to W. T. Grant, House Governor.

BORRISOKANE UNION, co. Tipperary—Medical Officer to the Workhouse: £60 per annum.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Borrisokane Dispensary District; £100 per annum.

CANCER HOSPITAL—Surgeon. Applications, 2nd June, to the Chairman of the Weekly Board.

CARLISLE DISPENSARY—Assistant House-Surgeon: £90 per annum, with apartments, gas, coal, and attendance.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodgings, etc., and the privilege of taking two apprentices. Applications, 2nd June, to H. Howells, Secretary.

DENHOLME GATE URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum. Applications, 3rd June, to George Burr, Clerk, Keighley.

DERBY COUNTY LUNATIC ASYLUM, Mickleover—Assistant Medical Officer. Applications to John Barber, Esq.

DERBYSHIRE GENERAL INFIRMARY—Assistant House-Surgeon. Applications to Samuel Whitaker, Secretary.

GATESHEAD DISPENSARY—Resident Medical Officer: £200 per annum, with furnished apartments. Applications to Joseph Jordan, Honorary Secretary.

GLASGOW ROYAL LUNATIC ASYLUM—Resident Physician-Superintendent: £600 per annum, house partly furnished, coal, etc. Applications, 12th June, to J. Roxburgh Strong, Secretary, 110, West George Street, Glasgow.

LEICESTERSHIRE and RUTLANDSHIRE LUNATIC ASYLUM, near Leicester—Assistant Medical Officer: £100 per annum, board, and lodging. Applications to W. Napier Reeve, Esq., Leicester.

LIVERPOOL DISPENSARIES—Three Honorary Medical Officers to the North and South Dispensaries.—Assistant Resident House-Surgeon: £108 per annum, increasing to £128. Applications, 27th instant, to W. Lister, Secretary.

MOHILL UNION, co. Leitrim—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Rynn Dispensary District: £100 per ann., and fees.

NEWCASTLE-UPON-TYNE INFIRMARY—Physician.—Junior House-Surgeon: £50 per annum, board, and residence. Applications, 30th instant, to R. Y. Green, Secretary.

NEWTOWNARDS UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Grey Abbey Dispensary District: £110 per annum, and fees. Applications, 5th June, to R. O. Young, Honorary Secretary, Innishargie, Kirkcubbin.

OXFORDSHIRE—Public Analyst.

PARISH OF LAMBETH—Resident Medical Officer and Dispenser: £100 per annum, board, apartments, and washing.

PRESTON URBAN SANITARY DISTRICT—Medical Officer of Health: £100 for one year. Applications, 8th June, to Robert Ascroft, Clerk.

ROYAL FREE HOSPITAL, Gray's Inn Road—Junior House-Surgeon.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician. Applications, 4th June, to C. Lowther Kemp, Secretary.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

STOCKTON-ON-TEES FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Surgeon: £100 per annum to commence, £30 per annum for rent and taxes, and Midwifery and Vaccination Fees. Applications to S. Gordon, 14, Sydney Street, Stockton-on-Tees.

SURREY COUNTY LUNATIC ASYLUM, Wandsworth Common—Junior Assistant Medical Officer: £170 per annum, furnished apartments, etc. Applications, 23rd instant, to Dr. Biggs, Superintendent.

SWANSEA—Public Analyst: £100 per annum.

UNIVERSITY COLLEGE HOSPITAL—Resident Medical Officer. Applications, 23rd instant, to John Robson, B.A., Secretary to Council.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne—Professor of Medicine.

WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £100 per annum, board, lodging, etc. Applications, 30th instant.

WELLINGTON (Salop) UNION—Medical Officer and Public Vaccinator for the Northern Division of No. 2 District: £80 per annum, and fees. Applications, 11th June, to George Marcy, Clerk.

WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £80 per ann., board, residence, etc. Applications, 15th June, to P. D. Bennett, Hon. Sec.

WESTERN INFIRMARY, Glasgow—Superintendent: £250 per annum, with board and lodging. Applications, 15th June, to W. H. Hill, Honorary Secretary, 106, Ingram Street, Glasgow.

WESTMINSTER HOSPITAL—House-Physician. Applications, 1st June, to F. J. Wilson, Secretary.

WESTMINSTER UNION—Medical Officer to the Industrial School at Tooting: £60 per annum. Applications, 27th inst., to W. B. West, Clerk, Poland Street.

WEST RIDING LUNATIC ASYLUM, Wakefield—Clinical Assistant, Applications, 23rd instant, to J. Crichton Browne, M.D., Medical Director.

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, furnished apartments, etc. Applications, 1st June, to the Chairman of the Medical Committee.

VACCINATION.—Dr. Jackson, public vaccinator for the Harraton district of the Chester-le-Street Union, has been awarded by the Local Government Board a gratuity of £41 3s. for efficiency in the performance of the duties of that office.

OXFORD SEWAGE.—The visiting justices of Littlemore Lunatic Asylum and the Local Board of Health of the city of Oxford having come to terms upon the question of water-supply, all further opposition to Mr. Bailey Denton's scheme of outfall and disposal of sewage is at an end. It is finally determined that the Oxfordshire side of the river shall receive the sewage for purification before its discharge.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Dr. E. Sparks, "On a Disease of the Skin caused by the Acarus Folliculorum, illustrated by cases observed in the Dog"; Dr. Lockhart Clarke and Dr. Gowers, "On a Case of Hypertrophic Muscular Paralysis".

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

POOR-LAW MEDICAL OFFICERS' ETIQUETTE.

SIR,—In looking over the BRITISH MEDICAL JOURNAL for the last week, my attention was directed to the notices to correspondents. It appears that Dr. Roe, one of the medical officers of this union, has been in communication with you relative to a case of insanity, and, from the reply given, it appears to me that the case was not sufficiently stated. Under these circumstances, I have thought proper to supply you with additional information respecting the case. About a week or so ago, the relieving officer was directed to attend upon a person of the name of William Pearce, residing in one of the parishes in the Fourth District of this union, for which Dr. Bethell is the medical officer, as it was supposed that the man was of unsound mind. After visiting the case, the relieving officer called upon Dr. Bethell, who instantly attended upon the man, and, after examining him, pronounced him to be insane and dangerous, and said that he must be removed to the lunatic asylum. As it was late in the day, and the wife being in great danger, the relieving officer considered it prudent to have the man removed to the workhouse (between nine and ten at night) until the following morning, when he was conveyed to the lunatic asylum. The medical officer of the district in which the lunatic was residing did not sign the certificate at once (although he might have done so without seeing the man again), but postponed doing so until the following morning, which he did in the board-room at the workhouse, as the relieving officer was most anxious that the man should be seen again by the medical officer (Dr. Bethell), and it was also a convenience for the magistrate to sign it at the same time.

I admit that all cases admitted into the workhouse come under the treatment of the medical officer of that establishment; but as the man was previously examined by Dr. Bethell before he was sent to the workhouse, surely he was entitled to his fee for signing the certificate. It was quite an exceptional case, the man being merely sent to the workhouse because he could not be removed to the asylum on the day he was examined, and for the protection of his wife; and I submit that there was no breach of etiquette on the part of the medical officer of District No. 4 in visiting the man at the workhouse for the purpose of signing the necessary certificate, nor was there any blame attached to the relieving officer for sending the lunatic to the workhouse for a few hours. I hope to see your decision reversed. I am sorry that the case was brought before your notice.

I am, etc.,
WILLIAM REYNOLDS, Clerk.

Bridgnorth Union, Bridgnorth, May 11th, 1874.

*** We concur in the view expressed by Mr. W. Reynolds, under the circumstances stated.

NOTICE TO ADVERTISERS.—Advertisements for insertion in the BRITISH MEDICAL JOURNAL, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

DR. SPENCER'S STETHOSCOPE.

SIR,—In answer to the inquiries of your correspondent C. J. P., respecting Dr. Spencer's stethoscope, I can inform him of cases in which I found it of much service. I was recently called upon to give medico-legal evidence respecting the pregnancy or non-pregnancy of a young woman on whom it was suspected a criminal assault had been committed four or five months before. The case presented some little difficulty, as the girl was a paralytic imbecile, and unable to give much information. There was no evidence of quickening, and the woman resisted a vaginal examination. I listened most carefully for the fœtal heart with the ordinary stethoscope, but failed to discover it. It was important that I should be able to give *certain* evidence next day. In this dilemma I used Dr. Spencer's stethoscope, and in a few minutes heard the fœtal heart and counted its pulsations; then (by means of the commutators, which are one of the chief features in the instrument) I discovered its exact situation—an unusual one. On again applying my ordinary stethoscope and listening intently, I could just hear the sounds of the heart. The sounds were so indistinct and muffled that, had I not known exactly where to listen, I should never have heard them. I was now able to give positive evidence of pregnancy, which subsequent events have verified.

Again, I had recently under my care a patient suffering from septicæmia. One morning, when auscultating the chest with Dr. Spencer's instrument, I distinctly heard crepitation, though neither myself nor a physician, whom I had in consultation, could discover anything abnormal with the ordinary stethoscope. In twenty-four hours, crepitation was marked, and could be heard on immediate auscultation. From what I have seen of Dr. Spencer's stethoscope, I am convinced that it will be found of very great value in investigating valvular sounds of the heart, in tracing murmurs, and, when sounds are confused, in separating and localising them. In the early stages of pericarditis, pleuritis, etc., the power of conducting sounds, with little loss of intensity, possessed by the new instrument, will often enable us to detect friction-sounds many hours earlier than by the stethoscopes in common use, and thus we may gain a day's march in our treatment. The case I have mentioned will, I think, help to prove its value in obstetric practice; and, although I do not consider that it will supersede the ordinary instrument, I have no doubt that it will be found a valuable—nay, more, a necessary—instrument in the hands of those who practise scientific auscultation.

I am, etc.,
WILLIAM A. CONCANON.

Lodway, near Bristol, April 1874.

J. H. P.—Some experiments on the production of fat, by the external use of cod-liver oil, were made by Klencke, and are mentioned in Stillé's *Materia Medica*, 3rd edition, vol. ii, p. 803. Klencke shaved young dogs, and rubbed them with cod-liver oil twice daily for three weeks. At the end of this period they were in as good condition as dogs to whom oil had been internally administered; their bile was found as rich in fat, and their chyle equally charged with corpuscles without nuclei. Similar changes were observed in the bile and chyle of a cat bathed twice a day for some time in the same liquid; and some oil was discovered in the urine of the animal, proving, it was supposed, its free absorption by the skin.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, May 16th; The Ayr Advertiser, May 14th; The West County Lantern, May 16th; The Scotsman, May 14th; The Brighton Examiner, May 19th; The Leicester Advertiser, May 16th; The Blackburn Standard, May 20th; The Hull Evening News, May 16th; The Sunderland Times, May 16th; The Auckland Chronicle, May 15th; The Blyth and Bedlington Star, May 16th; The Northern Daily Express, May 19th; The Sussex Advertiser, May 13th; The Newcastle Daily Journal, May 13th; The Bridgwater Mercury, May 13th; The Richmond and Twickenham Times, May 16th; The Brighton Daily News, May 18th; The Sussex Advertiser; The Bradford Observer: The Naval and Military Gazette; The Dorset County Chronicle; The Cork Daily Herald; The Cork Examiner; The Rochester and Chatham Journal; The Yarmouth Independent; The Northern Echo; The Hastings and St. Leonard's Chronicle; The Royal British Guiana Gazette; The Cork Examiner; The Manchester Guardian; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Lord Cholmondeley, London; Sir C. Trevelyan, London; Dr. J. Burney Yeo, London; Mr. Stansfeld, Redlands; Mr. C. W. Ryalls, London; Mr. Cæsar Hawkins, London; Dr. Bond, Gloucester; Dr. Wade, Birmingham; Dr. George Johnson, London; Dr. Moxon, London; Dr. Jagielski, London; Our Glasgow Correspondent; Dr. Galton, Norwood; Mr. W. J. Harris, Worthing: Mr. Lawson Tait, Birmingham; Mr. McGill, Leeds; Dr. Cogan, Chichester; Dr. Heywood Smith, London; Dr. J. Finlayson, Glasgow; A Staff-Surgeon; Mr. W. Reynolds, Bridgnorth; Dr. E. J. Syson, Salford; Mr. W. Draper, Boston, United States; Dr. H. S. Hatherley, Linton; Mr. W. H. Lewthwaite, London; Our Edinburgh Correspondent; Dr. Wilks, London; Mr. J. Morgan, Dublin; The Secretary of the Clinical Society; Dr. Livy, Bolton; Dr. Laycock, Edinburgh; Surgeon-Major Gore, Dublin; Dr. Russell, Glasgow; Dr. A. P. Stewart, London; Dr. Rumsey, Cheltenham; Mr. Byrne, London; Mr. F. A. Mahomed, London; Sir Edmund Lechmere, London; Dr. George Bland, Macclesfield; An Associate; Mr. H. G. Harper, London; Dr. Warner, Birmingham; Mr. Fairlie Clarke, London; Dr. MacCabe, Dundrum; Mr. E. L. Thurston, Ashford; The Secretary of the Royal Medical and Chirurgical Society; Dr. J. Hughlings Jackson, London: Mr Garrod, London; Mr. M. K. Robinson, Dover; Dr. Carmichael, Edinburgh; Dr. Holman, Reigate; Dr. Robertson, Glasgow; Our Paris Correspondent; Dr. Moore, Dublin; C. B., Malta; Mr. Gaskoin, London; The Secretary of the Pathological Society; M.D., R.N., Devonport; Messrs. Corbyn and Co., London; Rev. A. S. W. Young, London; Dr. Orange, Broadmoor; A Correspondent; Mr. Williams, Great Usworth; Mr. Wood, Ledbury; Our Dublin Correspondent; Dr. Maclagan, Dundee; Mr. Harding, Liverpool; M.R.C.S.E.; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Dr. Farquharson, London; Dr. Strange, Worcester; Dr. S. S. Dyer, Ringwood; Mr. P. H. Holland, London: Dr. T. L. Brunton, London; Rev. J. C. Robertson, Edinburgh; Dr. Rhodes, Bradford; etc.

THE HASTINGS PRIZE ESSAY,

1873.

ON THE PATHOLOGY AND TREATMENT OF OVARIAN DISEASES.

By LAWSON TAIT, F.R.C.S.,
Surgeon to the Birmingham and Midland Hospital for Women, etc.

I.

BEFORE discussing the pathology and treatment of diseases of the ovary, even in such limits as this essay must be restricted to, it is necessary that some account should be given of the anatomy and physiology of the gland; for, in proportion as our knowledge of normal processes has grown, the riddles of pathology have come nearer to our understanding. For interest, there is, perhaps, no gland in the body which surpasses the ovary; for, though it may be of comparatively little importance to the life of the individual, yet it and its functions may well be said to be the pivot on which our race depends. Even in the individual, though life may be endangered only in a certain class of ovarian diseases, yet the frequency of, and the discomfort attending, all the others are enough to exalt the gland into a structure of extreme importance.

The human ovary makes its appearance as a blastema on the Wolffian body about the seventh week of intrauterine life, this early part of its existence being absolutely identical with that of the testicle; and, though throughout its after history it has many differences from the male gland, yet it has so many resemblances to it, in anatomical structure, physiological purpose, and pathological change, that we are perfectly justified in going back to the ancient notion that it is the "testis muliebris", differing in its process of development from the testicle by undergoing fewer changes in growth and position; it displays what the other sexual organs also show, that the development of the male organs is an advance to a higher process than is seen in those of the female. It has its gubernaculum, though its function is limited; an excretory duct, differing from that of the male in being only occasionally attached to the gland; and a peritoneal investment, practically the same, though differing in detail from that of the testicle. One distinguished writer has further drawn a difference between these two glands, in that "the developing cells of the ovary are plastic or endermic, while the spermatic cells of the testis are epidermic". This view has really no sound meaning; for, seeing that the glands are originally identical, that they both carry on their functions by the formation and shedding of epithelium, and that it is only in these processes that they differ, it is impossible to give to them any difference in function. They are closely analogous even in their diseases, as we shall see; for, even in their malignant affections, the two great classes of cancer and cystic degeneration are conversely arranged, as might have been expected from the difference in the physiological processes. Thus cancer of the testicle is common, for the epithelial proliferation of that gland is rapid, and cystic degeneration is conversely rare; cystic degeneration in the ovary, on the other hand, is common, because the epithelial growth of the gland is one of slow cyst-formation, and cancer is correspondingly unusual.

In its development, the ovary becomes enclosed in a fold of peritoneum, known as the broad ligament of the uterus. Recent German writers, especially Waldeyer and Leopold, have asserted that, on the posterior surface of the ovary, the peritoneum does not exist. If so, it has become incorporated with the underlying coat, the tunica albuginea of after-life, for it must have that covering derived during its developmental transitions. A further analogy between the testicle and ovary has been asserted by Pflüger, that it has originally a tubular structure, and there are facts in comparative anatomy which support this view.

The ovaries at birth occupy the same relative anatomical position as they maintain in health throughout life; and they have, further, their peculiar physiological function, which they also continue to exercise, though its activity varies greatly at different stages of life. They are situated on a level with the inlet of the true pelvis, behind the Fallopian tubes and round ligaments. The left ovary is in front of the rectum, and the right in relation to a coil of small intestine which may occupy Douglas's pouch. They are outside the peritoneum really, that membrane, or its remaining epithelium, being ruptured at the escape of every ovum, and they are situated between the folds of the membrane, one on each side of the uterus, their posterior surfaces standing out beyond the plane of the broad ligament. They are attached to the uterus by a ligament of contractile tissue derived from the uterus and termed the ovarian ligament, and they are supplied by blood-vessels and nerves between the layers of the broad ligament, the blood-vessels corresponding in origin and distribution to the blood-vessels of the testis—the spermatic; and the nerves are derived chiefly from the renal plexuses of the sympathetic. The size of the ovaries varies with the different periods of life, and, to a less extent, so does their distance from the uterus. Henning's table of measurements is given below, the chiefly noteworthy fact given there being that the ovary is largest in the first six weeks after parturition. This may have been due to some pathological condition in those examined; but in connection with this it is curious to note the statements of horse-breeders, that a mare is more readily impregnated soon after the birth of a foal than at any other time.

Henning's Table of the Size and Position of the Ovaries at different Periods of Life and in various Social Conditions, in Centimètres.

—		Childhood.	Virgins.	Unchaste.	Married.	Multipara.	Puerperal.	Widows.	Divorced.	Menopause.	Old Age.
Length of the ovary	Right..	1.3 to 3.2	3.8	3.4	3.0	2.5	4.4	3.5	3.5	3.1	2.9
	Left....		3.7	3.8	2.8	2.4	5.5	3 2	3.1	2.5	2.7
Breadth ,, ,,	Right..	0.2 to 1.4	1.9	1.8	1.7	1.2	1.3	1.6	1.4	1.5	1.1
	Left....		1.5	1.7	1.5	1.2	1.4	1.7	1.4	1.4	1.0
Thickness ,, ,,	Right..	0.2 to 0.6	1.0	0.9	1.0	0.8	0.8	0.8	0.9	0.8	0.8
	Left....		1.0	0.9	0.9	1.1	0.9	0.8	1.0	0.8	0.9
Distance from the uterus..........	Right..	1.0 to 4.0	3.4	4.4	4.7	5 5	8.0	3.8	4.0	4.0	4.0
	Left....	1.2 to 3.7	3.3	4.5	4.7	5.0	7.0	4.2	4.2	3.7	4.5
No. of cicatrices ..	Right..	0	6	14	21	22	8	24	17	15	14
	Left....	0	9	13	21	21	8	26	18	24	11

Underneath the peritoneal covering of the ovary is the fibrous capsule, the tunica propria or albuginea, composed of ordinary fibrous connective tissue, and sending trabeculæ in all directions into the interior of the gland. Beneath this tunic is the "couche ovigène" of Sappey, which seems, however, to be only a layer of more active or more mature cells of the same kind as are found throughout the gland. These cells undergo a peculiar growth, enlarging, coming to the surface, and rupturing either under the influence of, or simultaneously with, menstrual excitement, when their contents are usually discharged into the uterus by the gland-duct; or this happens independently of such influence, when the contents are lost in the peritoneal cavity.

This peculiar cell-growth of the ovaries results in the formation of what are known as Graafian vesicles or the ovisacs of Martin Barry, and, although certain and specific names have been given to the different results of the process, it differs really only in degree from what takes place in any other epithelial gland. The Graafian vesicle is but a cell, the product of a gland formed, as all glands are, of basement-membrane, blood-vessels, and epithelium. The cell bursts and discharges its nucleus, as other cells are seen to do, but that nucleus has specific powers and goes through specific processes under certain circumstances, differing in this from all other cells. The gland, therefore, and its cells, having more highly developed and complex functions to fulfil than any other gland, is more peculiarly apt to suffer from disturbance; and, these special functions being in action during part only of the life of the individual, we find ovarian disease chiefly distributed in that time. The period of development and decay of these functions are also special times for ovarian troubles.

The cell-growth of the ovary is not, however, confined to the time of life between puberty and the climacteric change, during which the specific powers of the cell-nucleus are in existence; for Dr. Charles Ritchie has abundantly proved that the ovaries of newly born infants and children are occupied, sometimes numerously, by Graafian vesicles or ovisacs, which are highly vascular as early as the sixth year, and which vary in size from the bulk of a coriander-seed to that of a small raisin in the fourteenth year, at which time they are filled with their usual transparent granular fluid, and their contained ova can be detected. The Graafian vesicles contained in the ovaries prior to menstruation are found, as they also are in every other period of life, in continual progression towards the circumference of the gland, which they penetrate, and discharge themselves by openings in the peritoneal coat; the occurrence of the catamenial signs being thus not indispensable to their rupture. The ovisacs of a healthy menstruating woman are generally larger and more vascular than they are previously to puberty, and in their rupture there is a greater lesion of the peritoneum and a greater discharge of blood in the ruptured sac. The occurrence of pregnancy diminishes the activity of this ovarian cell-growth to something approaching its premoliminal state, and so also do certain diseases which have a wasting influence on the system, notably tubercular disease of the lungs and cancer. Lactation diminishes the activity of the cell-growth to a less extent. The cessation of the menses at the climacteric period, though it diminishes the activity of the cell-growth at once to a marked extent, never extinguishes it; for the development and extrusion of immature Graafian follicles ceases only with life itself. They are to be found of some size even fifteen or twenty years after the cessation of menstruation. In the early and late extrusion of immature cells, the hæmorrhage accompanying the process is either much less than it is during the period of greatest glandular activity, or it does not occur at all. It differs in no way from any other kind of hæmorrhage. A coagulum is formed in the cavity left, the rent slowly closes, and the coagulum slowly disappears; these processes, having nothing peculiar in them through all their stages, have been specially described and named; and, finally, the old dead ovary is found to be a tough fibrous structure covered with scars and still containing evidence of cell-growth.

The ovary, then, is simply a gland, developed as other glands, and formed of similar elements; its peculiarity is, that its cell-nuclei have special powers during a certain time of life; and this simplification of its physiology does much to simplify its pathology.

One other structure must be referred to more at length before we pass to the diseases of the ovary—its duct, or the Fallopian tube. This structure is formed from Müller's duct, in the embryo, from which are also formed the corresponding halves of the uterus and vagina; so that the Fallopian tube may be considered as part of the uterus. Its fimbriated extremity is formed from the ampulla of Müller's duct, and opens directly into the peritoneal cavity; during menstrual life, it has the special function of embracing the ovary to seize and convey into the uterus the extruded ovum. It is attached to the ovary by one of its fimbriæ, is enclosed in the broad ligament, has muscular fibre in its walls, and is lined by ciliated epithelium. Between the Fallopian tube and the ovary, between the layers of broad ligament, are to be seen the short tubes of the parovarium and the remains of the canalicules of the Wolffian body, and around these structures, between the layers of peritoneum, is some loose cellular tissue.

The most common diseases of the ovary are those due to incomplete or perverted functions. Some rare cases there have been of inflammatory attacks, of cystic degeneration, and even of cancer, of the ovary in infancy and childhood; but, as a rule, the ovary is free from disease till after the age of puberty. During infancy and childhood, the processes of cell-growth and shedding go on, but without any indication of their action until those mysterious changes take place which indicate that a new function of the organism is about to come into action, the maturation of the ovum, and the possibility of its impregnation. The chief external sign of this is the menstrual flow; but that this is no necessary part of the process is abundantly evidenced by the facts, that some women have large families without ever once having seen a catamenial discharge; that girls have become pregnant before the external evidences of puberty have appeared, a case of this kind having recently come under my own notice; and, further, that women sometimes become pregnant after the entire cessation of the monthly flow for many years. Since we know, then, that the ovarian cell-growth is quite independent of the menstrual flux, and that it may even complete its functions without it, we can only regard the flow as an accompanying phenomenon, and as neither a cause nor a result. That this is really the case is further proved by disease; for, in cases where both ovaries have been removed for follicular dropsy, and where it has been absolutely impossible that any evolution of ova could have taken place for many months, if not years, before the operation, the menstrual flow has occurred in normal regularity and quantity up to the time of the ovariotomy. On the other hand, we know that the flow of blood is intimately associated with the ovaries, for it usually ceases after the removal of both, and continues with uninterrupted regularity after the removal of only one, if the other be healthy; further, that any interference with the ovarian nerves, as their division by the écraseur or their inclusion in a clamp, will bring on the flow in a few hours.

The accession of puberty alters the nutrition of the ovary to the extent that, at the monthly periods, it shares in the general state of hyperæmia and excitement then common to all the sexual organs, and the whole economy seems to share more or less in the disturbance. Normally, this change takes place in the fourteenth or fifteenth year of life in this country; at an earlier date in hot climates. In strong, healthy girls, especially those engaged in active out-door work, still more those living a life approaching to the primitive state, the moliminal change is effected without suffering; but in girls brought up in refinement, of delicate habit and strumous parentage, there is much trouble. As a rule, this seems to be due to the onset of menstruation and the other signs of the change while the ovary is still in its infantile or incompletely developed condition; that is, it is forming incomplete cells whose nuclei are incapable of fulfilling their great functions, and the whole mechanism of ovulation is out of gear. In such cases, we find that the menstrual flux comes on either at irregular times or in insufficient quantity; or that, if it come regularly, it is overabundant, and it is always accompanied by severe ovarian pain. This arrest of development may be so complete that the ovaries may be said to be absent, though, clinically, this condition cannot be said to exist. The entire absence of the ovaries has been proved only in deformed fœtuses. The arrest of development may, however, be so complete that menstruation may never occur at all, or only once or twice. In such extreme cases, the development of the whole sexual apparatus is generally arrested, the sexual appetite is in abeyance, and there is comparatively little suffering after the first few months, during which an effort seems to be made by the system to establish the change. This is, provided epilepsy does not supervene; but it is only too common an accompaniment of arrested sexual development in women. Women who are thus affected have frequently an absence of those external peculiarities of their sex evident in roundness of form, a *prononcé* bust, smooth and hairless skin, and highly pitched voice; and they often partake in some slight degree of the characters of the opposite sex, especially in the growth of straggling tufts of hair on the upper lip and on the chin in a line with the canine and premolar teeth.

A greater number of cases have the arrest at a later stage, and in them menstruation is established, after much difficulty and suffering, between 16 and 19 years of age, and, though it may last with fair regularity, but deficient quantity, for four or five years, it then ceases completely. In many of these cases, however, if marriage should occur during the time that menstruation is in action, and if the patient should be fortunate enough to become pregnant, a cure may result; that is, her periods will become more abundant and her suffering less; her health will be improved, and she may go on menstruating for many years, and may even have a number of children. Even without the occurrence of pregnancy, marriage often establishes the health of a woman afflicted with arrest of ovarian development.

The great bulk of cases of this kind are those which are afflicted to a less degree, but whose sufferings are nearly always sufficient to require medical assistance; and it is a very singular fact that a very large percentage of the cases are found in women of splendid physical development, who, to any but one well acquainted with such cases, look the most likely to possess capacity for procreation. In these women, menstruation is established later than the normal time by a few months or a year or two. They have at first irregular times and much pain, but, after a while, the flow is established with normal quantity and regularity, and with but little suffering. In this way, they go on for eight or ten years, and, if they marry in the interval, their menstrual career may run an ordinary course. If they remain single, however, they begin to suffer from ovarian dysmenorrhœa between 25 and 30, and, after about ten years' suffering, they undergo a premature climacteric change. It is also noticeable in these women, that their menstrual function is suspended on slight provocation. Any chronic disease, even of an unimportant nature, any occupation which necessitates an overstrain on their system, mental anxiety or sudden fright, will check their menstruation for months or years, or, perhaps, for ever. In fact, this slight excess of functional power which the ovary became possessed of at their puberty is readily and soon exhausted, and its extruded cells, on slight provocation, assume an immature form, and the systemic conditions become correlated. In fact, ovarian amenorrhœa, and similarly to a less extent ovarian dysmenorrhœa, is a temporary resumption of the infantile condition of the ovarian functions; or, it may be, a complete and premature assumption of its senility. The amenorrhœa of pregnancy and lactation are partial resumptions of the infantile condition. This view has been admirably expressed by Dr. Charles Ritchie: "In early infancy, extreme old age, and long-continued organic disease, the ova are minute, transparent, and structureless; and, in advanced childhood, soon after the critical age and during pregnancy and lactation, they are more or less organised, larger, and, in the latter stage, are often so well maturated, that about one-third of the renewed pregnancies of married women take place while they nurse."

In these slighter cases of ovarian dysmenorrhœa, the uterus is generally normally developed, and it is frequently so in some of the most severe cases. There is a converse condition, where the uterus is infantile and the ovaries normal, much more rare and far more severe in its symptoms.

In ovarian dysmenorrhœa, the general symptoms are pretty constant and distinctive. Besides the menstrual irregularities and deficiency, there is almost always a persistent, sickening, and well marked ovarian pain, occurring in the less severe cases only at the menstrual periods, but in others being seldom absent and always greatly increased at the periods. It originates in the ovarian region, and shoots down the thigh, often also down the leg and round to the back. There is also often present, especially on the accession of atrophy, the peculiar submammary pain of ovarian disease, generally felt in the left side only. Headache, nausea, or even sickness and great general discomfort, are always present more or less.

In the milder cases, treatment is generally successful in mitigating the sufferings, and often the ovary may be made, even in some very well marked cases of arrested development, to fulfil its functions completely. First of all therapeutic remedies there stands iron, which will be found in such cases to be of great use, even though there should be no general indications for its employment. There can be no doubt that many forms of this remedy have a specific power over the sexual organs, male and female; for, in a case of chronic metritis or subinvolution, smart hæmorrhage may be induced by large doses of iron. In ovarian dysmenorrhœa, it is best given during the intermenstrual periods in small doses, one to five drops of the liquor ferri perchloridi, well diluted, and increased suddenly to fifteen or twenty for a day or two previous to and during the menstrual flow; or better still is the substitution for this large dose of an iron and aloes pill, there being few better combinations in the Pharmacopœia than that old-fashioned remedy. Hot hip-baths and leeches to the perinæum at the period are often useful additions, with an occasional blister on the sacrum. To such as this, the treatment of delayed or difficult menstruation at puberty, due to inefficient ovarian development, must be confined; for the other means are only allowable in very obstinate cases, after the patient has been married, or when there are indications of premature ovarian atrophy. Marriage is, perhaps, the most efficient remedy, and one we ought seldom to hesitate to recommend; for, even if the patients may not have children, they will have better health, and they may even become pregnant if they marry early enough and are not mismanaged.

The last and most powerful aid is mechanical irritation of the uterus; but, as it is not free from risk, and therefore requires careful use, it is not always to be recommended. It is, besides, in the class of cases where the uterus is most at fault that it is least risky and most serviceable. The method of irritation I generally employ, as the most convenient and least troublesome, is the insertion of Simpson's galvanic pessary. This instrument has by some writers been very much decried, but I think by those only who seem to have used it indiscriminately and without reference to a proper selection of cases.

The irritation set up by the presence of a galvanic stem in the uterus is communicated indirectly to the ovaries in a manner that is not as yet explicable, but that it has an influence is beyond doubt, and, if it remain within bounds, it is in a large number of cases beneficial. A large experience has shown me that it is only in occasional instances that the stem cannot be borne, and that, if carefully watched during the first few weeks of its use, these cases are easily eliminated. In a case where I have been led to regard the use of the stem as advisable, I always begin with a small size, and, after this has been worn for two or three months, I change it for a larger one. For the first week after its introduction, it is not unusual for the galvanic stem to give rise to considerable discomfort and even positive pain, but this usually passes off if the patient keeps her bed for a few days, and there is no further trouble save from the leucorrhœal discharge, which is a part of the process. The action of the stem is not purely mechanical, as has been stated; for, very soon after its insertion, the zinc becomes coated with an albuminous deposit, from which the copper is free, and the zinc becomes corroded. It is certain, therefore, that there is a galvanic action set up, and the stimulating effects are due partly to this, and partly to the interior of the uterus being constantly bathed in a weak solution of chloride of zinc. However produced, it is certain that the uterus rapidly enlarges under the action, and there is every reason to believe that the ovaries take part in the increased activity. If once the uterus become accustomed to the presence of the galvanic stem, it may be worn for many months, and the longer it is retained the more permanent will be the benefit; but, if after a trial of a few months, say four or five, there is no apparent alteration for the better, the attempt may be given up and the case considered as hopeless.

In a very large number of cases of incompletely developed ovaries, another remnant of infantile life is met with in an exaggeration of the normal curve of the uterus, amounting sometimes to complete anteflexion, and in this class of cases the galvanic stem is especially serviceable.

The results of my attempts to arrest premature atrophy of the ovary from any cause, when once begun, have been far from satisfactory; but this has been more especially the case when that atrophy has been due to a constitutional disease, such as tubercle. Sir James Simpson had a belief that the pretubercular amenorrhœa, so often seen in young women, was a cause of the subsequent disease; and he, therefore, directed his attention to the restoration of the utero-ovarian function, as a means of treatment or prevention of the consumption. From the views previously expressed, it will easily be seen that I consider his theory to be based on error, though in some cases his treatment would seem to have been successful; but how much of his success was due to local, and how much to general, treatment cannot now be determined. It is not, however, a practice likely to meet with many followers.

A singular condition has been noticed recently by Dr. Priestley, of termenstrual pain occurring about midway between the periods, which is almost certainly due to an ovarian condition, though it is not clear of what kind. Since reading his paper, I have seen two cases, but have been unable to refer them to any category.

[*To be continued.*]

CLINICAL LECTURE

ON A

CASE OF FATAL HYPERPYREXIA OCCURRING IN ACUTE RHEUMATISM.

By J. D. HEATON, M.D., F.R.C.P.,
Senior Physician to the Leeds General Infirmary.

ELIZABETH ELRIDGE, aged 23, a burler, was admitted an in-patient of the Leeds Infirmary November 17th, 1873. She was a well formed, healthy-looking young woman, of good family history, and had had good health till the present attack. About a week ago, she caught cold after being wet. She was feverish, had pains in the knees and ankles, but perceived no swelling. She took to bed; and, as she was getting worse, she came to the Infirmary.

On admission, her face was flushed; the body freely perspiring, and emitting the sour rheumatic odour; pulse frequent, rather hard, regular; much thirst; urine scanty. The auscultatory signs of the lungs and heart were quite normal. Temperature 104 deg.

℞ Misturæ salinæ effervescentis ℥iss 4tis horis.

November 18th. There was much articular pain, aggravated at night. Evening temperature 104.5 deg.

℞ Liquoris morphiæ acetat. f. ʒss; aquæ f. ℥j; horâ somni.

November 19th. The morning temperature fell to 102.8 deg.

November 20th. The morning temperature had fallen to 102 deg.; evening, 104 deg.

November 21st. She did not seem so well; felt very hot, but was perspiring profusely. The pain had very much subsided, being felt only in the left shoulder. Temperature throughout the day about 104.5 deg.

November 22nd. This morning, she said she was free from all pain. She had profuse sour perspiration; the pulse had risen to 136; temperature 104.4 deg. The countenance was good. A gentle friction-sound was heard in a limited space over the middle of the heart.

℞ Potassæ bicarbon. gr. xv; aquæ f. ℥j; 4tis horis. Horâ somni sumat quinæ sulph. ℈j.

During the evening of this day, she began to ramble a little; and towards midnight she became more excited, and attempted to get out of bed, and was noisy. The temperature rose to 106.3 deg. A scruple of chloral hydrate was administered, after which she became quieter; but she passed a restless night.

November 23rd. There seemed some improvement in the general symptoms. She was quite collected, and conversed rationally; but the temperature had reached the serious elevation of 106.75 deg. In the afternoon, the temperature rose to 110 deg., and she was passing into a comatose state. I was sent for, but before I arrived she was dead.

The *post mortem* examination was made twenty-three hours after death. The body was well nourished. *Rigor mortis* was imperfect. The blood was imperfectly coagulated. In the *Thorax*, the lungs were perfectly sound, free from adhesions, quite crepitant in all parts, rather full of dark blood. The heart was partially adherent to the pericardium anteriorly by recent lymph. There was not above an ounce of fluid in the pericardium. On the anterior surface of the heart, when removed, was seen a red patch two inches in diameter, roughened with recent lymph; and a similar patch posteriorly, of smaller size. The rest of the surface was smooth and normal. The substance of the heart was rather soft, not firmly contracted; the valves and internal structure were perfectly sound. In the *Abdomen*, all the organs were quite sound. There was copious urine in the bladder. The *Brain* presented no appreciable deviation from a perfectly healthy condition. The capillary vascularity of the external pia mater was thought to be rather exaggerated.

Cases of rather sudden death occurring in the course of acute rheumatism, not previously presenting any symptoms of unusual severity, have been recorded from time to time; and as, in several of such cases, cerebral symptoms, such as pain in the head and delirium, have preceded death, they have been attributed to rheumatic inflammation of the membranes of the brain; and since, also, some of these rapidly fatal cases have been marked by a sudden subsidence of articular pains preceding the development of cerebral symptoms, it has been customary to speak of such as examples of a *metastasis* of rheumatism from the joints to the membranes of the brain. But *post mortem* examinations have not produced any uniform result of distinct inflammatory appearances in the brain, such as are met with, for instance, in the pericardium when it becomes inflamed in the course of acute rheumatism; neither is the subsidence of previously severe articular inflammation an invariable incident in these cases.

A considerable proportion of patients who have died with these symptoms have been young, previously healthy, and experiencing an attack of rheumatism for the first time. Such was the case with each of the three cases recorded by Dr. Ringer in the *Medical Times* of 1867; such is the fact with regard to my own case. Dr. Wilson Fox's two cases of hyperpyrexia in acute rheumatism were both first attacks of rheumatism, but were aged 49 and 36; these cases recovered under the treatment he has invented and described in his book *On the Treatment of Hyperpyrexia.*

The symptoms of fatal hyperpyrexia occurring in acute rheumatism, as presented in most cases, are, subsidence of any existing rheumatic pain; increased frequency of pulse; rise of temperature; the occurrence of pericarditis in many cases, but this is not invariable, nor essential; pain in the head and delirium. When the temperature reaches to 110 deg., the natural tendency is to a speedily fatal result.

These cases are not to be regarded merely as aggravations of the rheumatic complaint. Some new disorder, having a pathology distinct from that of rheumatism, is superadded, giving rise to the special symptoms, and occasioning the fatal result. In some instances, the patients have been convalescent from the rheumatism, when hyperpyrexia has occurred, speedily terminating in death.

The one circumstance common to all these fatal cases is the extreme temperature of the body attained contemporaneously with the development of the serious symptoms, or shortly before death. Acute rheumatism not unfrequently gives rise to a high temperature. The evening temperature may reach 104 deg., or even 105 deg., especially if there be any pericarditic complication; but any higher temperature suggests serious danger, and few cases have long survived when the temperature of 109 or 110 deg. has been reached, the temperature continuing to rise until the patient is *in articulo mortis*, and even rising for a time after the heart has ceased to beat in some cases.

The simple treatment of the case reported left its spontaneous course practically uninterfered with, the only exception being the administration of a scruple dose of quinine, the effect of which (according to the report of the committee thereon, given in the third volume of the Clinical Society's *Transactions*) is markedly to reduce the temperature in pyrexia, but which in this instance had no very perceptible effect. The case may, therefore, be taken as a contribution to the natural history of hyperpyrexia.

The exceptions to the general result of death when the temperature reaches 110 deg. are afforded in the two cases recorded by Dr. Wilson Fox of University College, in which the extreme temperature was reduced by immersion of the patient into water of about the natural warmth of the body, of which the temperature was then gradually reduced, followed by the application of ice-bags and the free administration of stimulants. This treatment seems rather an attack upon the effect, or the symptom, than an attempt to correct or remove the cause; but it had the highest merit of saving the life of the patient in each case.

When I last saw my patient alive, on the day prior to her death, neither the general symptoms nor the rise of temperature were suggestive of immediate or very serious danger. When the danger was imminent, I was sent for, and attended without delay; but the patient's death just before my arrival prevented any attempt to follow out the plan indicated by Dr. Fox.

To the question, What is the cause of the greatly elevated temperature in these fatal cases? I fear we have at present no satisfactory definite answer. In the healthy body, some regulating powers maintain an uniform temperature, varying only within narrow limits. There must be calorific agencies continually at work, and the undue activity of these is restrained by opposite counteractive influences. What is the nature, respectively, of these calorific and restraining agencies? and is hyperpyrexia due to exaggeration of the former, or to failure of the latter?

We attribute the maintenance of animal heat to a slow combustion going on throughout the body; the oxygen inhaled in respiration is given off, in combination with carbon and hydrogen, and these combinations evolve heat. This must be regarded as a destructive process, whether exercised partly on nutrient substances in the blood, whilst yet unassimilated (according to the view that certain hydro-carbons, taken as food, are employed directly for the generation of heat, and not for nutrition proper); or whether exercised on tissues undergoing destruction in the continual process of decay and reproduction which is essential to functional activity.

On the other hand, it is certain that the healthy living body is endowed with the power of restraining extreme temperature, whether derived from external media, or developed within itself. The experience of persons who have survived accidental confinement in the heated atmosphere of buildings on fire proves this, as does also that of workmen exposed to the heat of furnaces in some manufacturing processes, as in that of puddling in the manufacture of iron. Many years ago, a man attracted a good deal of public attention, under the name of "The Fire King", who, amongst other performances, would shut himself up in an oven, of which the internal temperature was raised to several hundred degrees, with a raw beef steak, which, after a time, he brought out cooked, himself being uninjured. Whatever jugglery there might be in this performance, no doubt the man was exposed to a very high temperature. Profuse perspiration is generally regarded as one of the means by which the body is cooled, when exposed to high external temperatures, or when heated by violent exertion. But arrest of perspiration is by no means an invariable condition in the progress of a case of fatal hyperpyrexia; and it is evident that there must be some essential and continually acting physiological agency at work in restraint of the continual generation of heat in the healthy body. It is believed that the particular action whereby heat is rendered latent, which is directly opposed to that destruction of tissue by which heat is generated within the body, consists in the opposite process of the re-formation of cells and the development of tissue, by which growth is effected, and the nutrition of the body maintained.

This cooling process is essentially vital, whereas the internal combustion, whereby heat is generated, may be regarded as physical. And it may seem to be in accordance with this view that, in many cases, the approach of death and the act of dying, when vital powers fail, are accompanied by a marked elevation of temperature. The process by which the heat of the body is maintained, is allied to the development of heat in a hot-bed, or in a damp hay-stack, or that by which accumulations of waste in a cloth-mill occasionally become ignited; but in the healthy living body this generation of heat is kept within due bounds by vital agency. And this restraining influence is exercised and regulated by the subtle influence of the nervous system.

The experiments and observations of Claude Bernard, Brown-Séquard, Schiff, and others, lead to the conclusions that the increased warmth sometimes found in paralysed parts is due to a freer current of hot blood flowing through vessels relaxed and dilated by vaso-motor paralysis, and that the temperature from this cause cannot reach a high degree; but that the general condition of hyperpyrexia, in which a temperature is reached considerably in excess of the natural heat of the blood, is due to profound disturbance of the functions of the great nervous centres.

In meningitis, tetanus, direct injuries to the brain and spinal cord, and in typhus fever, puerperal peritonitis, pyæmia, and other blood-poisonings, hyperpyrexia not unfrequently precedes death; so also the effect of some poisons, having a sedative effect on the nervous centres, is to raise the temperature of the body. Woorara has this action; and my colleague Mr. Oglesby has shown, by experiments on animals, that both morphia and atropine have a primary effect of lowering the temperature, which is followed by a considerable elevation. Farther experimental inquiries into the effects of poisons, and of injuries inflicted on the brain and spinal cord, might lead to very valuable results. It is desirable, also, to ascertain whether hyperpyrexia is accompanied with increased exhalation of carbonic acid and watery vapour, as from increased combustion of hydrocarbons. There is not, in this state, any invariable increase in the excretion of urea in the urine, as from rapid destruction of tissue; but the state of the blood should be investigated, to ascertain whether urea is there accumulated. If we adopt the view that hyperpyrexia is due to some depressing influence upon the nervous centres, the administration of agents which are believed to stimulate the functions of the brain and spinal cord, such especially as phosphorus and strychnia, would seem to be a theoretically appropriate treatment of this condition.

ON THE REFLEX FUNCTION OF THE BRAIN: A CORRECTION OF DATES.

By T. LAYCOCK, M.D.,
Professor of the Practice of Medicine in the University of Edinburgh.

THE leading article in the JOURNAL of May 16th, "On the Comparative Study of Drunkenness", was instructive as well as personally interesting to me. It is a favourable omen when a general fact is made so practically available to diagnosis. As to the special points discussed, I would only add that injuries to the head, especially to the basilar region, may be mistaken for drunkenness, as they sometimes are, since they cause very similar symptoms. The facts of "reduction" have been long applied by me to mental pathology under the term "reversion".

I write, however, more especially to ask the favour of space in the JOURNAL for the correction of an error as to the date of my first introduction of the Reflex Function of the Brain to the profession. Dr. Carpenter, as quoted in your leader, has always fixed 1844 as the date, which is an error that I ought perhaps to have corrected sooner. It is true, that on September 28th, 1844, I read a paper "On the Reflex Function of the Brain" to the medical section of the British Association for the Advancement of Science, then meeting at York. But, on reference to that paper (which, with an important appendix, was printed in the January number of the *British and Foreign Medical Review* for 1845), the following introductory sentences will be found.

"Four years have elapsed since I published my opinion, supported by such arguments as I could then state, that the brain, although the organ of consciousness, is subject to the laws of reflex action, and that, in this respect, it does not differ from the other ganglia of the nervous system. I was led to this opinion by the general principle that the ganglia within the cranium, being a continuation of the spinal cord, must necessarily be regulated, as to their reaction on external agencies, by laws identical with those governing the spinal ganglia, and their analogues in the lower animals. And I was confirmed in this opinion by finding, after the investigation and collocation of known facts, that observations and arguments like those satisfactorily adduced in proof of the existence of the reflex function of the spinal ganglia, may be brought forward in proof that the cerebral ganglia have similar endowments. In the present paper, I propose to give these proofs connectedly." (*British and Foreign Medical Review*, vol. 19 (1845), p. 298.)

The "four years" that had elapsed since I called special attention to the subject, referred to the date of my treatise on the *Nervous Diseases of Women*, which was published in 1840, and which contains a chapter (p. 105) headed "The Instinctive Actions in Relation to Consciousness: the Brain subject to the Laws of Reflex Action".

But, in fact, this book was virtually a second or systematised edition of researches and conclusions regarding the various diseases of the nervous system peculiar to women, which were published during 1838-39 in successive numbers of the *Edinburgh Medical and Surgical Journal*. At that time, I was House-Surgeon to the York County Hospital, and began originally with a series of clinical observations and inquiries having in view to determine what were the special kinds of mental and cerebral disorders to which young women were liable. My primary object was to discover the true nature of the so-called mesmeric phenomena which the two sisters named O'Key were manifesting under the manipulations of the late Dr. Elliotson, and to this end it was necessary to ascertain how far they were cerebral and how far simulated. In this way, I accumulated a series of clinical observations of cases of hysteria in all their anomalies, and examined both the cerebral and the psychological phenomena of them in their relations to the anatomy and physiology of the nervous system. My inquiries into the diastaltic influence of the uterus and ovaries on cerebral and mental states led me to develope the laws of evolution in reference to both mental physiology and pathology; and I thus arrived at results which include much more than the theory of the reflex function of the brain, together with its applications. Some of these, as to evolution and reversion, were published in the Appendix to the paper read at York.

The then exceeding difficulty of these inquiries cannot be appreciated by the present generation of physicians and physiologists. Not only was it universally held that the mind or consciousness was the cause of all mental states, but, at that date, Dr. Carpenter, together with Alison, Müller, Reid, and others, strongly maintained that sensation was a cause of certain movements—*e. g.*, that pain caused the cries and writhings significant of pain. On the other hand, Marshall Hall had fixed the limit in the encephalon of his true spinal system to be at the tubercula quadrigemina; all above (he held) was the seat of the "soul", and beyond the range of physiological research.

The analytical essay in the *Edinburgh Medical Journal* for July 1839, but dated October 10th, 1838, contains many illustrations of my conclusions. I quote a passage in illustration of the views as to evolution of energy by which I worked.

"20. If we would obtain a large and definite knowledge of the action of force upon matter and intelligence, in exciting the phenomena of life and thought as displayed in man, we must examine the laws of its action as exhibited both in every living organism and in the molecular changes of inorganic matter. A thousand circumstances assure us that, between these last and the highest efforts of the human intellect, there is a continuous chain of phenomena, although we have been unable to follow it link by link" (p. 10). And I then give illustrations of evolutional relations.

The subjoined will illustrate what is now termed *automatic activity*. "Since external stimuli produce such changes in the nervous centres that the involuntary motions termed reflex follow—Can they produce analogous sensorial phenomena?" I adduce certain considerations in proof, concluding thus: "It will be easy to show that the excito-motory phenomena of Dr. Hall, confined by him to the spinal cord, have their analogues in the cerebral hemispheres. In short, that there is a large class of combined involuntary sensations or ideas which are excited secondarily from without, and may be termed excito-sensory, if Dr. Hall's nomenclature be followed." (p. 17).

Dr. Maudsley, in his valuable work on the *Physiology and Pathology of Mind*, claims for the late Dr. Griesinger priority in regard to the reflex function of the brain, who, it appears, published a paper in the *Archiv für Physiologischen Heilkunde* for 1843, entitled "Ueber psychische Reflexactionem mit einem Blick auf des Wesen des psychischen Krankheiten". I have never seen this paper, but I can affirm that, when I was in Germany in 1839 (and I graduated at Göttingen in that year, my papers in the *Edinburgh Journal* being accepted as a thesis), I found German physicians familiar with my views. My treatise was also subsequently reviewed in German periodicals; so that Griesinger could, if he thought right, use my researches to elucidate his own. As applied to mental diseases, in his systematic work, they are, however, being metaphysical, unlike mine.

I venture to trespass further on your space as to another class of morbid phenomena, namely, those caused by the *will*, *attention*, the *imagination*, and *suggestion*, and which are so common in mesmeric and like experiments. In the article on Reichenbach's and Gregory's researches referred to in your leader, and of which I was the author, I develope my principles as to these points; but then they were equally, although not so clearly, set forth in the essays and the treatise I refer to above. As to the morbid influence of attention on bodily organs, I certainly anticipated my late valued friend Sir Henry Holland, who had not published his views when I wrote in October 1838.

In his excellent work on *Mental Physiology*, lately published, Dr. Carpenter developes certain theories of the influence of the will and of attention on the "cerebrum," as he names the "hemispherical ganglia" of Solly and others. I do not concur with these theories, having learnt their weak points; but I would observe here, that I discuss them both in the papers and in the treatise referred to. In the latter, there is a chapter (p. 109), headed, "The Action of the Will, and of Internal and External Stimuli on the Hemispherical Ganglia," which is, for the most part, a *verbatim* reproduction of the views I published in July 1839, in the *Edinburgh Medical and Surgical Journal*. A short extract will serve to indicate how definite my inquiries were.

"184. From the preceding statements [as to the reflex motor action of the brain], it is obvious that changes in the sensorial fibres of the encephalon may originate internally as well as externally, and excite movements. Tickling the fancy will excite laughter as much as tickling the feet. In fact, it may be hypothetically supposed that there is a surface on which sensorial fibres terminate, connected with ideas, and which is analogous to [that of] the sensitive fibres on the skin and mucous membranes. It becomes a matter of some importance to inquire how far the will can act on sensorial fibres in general, and whether external or internal stimuli, acting upon them, can excite sensations, emotions, and ideas, simple and compound, corresponding to the whole class of excito-motory phenomena". (*Treatise*, p. 109).

I then adduce various instances of this action of the will. I show that new sensations can be thus excited, and that "the phenomena of mesmerism (so-called) are all illustrations of the power of the will over the brain." As to attention, I add, however: "An act of attention may be, and often is, involuntary and instinctive, when it is to be classed with the conservative, or rather with the excito-motory phenomena. Point at a nervous female, and she will complain of a sensation as if cold or warm air were blowing upon her. [I repeatedly thus induced this "aura" in hospital patients.] The sensation probably depends upon changes in the central terminations of the sensitive nerve, excited by the act of attention. Of a similar character are many sympathetic phenomena."

In making these corrections as to dates, I by no means wish to do more than set right what appeared to me to be oversight. I have no doubt Dr. Carpenter is sincerely anxious to do me justice, and I am sure no one has so clearly and fully developed my views as he has, and so has greatly facilitated the research. I hope, when I can secure leisure, to develope my views in relation to the will.

THE RELATION BETWEEN ARTERIAL TENSION AND ALBUMINURIA.

By GEORGE JOHNSON, M.D., F.R.S.,
Professor of Medicine in King's College; Physician to King's College Hospital.

I learn from Mr. Mahomed's paper in the last number of the Journal, that I had mistaken his explanation of the relation between arterial tension and albuminuria. I now understand his theory, but I cannot accept it as a satisfactory explanation of the facts. While I admit that there exists a physico-chemical, or, as some would say, a vital attraction, between the tissues and certain of the blood-constituents, I deny that Dr. Carpenter or any other physiologist has demonstrated the existence of a "capillary power", the mere diminution or suspension of which would so increase arterial tension as, when long continued, to cause hypertrophy of the muscular walls of the minute arteries. This hypothesis assumes the existence of a mysterious "capillary power", while it ignores the regulating influence of the muscular arterioles. And yet this regulating influence has been conclusively demonstrated by Bernard, Brown-Séquard, and others; and the doctrine has met with very general acceptance. We believe that, while the propulsion of the blood, and its regulated distribution to the various tissues and organs, are effected by the muscular contraction of the heart and of the arterioles under the influence of the vaso-motor nerves, the interchange of materials between the blood and the tissues during the processes of nutrition and secretion are the result of subtle chemico-physical or so-called vital attractions.

A true theory must be consistent with all ascertained facts. There are many facts which are not consistent with Mr. Mahomed's hypothesis. Let the following suffice for an illustration. In no cases of chronic Bright's disease is there greater arterial tension, in none are the minute renal arteries more constantly and conspicuously hypertrophied, than in cases of the small red granular kidney. This state of the arteries would, according to Mr. Mahomed, imply a great increase of capillary engorgement and pressure, and therefore a copious transudation of albumen; yet we find that in many of these cases the amount of albumen in the urine is comparatively scanty, and it may be entirely absent. These facts are intelligible if we admit that the contraction of the hypertrophied arterioles lessens the pressure on the capillaries in front; they are intelligible on no other hypothesis.

That a merely passive distension of the minute arteries, consequent on an obstruction in front, is not sufficient to cause hypertrophy of their muscular walls, is shown by the fact repeatedly observed by Dr. Kelly and myself, that in cases of chronic incompetence of the mitral valve, involving long continued passive engorgement of the lungs, the muscular walls of the pulmonary arterioles present no appearance of hypertrophy. More than twenty years ago, when I first discovered the hypertrophy of the renal arteries in the granular kidney (*Med.-Chir. Trans.*, vol. xxxiii, p. 107), I endeavoured to explain the phenomena by a hypothesis similar to that which Mr. Mahomed now adopts; but I soon found that my explanation was inconsistent with pathological facts and with the established doctrines of physiology.

The main difference between Mr. Mahomed and myself is this. He believes that the increased arterial tension in cases of Bright's disease is the result of an impediment in the capillaries—a loss or diminution of "capillary power". I, on the other hand, maintain that it is mainly due to the resistance offered to the passage of the blood by contraction of the muscular arterioles under the influence of the vaso-motor nerves.

With reference to Mr. Mahomed's concluding remark, I would suggest that there is the same "unity of action" in the propelling heart and the regulating arterioles as in the detrusor urinæ and the sphincter vesicæ; the same, too, as in the muscular coats of the large intestine and the sphincter ani. It is incredible that the muscular walls of the arterioles have no other function than that of resisting the pressure which results from a diminution of "capillary power" in front.

Mr. Mahomed's explanation of the pathology of acute Bright's disease appears to be this. Poisoned blood destroys the attraction between the blood and the tissues. The result is an increase of arterial tension; then follows congestion of the capillaries, and, "from the fact of increased blood-supply, increased cell-production". Hence, according to this doctrine, an increased blood-supply to the tissues results from the suspension of the "capillary power", which is believed to be a motor force; and an increased tissue-formation is determined by a diminution of the vital attraction between the blood and the tissues. Surely these propositions are inconsistent with each other, and the supposed physiological mechanism would not work.

With regard to the proximate cause of albuminuria, it is unquestionable that blood-serum may transude through the walls of the Malpighian capillaries as a direct result of excessive pressure on the walls of the vessels, whether caused by an increased afflux of blood through the arteries, or an impeded efflux through the veins; but there is also good reason to believe that, while certain morbid materials are passing from the intertubular capillaries into the gland-cells, modifying their nutrition and causing a rapid desquamation, the same morbid condition of blood may result in an abundant passage of serous fluid through the Malpighian capillary walls, apart from mechanical pressure either on the arterial or the venous side of the capillaries. I have no doubt that the albuminuria and the intratubular structural changes which are characteristic of acute Bright's disease, are the result of something more than mere mechanical pressure on the walls of the blood-vessels.

CASE OF HYDROPHOBIA IN A CHILD.

By F. RHODES, M.D., Bradford.

Cases of hydrophobia have hitherto been so unfrequent, that few medical men have seen more than two or three cases, while the great majority have not even seen one. Notwithstanding this, it is apparent that the disease is now sufficiently common to make "Painful Death from Hydrophobia" a very constant heading in the newspapers, and to cause the intractability of the disease to be a most serious consideration.

At the onset, the diagnosis is no doubt difficult, from the rarity of the disease, and thus appropriate treatment is delayed until the pathognomonic symptom—dread of water—is fully developed. This, however, eventually comes on, the history of the bite is revealed, and the case draws quickly to a conclusion, giving scant opportunity to the physician to employ his "remedies".

The reports of cases of hydrophobia should especially state in what way the original wound was treated, and how long it was after the bite before such treatment was adopted. The following case, which occurred in my practice recently, may be of interest.

On the evening of January 27th last, I was called to see a little boy between sixteen and seventeen months old. I was informed that he cried, and had a "shivering fit", when moved. I examined him carefully, to detect tenderness about the spine and other parts, but did not succeed in finding any; yet, upon the slightest movement, he started and cried. The child would not drink, and, supposing that there might be disease of the cervical vertebræ, pharyngeal abscess, or some disease about the fauces, I endeavoured to obtain a good view of the back of the throat; but, as he struggled violently, the mother would not permit me to persevere, and I merely saw that there was phlegm at the back of the mouth. I also examined the teeth, but the child held its mouth so firmly closed that this was difficult. The pulse was 160, and the temperature in the axilla about 101 deg.

On December 26th, 1873, the child was found, after having been left a short time, lying crying upon the floor, and the dog beside him, according to the supposition at the time, licking a wound upon the child's cheek, inflicted by a fall which the little boy had apparently had. The parents, however, seem to have had some misgivings about the nature of the wound, and in a few days obtained the advice of a surgeon in Halifax, where they then resided. The wound was then covered with a scab, and nothing could be made out regarding it. Upon inquiry, the father of the patient told me that the dog was his own, and that it was not mad. The marks upon the child's face were now clearly those caused by a bite. Two days before I saw him, he began to show signs of restlessness, and, according to the father, appeared as though he had "caught cold". There had been slight cough, but not of a barking character, and throughout it did not assume that form. Upon the morning of the day before I saw the child (the 26th), it drank some tea all right, but did not eat, and it was noticed to start when asleep.

On the morning of the 28th, the dread of movement continued, and that of fluid also. The child had not slept during the night. The mother then, apparently more anxious for the safety of the child than desirous of vindicating the character of the dog, gave me the following account: The dog, a valuable smooth fox-terrier, had always been very savage, and was much disliked by the neighbours. It did not bite at everything in its way, but the day after the child was bitten, when out with the child's father, it attacked every dog it met, and, among others, bit a cur dog kept at the next house. This dog had a great deal of hair on, and perhaps owing to this cause had, on January 28th, when I caused inquiries to be made, shown no symptoms of rabies. On the same day that the child was bitten, they found the cat dead in the cellar, whether worried or not, they did not know. The doctor advised that the dog should be poisoned, and this was accordingly done.

The child passed urine normally. There was no frothing at the mouth, but the tongue was coated with viscid saliva. In the evening, the same symptoms were apparent, the child going into paroxysms of fright if a cup were brought near him, and yet he could swallow when forced to do so. The pulse was 180 in the minute. The child died early next morning, death appearing to result from exhaustion. There were no convulsions. The period of incubation was thirty days, and the duration of the disease about four days.

The treatment adopted consisted of an aperient powder, containing rhubarb and calomel, which acted upon the bowels, wet sheet packing, and a mixture containing bromide of potassium and tincture of conium in ordinary doses. Ice was ordered, but, I believe, was not obtained.

I have nothing new to offer with regard to the treatment of this affection. Whether large doses of succus conii, or the application of electricity in some form, might allay the painful spasmodic action of the muscles of deglutition, I cannot say. Chloroform and sedative hypodermic injections would, no doubt, be useful in some cases. Whether or not successive transfusions of blood from some animal not subject to hydrophobia, might be of service as a palliative and restorative until the crisis were passed, without experiment it would be rash to speculate, especially as we do not know when such crisis would occur; indeed, from the invariably fatal result in the human subject, we scarcely know that it would occur at all, except that, by analogy, we may infer that it does, as cases of recovery in the dog are said to take place.

In the ordinary preventive measure of applying caustic to the wound, I have little faith. If the dog be not mad, it is a needless cruelty; and if it be, from what we know respecting the rate of the circulation, and the rapid action of drugs used hypodermically, we may be sure it is of no use if the true skin be penetrated, unless the virus takes its stand temporarily in the tissues around the bite, and requires to undergo development there. If we can, by excising a hard chancre, prevent constitutional syphilis, we may hope similarly to prevent hydrophobia by excision of the wounded part, and the subsequent application of caustic. Very probably, inflamed and suppurative glands are often produced by the free application of caustic to wounds, thus inducing, in debilitating subjects, a cachectic condition, if not so fatal as the disease we hope to prevent, still much worse than what would really have ensued.

A CASE OF APHASIA.

By E. SCOTT JONES, L.R.C.P., Honorary Medical Officer to the Weston-super-Mare Sanatorium.

MR.——, a gentleman 32 years of age, had always been a hard drinker, and led a very dissipated life. He had occasionally been under my care for bilious attacks, etc., brought on by his indiscriminate way of living.

One afternoon, in the month of August 1870, he came into my consulting-room, complaining of a pain in his right eye. He evidently had been drinking. I accordingly did not pay much attention, and ordered a mustard plaster behind the ear, and a little aperient medicine.

The next day, I was sent for, and was informed by the wife that she considered her husband very queer; that he had been tipsy the night before, but did not appear to recover. He had slept well. He appeared to me very much the same as I had seen him on former occasions, when under the influence of alcohol; but, on closer examination, I found him suffering from aphasia. On my showing him my watch, and asking him the hour, he told me quite wrong, and, in fact, could not talk sense.

Were I to relate the whole history of this case, I fear it would be tedious to my readers. Suffice it to say, he continued in much the same condition until the commencement of October, sometimes getting better, and then again falling back. He was able to walk out, and looked well, and recognised his friends, but always addressed them by the wrong name. If asked to repeat the alphabet, he invariably mixed the French and English together, and, in fact, presented all the aphasic symptoms. At the commencement of October, he was obliged to take to his bed, and gradually sank into a low typhoid condition, death being ushered in by convulsions.

At the necropsy, all the thoracic and abdominal viscera were healthy, but the brain, although I made the examination only six hours after death, showed general softening; in fact, the whole of it was in such a state of degeneration, that it was impossible to make any proper examination.

THERAPEUTIC MEMORANDA.

TREATMENT OF ROUND-WORM.

IN the JOURNAL of May 23rd, several cases of round-worm are reported. A peculiar case came under my care as an out-patient at the Bristol General Hospital in February last. The patient, a child aged one year and eight months, had been suffering for three weeks with a very irritable state of the bowels, so much so that it could not be kept clean; and during an evacuation a round worm was passed. The child looked pale and ill; it had been fed with the ordinary diet of the house and pork. A mixture of a grain of santonine and syrup was ordered to be taken three times a day. On the next visit (four days), the child had voided forty-six round-worms. It seemed more cheerful, and was to continue the mixture. At the next visit, fifteen more had passed, making in all sixty-two worms. Afterwards the child improved rapidly.

THOMAS E. CLARK, M.D., C.M., Clifton.

SURGICAL MEMORANDA.

TREATMENT OF PALMAR ANEURISM.

MR. CRIPPS's interesting, but most troublesome, case of traumatic palmar aneurism illustrates the serious nature of the disease when treated on the established principle of laying open the sac in order to secure the wounded points. Five cases are mentioned by Mr. Cripps as having been treated in this way; three died of secondary hæmorrhage, and two were cured, one of these being Mr. Cripps's own case, in which, after several recurrences of bleeding, the ulnar radial arteries were first tied, but without avail, then the brachial with success. Nine cases were cured by pressure, two others were treated by ligature, and one by injection. I can add another case to the list cured by pressure, which will, perhaps, be of interest in connection with the preceding one. On May 1st, a healthy-looking man, aged 30, was admitted to St. Thomas's Hospital under my care. He had cut the palm of his hand a month previously with a saddler's knife, near the ulnar border. The wound, which was strapped up by a doctor, soon healed, and for three weeks he experienced no trouble. Then the hand began to swell, and he experienced much pain. On admission, a week after, the tumour was of the size of a walnut, occupying the ulnar border of the palm close below the wrist. The skin over the most prominent part was thin and red in colour; the pulsation was very strong, and the tumour very tense. Compression of the arteries at the wrist stopped the pulsation, and the sac could be partially emptied. Subcutaneous injections of ergotin, with instrumental pressure on both radial and ulnar arteries near the wrist, were tried until the following day. No good effect followed; the tumour was larger, more tense, and the skin seemed likely to give way. The forearm was now carefully bandaged with flannel, placed upon a posterior splint, and well elevated upon pillows; the tumour itself was left uncovered, and an ice-bag laid upon it. Digital pressure was now applied to the brachial artery, the directions given being, that no drop of blood should be allowed to pass. After an interval of forty hours, the aneurism was found to have become harder, and without a trace of pulsation. The following day, it was imagined that slight pulsation could be detected; this became next morning somewhat more distinct, and was perceptible during the next eleven days; but it was always very faint, and the tumour, nevertheless, continued during the whole time to diminish steadily in size. By way of precaution, digital pressure was applied afresh for twenty-four hours without altering the condition of matters, and the arm was constantly kept upon the splint. On the 16th, a fortnight after the pressure was commenced, it was observed that, during three or four hours at a time, the pulsation wholly disappeared; would then return for a few hours, and again disappear. During this interval until the final disappearance on the evening of the 16th, it was clear that the cause of the pulsation was a supply of blood from the radial artery; pressure on that artery stopped the pulsation; pressure on the ulnar artery produced no effect whatever.

To-day, May 26th, I may pronounce the patient cured. There has been no pulsation in the aneurism during the last ten days. The tumour is being gradually absorbed, and is now about one-third its original bulk. I conclude that the return of pulsation was due to the contraction of the soft clot formed in the sac, allowing a certain quantity of blood to enter from the distal or radial side. So far as it goes, this case encourages me to further employ pressure in these cases, and I feel convinced that it is better, and more likely to prove successful if we at once apply the pressure to the main trunk, rather than to the radial and ulnar arteries. The long and superficial course of the artery renders it very easy to compress without inconvenience or suffering to the patient. Where the alternative lies between tying the brachial artery, the radial, and the ulnar, I am inclined to think the former the preferable course, as affording greater security against recurrent hæmorrhage.

William Mac Cormac.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

WEST LONDON HOSPITAL.

EXTRAVASATION OF URINE: OPERATION: RECOVERY.

(Under the care of Mr. Teevan.)

Charles T., a book-traveller, aged 48, admitted into the hospital with extravasation of urine, was seen by Mr. Teevan on February 18th, 1874, at 3 p.m. The patient, who was of feeble and cachectic appearance, had suffered from some half-dozen attacks of gonorrhœa upwards of twenty years ago, for which he was treated by medicines and injections. About twelve years ago, he commenced to experience difficulty in micturating, which gradually increased from year to year till last October, when he was confined to bed with two abscesses in the perinæum, which burst of their own accord, and gave him much relief by enabling the urine to escape through the fistulæ that resulted. A few days before admission, urine ceased to come as usual, and not a drop passed through the penis.

When seen by Mr. Teevan, the patient was in a very critical state, and suffering much pain. The affected parts were greatly swollen, of a dark purplish colour, and fluctuation could be felt in the perinæum. Some chloroform having been administered by Mr. Webber, the house-surgeon, the patient was brought to the bottom of the bed, and placed in the lithotomy position. Mr. Teevan, having placed his left forefinger in the rectum, thrust a long straight bistoury into the median line of the perinæum, and cut upwards for about three inches. Much blood and broken-down tissue gushed forth, and about a couple of ounces of pure pus followed. Mr. Teevan now tried to insinuate a large elastic olivary catheter into the bladder by sliding it along his left forefinger, which he had placed in the wound; but a few more touches of the knife were required before the instrument slipped in and drew off a small quantity of bloody urine. The catheter was immediately withdrawn, as it had demonstrated the fact that there was a free channel all the way to the bladder. Incisions were then made into the scrotum; the penis was punctured in many places; and the whole of the parts enveloped in a charcoal poultice. At 10 p.m., the patient was very feeble, but free from any pain. He, however, rallied somewhat after drinking about a quart of milk.

February 19th, 10 p.m. A slight rigor took place last night, which was followed by a few hours' sleep. The patient was much better to-night, and took nourishment freely. All urine passed by the wound.—February 21st. A large piece of the scrotum had sloughed away, leaving the under surface of the penis denuded for about a couple of inches. No. 23 elastic catheter was passed into the bladder from the perinæum, and immediately withdrawn.—February 25th. The patient was very much better, the wounds looking healthy. The catheter passed to-day, and again on the 28th.—March 4th. As a few drops of urine had begun to come through the penile urethra, Mr. Teevan attempted to pass a catheter from the meatus, but failed. However, on the 7th he succeeded in introducing No. 14 through the entire course of the urethra. On March 11th and 14th, Nos. 15 and 17 were passed.—March 18th. The patient, who had been up daily for the past week, left the hospital to-day, as he wanted to resume business. Before he went, No. 18 was introduced with ease. The wounds were almost well, and nearly all the urine came through the penis in a large stream.

Mr. Teevan remarked that the case exhibited the results of a stricture when left to itself unchecked by the surgeon's art. In these instances of extravasation, it was better not only to make a free incision in the median line of the perinæum, but to demonstrate that there was an open passage all the way to the bladder. This was to be done by using a large elastic olivary catheter, which could be insinuated into the bladder when metal instruments often failed. If the patient were young and vigorous, any strictures anterior to the wound could be divided subcutaneously on a grooved staff passed down the penile urethra, by sliding a tenotome upwards beneath the skin from the perinæal wound; but, if the sufferer were old or feeble, the procedure were well delayed till he had perfectly rallied. In accordance with his usual practice, he left no instrument in the bladder; so that the patient was saved much annoyance, and the chance of a formation of a fistula greatly lessened.

BELFORD HOSPITAL, FORT WILLIAM, N.B.

CASE PRESENTING SYMPTOMS OF INTESTINAL OBSTRUCTION: ADMINISTRATION OF OPIUM.

(Under the care of James W. Allan, M.B., C.M.)

In the following case, the symptoms of intestinal obstruction were pretty well marked; viz., vomiting, constipation, twisting pain about the umbilicus, etc. There was no history of hernia; no indication of pyrexia. The pulse during the early part of the indisposition might be described in general terms as full, soft, and irregular. The tongue was brownish at times, but never decidedly foul. The treatment consisted in the continued administration of gum-opium pills (gr. i)—one every four hours, if required; an occasional enema and sinapism; restricted diet (beef-tea, chicken-soup, and raw beat eggs); and brandy and soda-water in small quantities at a time. The following are abridged notes.

J. McG., aged 76, carter, formerly of very intemperate habits, was admitted to the hospital on January 1st, 1874, with symptoms pointing to dyspepsia. On January 2nd, the patient requested an aperient from the nurse, as he was constipated. He got a dose of castor-oil. He began to vomit in the afternoon. The nurse gave brandy, but the vomiting continued. The vomited matter was described as being stercoraceous. I saw the patient late at night, on returning from a long journey. He complained of abdominal pain and twisting about the navel. I ordered a sinapism to be applied to the abdomen, a grain of opium in a pill every four hours, brandy, soda-water, and beef-tea in small quantities. An injection was given. The vomiting continued till 7 a.m. of the morning of January 3rd. On the 3rd, he had two motions from the bowels. His breath was peculiarly offensive. On the 4th, his state was favourable. On the 8th, he had had no motion from the bowels till to-day, when an injection brought away some fæcal matter. On the 10th, the bowels were moved. On the 15th, he was ill again. He vomited (not stercoraceous matter, however). He had pain in the epigastrium, which went on increasing till he was almost compelled to cry out; it then left him. The treatment was continued. On the 16th, he was better. On the 17th, the abdomen was fuller and firmer, but not tympanitic. On the 19th, he had neither motion nor vomit; he had pains. On the 21st, he was very ill; he had pain and swelling, and fancied he would burst. The abdomen was swollen and tender, and inclined to be tympanitic. There was no vomiting. He had a pretty natural motion from the bowels. The opium pills and restricted diet were continued. In the evening, he vomited (stercoraceous matter, according to the nurse). On the 22nd, he had had a good night. The pains returned this morning. He had neither motion nor vomit. On the 23rd, he had a fairly easy day. On the 24th, he had two motions; the stools were thin, yellowish, and frothy. Freedom from pain followed the motion. On the 26th, he had several motions; the stools were thin and yellow. On the 27th, he was quite free from pain. On the 31st, he had had no passage for three days. He was free from pain (by opium). On February 3rd, he vomited chocolate-coloured stuff twice. On the 4th, he had had no motion since January 31st. The pain had returned, and he had twisting in the abdomen. On February 5th, he was worse again, with vomiting and hiccup. The abdomen was full and elastic, but did not seem tender to the touch. He had an injection in the morning, which returned without fæcal matter. On the 7th, there was a yellow scummy motion from the bowels. He was better. On the 10th, he vomited yellow gruel-like matter. On the 11th, he had a motion. There was a bulging fulness in the abdomen. On the 14th, he had a fairly natural motion. On the 15th, he had some sherry wine at his own request. On the 21st, he had been pretty easy of late. The abdomen was somewhat tympanitic. On the 27th, he had vomiting. The abdomen was tympanitic. An injection was given, and was followed by very natural (pale) motion. On March 3rd, he vomited brown gruel-like stuff, with a horrible fæcal odour. He had three pills during the day. On the 4th, he was easier. He got no pills that day; had motions from the bowels. He died quietly about 1.30 on the morning of the 5th.

There was great emaciation, especially marked about the face, neck, etc. There was œdema of the lower extremities. No *post mortem* examination was made.

REMARKS.—Although the case terminated fatally, the curative tendency of the opium was admirably demonstrated. By means of the drug, life was prolonged, and the horrible sufferings connected with the case were kept in check most effectually.

ROYAL NAVAL HOSPITAL, HASLAR.

HEPATIC ABSCESS (CONTRACTED ON THE GOLD COAST), OPENING INTO PLEURA: DESTRUCTION OF LUNG: DEATH.

(Under the care of Staff-Surgeon W. J. EAMES, R.N.)

[Communicated by the DIRECTOR-GENERAL of the Medical Department of the Navy.]

A. S., gunner, Royal Marine Artillery, aged 25, was admitted for hæmoptysis on January 23rd, 1874, with the following history. He was suffering from hæmoptysis, which had now lasted for two months. There were no constitutional symptoms; his pulse was quiet; tongue clean; percussion-note normal; some roughness of respiratory murmur over the upper third of the left lung. He was invalided from Cape Coast Castle in October, suffering from hepatitis. He had been present at the operations at Elmina, etc.

The following remarks were made on his admission. He suffers from cough, with hæmoptysis. The percussion-note is fair over both lungs. The respiratory sounds are normal throughout, with the exception of some roughness and cooing sounds, which are heard over a spot corresponding to the third or fourth ribs on the left side. He suffers from dyspnœa on exertion. He is a well-formed, healthy looking man. There is considerable tenderness, increased by pressure, over the liver, the margin of which can be felt lower down than natural. The area of dulness is abnormally increased, and a feeling of hardness is communicated to the hand on palpation. There is no yellowness of skin. The bowels are regular. There is no constitutional disturbance. The sputa are of a serous prune-juice character, very abundant.

January 28th. The hæmoptysis continued; it was of a different character, being now bright red. The condition of the liver was unchanged.

February 5th. The pain in the right hypochondrium was much increased. He lay on his back. The pulse was normal; the tongue clean; the appetite fair. He slept badly, on account of the cough. The hæmoptysis continued.

February 18th. Up to this date, the hepatic pain continued to increase in intensity. The character of the sputa had changed; they were merely streaked with blood. Rough, creaking respiration was heard over the lower portion of the right lung posteriorly, but especially over the nipple. Pulse 95; respiration normal. Examination of the chest caused much inconvenience.

February 26th. He had some vomiting; the hæmorrhage had increased in intensity, but there was less tenderness over the liver. There were no rigors, nor constitutional disturbance.

February 28th. The symptoms were unchanged. The bowels were confined.

March 3rd. Increasing pain and enlargement of the liver.

March 6th. No constitutional disturbance. The hæmoptysis continued. The respiratory sounds, anteriorly and posteriorly, were of a blowing, hollow character, from clavicle to nipple; they were normal for an inch below, and were absent at the base, where there was complete dulness on percussion.

March 10th. A profuse attack of hæmoptysis came on, which was checked by small doses of turpentine; but the pain was so much increased that the patient begged that the discharge might not be stopped.

March 15th. He had a sudden feeling of faintness, which was quickly relieved by a little æther and ammonia. Pulse rapid. The breath-sounds were of a distant tremulous character, with some bronchophony; but no crepitation or moist sound was audible. The sputa were less abundant. There was no hæmoptysis.

March 28th. Pulse 138, thready. He had great pain in the back. There was considerable swelling over the liver, which communicated a feeling of fluctuation. The abdomen was distended with flatus.

April 1st. He coughed up during the night a large quantity of purulent matter. This was found to contain lung-tissue and hepatic cells. Afterwards he felt much easier.

April 5th. He had another copious purulent discharge from the lungs. He appeared to be progressing favourably.

April 10th. There was considerable swelling over the liver, which seemed to point in a circumscribed area of resonance, surrounded by solid substance. Pulse 108, small, and unfilled. He sweated profusely at night.

April 12th. He did not seem so well; the expression of his countenance was anxious. He was losing strength. Expectoration was profuse.

April 13th. An aspirator was introduced at the prominent part of the swelling over the liver, and five ounces of pus were evacuated, which gave relief. Respirations 40; pulse 120, small and compressible.

April 14th. He coughed up about 20 ounces of purulent matter. The symptoms were unchanged.

April 16th. The aspirator was again introduced, and about 28 ounces of fœtid pus were drawn off. He felt relief after the operation.

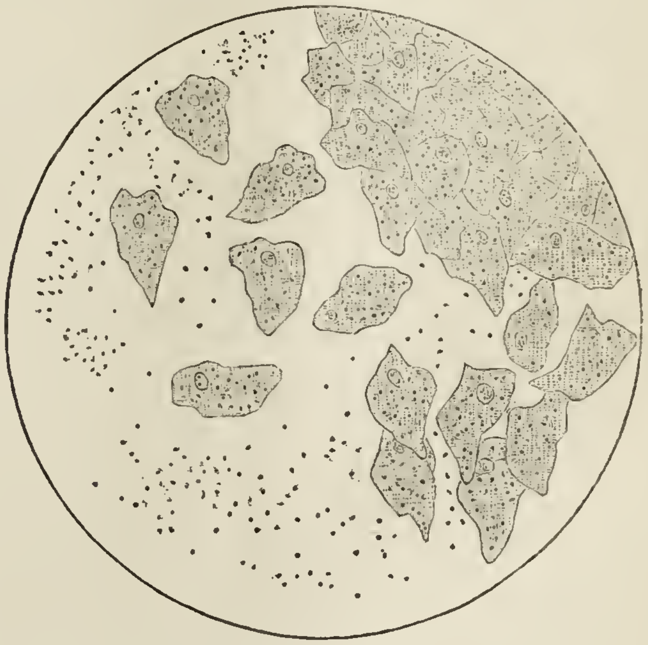
April 17th. He had a good night. Pulse 128; respirations 40; temperature 99.2 deg.

April 18th. He coughed up about 20 ounces of pus. There was considerable bulging and fluctuation between the sixth and seventh ribs. A cannula was introduced, and 30 ounces of purulent matter removed. At 11 P.M., great and oppressive dyspnœa set in, and he expired at 8.15 A.M. on the following day.

Post Mortem Examination Twenty Hours after Death.—The body was that of a well-formed man, not much emaciated. On opening the cavity of the abdomen, a huge abscess was disclosed, occupying the right hypochondrium, and containing upwards of 90 ounces of pus. The walls of this abscess were formed inferiorly, posteriorly, and to the left side, by the surface of the right lobe of the liver, covered by a villous pyogenic membrane. On the right side, the membrane was in contact with the anterior chest-wall, and had almost established an external opening by erosion and destruction of portions of the sixth and seventh ribs. The roof was formed by the remains of the lung, which consisted of a small portion of the apex only; all the remainder had disappeared. The liver had been displaced and pushed over to the left hypochondrium, the greater portion of which it occupied. The diaphragm, on the right side, was nearly destroyed; adhesions existed between what remained of it and the liver. On cutting into the substance of this organ, numerous abscesses were found scattered through it, varying in size from a pea to an orange. The largest of these had pointed and burst through the diaphragm into the pleura.

The subsequent course of events appears to have been as follows. The matter having been discharged into the pleura, before adhesions had been established with the lung, rapid destruction of that organ must have ensued. An opening for the fluid in two directions was then sought for; first, probably through the ribs; but that process proceeding too slowly, another method was adopted—viz., by again perforating the diaphragm, and completing for itself the enormous thoracico-abdominal sac which has been already described. The weight of the liver was 6½ lbs. The left lung was healthy, as were also the other organs. Some fluid was contained in the pericardium.

Microscopic examination of the liver showed the cells smaller than natural, each cell thickly studded with minute granules. At the same time, the nuclei were perfectly distinct. On the application of ether, the cells were rendered slightly paler, but without any dissolution of granules. On being subjected to the action of acetic acid, the granules disappeared, leaving the cell-walls delicately outlined: in some, the nuclei were then visible; in others, they had disappeared. A sketch is subjoined.



REMARKS.—The points of interest in this case are considerable. That such destruction of tissue and profuse suppuration should set in and continue, with so little constitutional disturbance, is quite unusual. At no time did the temperature rise above 100 deg. No rigors were met with at any stage of the disease, and very little hectic at its close. At no time was there a jaundiced condition of the skin, and the functions of the bowels were regularly performed. Such a very severe form of hepatitis is also (according to my experience) not commonly met with in West Africa. During a period of seven years on the station, I can only call to memory two other cases. Another point of interest, which I think should be looked upon as a diagnostic sign of great value in these cases, is the early occurrence and continuance of prune-juice expectoration. It is suggestive, I consider, of the inflammatory process having been communicated through the diaphragm to the pleura and lung, preparatory to ulceration and perforation of that septum. In this case, however, the steps which Nature had taken to secure the evacuation of pus through what is considered the safest channel, proved the destruction of the man, as the rapidity with which the lung-tissue was destroyed speedily changed the primary disease into one of comparatively secondary importance.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, MAY 19TH, 1874.

CHARLES JOHN HARE, M.D., in the Chair.

Fibroma of the Ovary.—Dr. GOODHART exhibited a specimen, the chief point of interest of which consisted in its showing the earliest commencement of fibroma of the ovary from the outer part of the tunica albuginea.

Secondary Cancer of Uterine Mucous Membrane.—Dr. GOODHART also exhibited a case where cancer of the ovary was the primary lesion. It occurred in a young woman aged 26, where ovariotomy had been performed three weeks previously. The Fallopian tube was full of a milk-white juice. The whole of the mucous membrane of the uterus was in an excessively diseased condition, the columnar epithelial cells being changed to tessellated, the glandular tubes having disappeared, and the muscular structure infiltrated with cells. It was very similar to a case shown by Dr. Moxon, where a portion of diseased epithelium had been carried from the throat and grafted on the trachea. It was a good specimen of the so-called spermatic influence, where the normal cells had been transformed into others of a different nature.

Fibroid Degeneration of Heart.—Dr. HILTON FAGGE showed a series of cases that had occurred at Guy's Hospital recently. The first case was that of a man aged 55, who had gangrene of the right lower leg. He had been a hard drinker, but there was no history of venereal disease. The temperature sank, and he gradually died. At the *post mortem* examination, the heart weighed 13 ounces. On the posterior aspect of the left ventricle, there was a patch of lymph of the size of a half-crown, with commencing adhesion. On section, it seemed as if a pyæmic abscess were present. The heart-substance consisted of a dullish greenish material, due to degenerative changes. The arteries of the gangrenous leg were plugged; but there was no reason to believe this to be due to embolism. The second case occurred in a man who had had acute rheumatism with cardiac dropsy, from which he died. The heart weighed 34 ounces. The pericardium was adherent, but did not seem to have interfered with the heart's movements. The left ventricle was dilated, but not proportionately thickened; the septum was enormously broadened, and the cavity of the heart five inches deep. The mitral valves were thickened. Regurgitation seemed to have been due to a want of contractile power. There was no indication to show that the fibroid change had extended inwards from the pericardium or outwards from the endocardium. The aortic valves were healthy. The third case was very remarkable, the ventricles consisting of tough fibrous tissue, containing aneurismal cavities in their walls, like little tunnels running horizontally. The patient, a female aged 30, had suppuration of the glands of the neck. The heart weighed 25 ounces. The lungs were firmly adherent to the pericardium, which was adherent to the heart, especially on the left ventricle. On section of the ventricle, the valve was found to be stretched across an elongated cavity. At the back of the ventricle, a large part was turned into a greenish substance, which could have been shelled out. A fourth case was that of a man who fell down dead whilst wheeling a barrow in the street. The heart weighed 16 ounces. The ventricle seemed healthy; but there was a whitish band of fibroid disease at the apex, no appearance on the surface being present to indicate this. A fifth case occurred in a man aged 66, who had hæmaturia from old cystic disease of the kidney, with carcinomatous degeneration secondary to general dilatation of the kidney. The aortic valves were calcified, and there was marked fibroid disease on the posterior wall of the heart. A sixth case was that of an old gentleman aged 85, who left home quite well, but died collapsed from the effects of a dense fog. The heart weighed 10½ ounces. This case was narrated at a previous meeting of the Society. A seventh case occurred in a man aged 69, who had been perfectly well until within five weeks of his death, when dyspnœa and dropsy set in, no cardiac murmur being detected. The heart weighed 22 ounces. The right side was dilated; the left dilated and hypertrophied. The mitral valve was healthy. The posterior wall of the ventricle was of a pale yellow colour, like fibrous tissue, of a gristly hardness. In these eight cases, the changes were greater in the posterior than in the anterior wall, contrary to the general opinion. In some, there was a large amount, and yet the patients lived; in others, only a small amount, and they died. The pericarditis seemed to be secondary. As regards the question of syphilis, there was no history or trace of any lesion in the majority of the cases. Fibroid degeneration was a bad term. Microscopically, many bands of fibrous tissue were found; not gummata or masses of material, but wasting or thinning of the wall. In one case, there was senile gangrene; and in several, arterial disease. Clinically, it seemed to produce all manner of symptoms: dropsy, dyspnœa, death. It was a question whether the muscular fibre of the heart itself was connected with this material.—The PRESIDENT said that Dr. Gairdner of Glasgow had met with several cases of this nature, but differing from those shown this evening. It seemed to originate in two separate and distinct ways: first, as a change of a previous morbid deposit; secondly, as a primary fibroid degeneration. He thought that in the aneurismal case there had been previous degeneration, producing softening. In one case he had noticed, it seemed to spread from the columnæ carneæ.—Dr. MOXON alluded to the widely spread belief that the softening was due to syphilis; and yet there was no trace of it in these cases. In one case, the disease of the glands in the neck, extending to the mediastinum, in connexion with fibroid disease of the heart, showed there was some common constitutional condition. It was a question whether, in some of these cases, it was not associated with rheumatism.—Dr. GREEN thought that several of the cases narrated were due to chronic adhesions of the pericardium. In two cases he had himself observed, there was adherent pericardium, with commencing fibroid degeneration, small cell-growth extending inwards through the muscular striæ. Many cases were the result of pericarditis interfering with the contractile power of the heart. In one case, there was thickening of the pericardium. In the majority of the cases, it was secondary to endocarditis and pericarditis. Others were due to syphilis, and others to primary fibroid change.—Dr. FAGGE explained that, in the case of the suppurating sore in the neck, the glands in the axilla were enlarged and hard. *Post mortem*, the connective tissue was found to be indurated, and the glands cheesy. Scattered tubercles were found in the spleen. In one case, there was a distinct history of syphilis.

Fatty Tumours in the Neck with Goître.—Dr. HILTON FAGGE showed a specimen of this condition occurring in a cretin aged 23. The thyroid body existed; and in the right lobe a distinct goître was present. He was only two feet high. In the skull, the calvarium was found to be adherent; the fontanelle was still open; the diploë like those of an infant. The form of the base of the skull was altered; the basilar process was elevated and sloped, exactly as described by Virchow. The cerebral bones were natural, proportionate to the brain. On the right of the thyroid gland, there was a pinkish tumour of the size of a walnut, the fat being suetty. Below the clavicle, similar lumps of fat existed. The heart was small, the testes infantile. Dr. Fagge exhibited photographs of three cretins occurring in a family of twelve, where there was reason to believe the mother was intoxicated at the period of conception. He had also met with a case lately of a boy, three feet high, a cretin, whose sister had a goître, which was endemic in the neighbourhood. The relationship between goître and cretinism was generally regarded as one of antagonism.—Dr. SQUIRE thought that the existence of iron pyrites in the water was a cause of goître. On a narrow strip of gault running through Bedfordshire, where the water was drawn directly from the gault, and iron pyrites were present, goître was very prevalent.

Bladder after Lithotomy.—Dr. FAGGE exhibited a specimen where this operation had been performed twenty-four years before. The cicatrix was well marked on the left side of the prostate.

Growth from Larynx and Trachea.—Dr. MORELL MACKENZIE exhibited a papillomatous growth in a lady aged 72, where thyrotomy had been performed. She had a large growth from the larynx, which was removed, but recurred. A growth of the size of a bean was found in the left half of the trachea.

Bronchocele from a Dog.—Dr. M. Mackenzie also exhibited a specimen of fibro-cystic disease of the thyroid. The dog was unable to bark, had difficulty in deglutition, and died. On *post mortem* examination, a fibro-cystic goître was found, a cyst containing three ounces of characteristic coffee-ground fluid being present in it. A sheep's knuckle-bone was found lodged near the upper portion of the trachea, which had caused ulceration, the lining membrane of the trachea being infiltrated. Bronchocele was rare in dogs, even in Derbyshire.—Dr. CRISP remarked that in the South American mountains, after a certain height, all the dogs had goître.—Dr. WHIPHAM alluded to the case of a dog he had, where some blistering ointment caused the skin to give way and a thin coffee-coloured fluid discharged, the dog recovering.

Fatal Hæmoptysis in an Infant.—Dr. DOUGLAS POWELL showed a specimen of this nature, chiefly interesting from the early age at which it occurred—viz., seven months. The child had a peculiar spasmodic cough, like whooping-cough, since four months old, with pigmented expectoration. The child died after expectorating dark blood. At the *post mortem* examination, the lower lobe of the right lung was found consolidated; the apex also with tubercular pneumonia. There were two small cavities in the apex of the right lower lobe, of the size of filberts. Across the upper cavity, was a vessel entirely exposed, blackened, eroded at the upper part, and ruptured; and from this the hæmorrhage had taken place. He had never seen a case of hæmoptysis in one so young. Acute miliary tubercle was also rare. The predisposition, in this instance, was very strong. There were no other children in the family living: the father and grandfather had both died from tubercle.—Dr. SQUIRE had seen hæmoptysis from whooping-cough which was not fatal.—Dr. HARE had seen a case of pneumonia in a child four years old, where hæmoptysis occurred, yet the child lived till ten.

Double Aneurism of the Thoracic Aorta.—Dr. THEODORE WILLIAMS exhibited a specimen, the chief feature being the presence of two aneurisms proceeding from different parts of the vessel. At the *post mortem* examination, the left pleura was found to be full of blood and clots, a ruptured aneurism being detected behind, which had corroded the ribs, the sixth and seventh being separated. In the right pleural cavity, another aneurism existed, which had eroded the vertebræ and ribs. Both aneurisms opened into the descending aorta; the right one by a button-hole aperture. The two sacs had separate openings into the aorta. The case was that of a commercial traveller, aged 37, who complained of dyspnœa. The pulse was 100; there was cardiac dulness, a loud double murmur with a diastolic murmur at apex. There was a complete absence of dicrotism. Dilatation of the heart was diagnosed. The symptoms improved for a time, he then wasted; the face became puffy; epistaxis occurred, and he died. The aneurism had probably existed from the commencement of his illness.

Femoral Artery which had been tied with Carbolised Gut.—Mr. CALLENDER exhibited this, and a series of gut-ligatures which had been subject to the action of wound-secretions. The artery was removed from a woman, aged 50, who died twenty days after amputation of the thigh. On *post mortem* examination, the artery was found to be closed by consolidated fibrine alone; there was no trace of the catgut-ligature. In experimenting with the catgut-ligatures in wound-secretions, he found that they would not hold for more than fifty or sixty hours, even when there was no strain on them. Another experiment was keeping carbolised gut-ligatures in distilled water, in an automatic digester, at a temperature of 99 degs. Fahr., for a hundred hours; not the slightest change had taken place then. He concluded that (1), in employing the ligature, we must depend upon the formation of a clot in arresting the hæmorrhage; 2. The ligatures did not hold for longer than fifty to sixty hours, and probably a much shorter time, making allowance for the strain; 3. The disappearance of the ligature was not due to fluid simply, but to the character of the fluid contained in the wound.—Dr. HEYWOOD SMITH asked whether the resistance of thick catgut would not be much greater than thin; it was a question whether the tension made it untwist. In ovariotomy, catgut-ligatures were not to be trusted, as they slipped.—Mr. JOHN GAY inquired whether it was necessary to keep the ligature in the vessel to keep up the constriction.—Mr. MAUNDER remarked that, in patients dying from pyæmia, no clot was found.—Mr. CALLENDER, in reply, stated that he had very little experience in ligatures. He always employed torsion. He thought that division of the internal and middle coats did not always occur; he had seen cases where it did not.

Mitral Stenosis with Hypertrophy of Left Ventricle.—Dr. WICKHAM LEGG exhibited a specimen where the common doctrine of the left ventricle being atrophied was reversed; the aortic valves were stiff; there was no high degree of atheroma; the aorta was narrower than usual; the kidneys were sound.

Cylindrical Epithelioma of the Liver.—Dr. GREENFIELD showed a specimen occurring in a female, who was much emaciated and died. On *post mortem* examination, the liver was found considerably enlarged, measuring nine inches. The surface was fat and covered with small nodules. The nodules of the liver presented a sharp outline, were surrounded by a fibrous capsule, and contained a creamy juice. On section, it seemed as if there were small tubules surrounded by a delicate fibrillated stroma. In the larger nodules, the stroma was more fibrous. It was supposed to originate in the bile-ducts, and was described by Rindfleisch as adenoma.—Dr. WHIPHAM had exhibited a specimen where cylindrical-epithelioma was present. The tumour was so broken down, that it was difficult to detect any cancer.

Syphilitic Narrowing of the Trachea.—Mr. PUGIN THORNTON showed a specimen. The patient had had a chancre, rash on the skin, sore-throat, and dyspnœa, for which tracheotomy was performed, the opening being very low down, near the stroma. The dyspnœal attacks increased in frequency, and the patient died. After death, thickening of the larynx and trachea, as far down as the bronchial ring, was detected. There had been symptoms of constriction, resembling those of an aneurism, pressing on the trachea.

Specimen of Adenoma.—Mr. GAY brought forward this, as being the continuation of a case that had previously engaged the attention of the Society; viz., that of a young woman who, thirteen years before, had a tumour removed from her breast. She recovered. Fourteen months afterwards, it recurred and was again removed, and subsequently a third time fairly and freely. It was composed of proliferous cysts, microscopically presenting the characteristics of spindle-celled sarcoma.

Photographs of Effects of Injury to the Ulnar Nerve.—Mr. NUNN exhibited these. In the first case, the nerve had been divided close to the pyriform bone. There was inability to extend the fingers, from paralysis of the interossei muscles. In a second case, a similar accident produced like effects. In a third case, syphilitic thickening of the ulnar nerve, near the condyle of the humerus, produced atrophy of the interossei muscles, but less deformity of the hand, though there was paralysis of sensation. If the nerve were completely divided, the hand became like a claw. The interossei muscles were the true extensors of the last phalanx.—Dr. VANDYKE CARTER remarked that the syphilitic lesion was similar to that produced by leprosy.—Mr. NUNN alluded to a case of an officer in the artillery, where a tubercular skin-eruption produced tumefaction along the course of the ulnar nerve.

Vascular Tumour from the Neck of a Child.—Mr. WILKINSON exhibited a specimen occurring in a child aged eight months. There were no symptoms of it at birth. It was as large as the half of an orange, situated in the upper part of the neck and sternum, and interfering with respiration. The parts were turgid, and the head congested. The skin was smooth on the surface, and movable; there was no pulsation; the tumour was firm and resistant. After death, the growth was found to be 3½ inches in length, and 2½ inches broad. The peculiarity was in its being fixed along the middle line more deeply; it lost the character of a tumour, and ramified out, encircling the thyroid body and reaching on the left side to the submaxillary gland. It consisted of dense trabecular structure.—Referred.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, MAY 6TH, 1874.

E. J. TILT, M.D., President, in the Chair.

Fœtus.—The report by Dr. SAVAGE and Dr. ROUTH on Dr. Willing's specimen was read. The fœtus was eleven inches long. The nails were well formed; the skin was pale red; the hair on the scalp was dark in colour. The cerebral convolutions and valvulæ conniventes were well developed. There was meconium in the intestines. The lungs with the heart attached, and also in pieces, floated freely in water. The heart, and the uterus, ovaries, and vagina, were well formed. The eyelids were non-adherent; the iris was well developed; the pupil moderate in size. There was no membrana pupillaris. The age of this fœtus was believed to be between the sixth and seventh month.—The PRESIDENT called attention to the point of interest in this case; viz., that a child apparently only five-and-a-half months old had cried lustily, and lived forty-four hours. The report did not confirm this; the age being nearer seven than five months.

Tapering Metallic Tubular Speculum.—Dr. J. HALL DAVIS exhibited a series, manufactured by Arnold after Dr. Davis's design. It had a trumpet-shaped external opening, the width of the speculum gradually diminishing from this to its smaller uterine aperture. The tube was suitably bevelled off at its uterine end; the edges were carefully rounded; and, when the instrument was accurately made, no groove existed where secretions could lodge. It was made in three most useful sizes, and produced in two combinations of metals—viz, nickel plated on copper, and silver plated on copper. This latter, as a defence against the action of nitrate of silver, was electro-gilt also for two inches of its uterine end. The advantages of this over Fergusson's glass silvered speculum were its non-fragility and its tapering form. The lengths varied from 5¾ inches in the largest to 5⅛ inches in the smallest. The diameters of the outer opening were 2⅓ inches in the largest and 2⅓ inches in the smallest. It need be replated only at long intervals, at small cost.—Dr. ROUTH thought one disadvantage would be, that it would tarnish readily, and would not resist the action of nitric acid, bromine, acid pernitrate of mercury, etc.—Dr. DAVIS replied, that this disadvantage did not exist in reality.—Dr. HEYWOOD SMITH objected to the metal being turned inwards at the vaginal end, as it formed a gutter, in which discharges would lodge. This would prove a great disadvantage in hospital practice, and might prove a source of infection from one patient to another.

Twin Abortion.—Dr. CLEMENT GODSON exhibited a specimen in which one embryo, five inches long, was much emaciated, and the other presented no trace of head or upper extremity. Though apparently of no more than three months' development, they were not expelled from the uterus until five-and-a-half months after impregnation. There had been no opportunity of examining the placenta. In Dr. Martin's *Atlas*, a monstrosity very similar to this was figured. He thought it an interesting question, whether the development of the head and upper extremity had been suddenly arrested, or whether they had become absorbed during the time which had elapsed between the cessation of vitality and the expulsion from the uterus.—Dr. JOHN WILLIAMS remarked, that the appearances presented by the upper surface of the trunk of the acephalous fœtus seemed to point to amputation as the cause of the malformation. Near the posterior margin of this surface, and in the situation of the spinal column, was a small, hard, firm projection. This appeared to be continuous below with the vertebral column, and was probably the amputated extremity of it, which had remained uncovered by soft tissue. The posterior margin of this surface was somewhat raised and round, and presented much the same appearances as were found at the margin of a recently healed wound.—Dr. Godson and Dr. John Williams were requested to draw up a further report.

Abnormal Presentation.—Dr. BARNES exhibited, for Mr. KESTEVEN, jun., the upper portion of the trunk and head of a fœtus where the arm, face, and a foot, had presented. The right hand and arm were projecting from the vagina, the left being immediately within or between them; the face presenting posteriorly; and between the pubes and the chin the left foot could be felt. Whilst preparation for turning was being made, the child was suddenly expelled, dead. This was explained by the fact of the total deficiency of the occipital bone. Extending backwards from the head, was a large soft bag, consisting of the scalp, the meninges, and the brain. Dr. Barnes remarked, that the chief point in this case was the difficulty in making a diagnosis, on account of the bag supplementing the head.—Dr. HEYWOOD SMITH suggested that a further report on the specimen should be presented to the Society.—The PRESIDENT requested Dr. J. Williams and Dr. Godson to do so.

Carcinomatous Tumour.—Dr. J. C. HAYES exhibited a carcinomatous tumour, originating, he thought, in the broad ligament, which, according to some anatomists, was properly recognised as an expansion of the uterus. The patient, aged between 30 and 40, was admitted in a very emaciated condition, almost moribund. No history was obtained. *Post mortem*, an irregular semi-elastic tumour, somewhat larger than the fœtal head at term, was found in the right iliac fossa. The bony tissue, as far back as the vertebræ, was superficially infiltrated with the morbid growth, which extended up between the layers of the broad ligament to within a short distance from the uterus and the ovary. These were quite intact. The pelvic, lumbar, and inguinal glands were only slightly enlarged, without being diseased. The microscopic appearances of the tumour were those of medullary cancer.—The PRESIDENT inquired in what way the bone was involved.—Dr. BARNES asked if there was any evidence of cancer in the other organs.—Dr. SAVAGE thought there was no reasonable objection to the view taken as to the cellular origin of the tumour, cancer being the offspring of cellular tissue or its allies. But might not the tumour have commenced in the bone? The uterus appeared to be free, adherent, but not involved. What was the state of the bony surface to which it so firmly adhered? Was it simply denuded, absorbed away by the pressure, or actually involved? The notion that the broad ligament was an uterine prolongation or offshoot, was an idea of Rouget's, which was abandoned long ago. One might as well call the mesentery a prolongation or offshoot of the intestines. Scarcely any smooth muscle existed in the anterior layer; only in the posterior layer of the broad ligament was it found. The fibres near and about the ovary were supposed by Virchow to possess a sort of corrugating function, not dissimilar to that performed by the dartos. There were no muscular fibres in the alar ligaments. The question of gastrotomy in these cases was worth considering.—Dr. HAYES explained that the bone presented the appearance of caries, being honeycombed.—Dr. SQUAREY had seen cancer originating in the glands and extending to the broad ligament.—The PRESIDENT requested Dr. H. Smith and Dr. Squarey to report upon the specimen.

Statistical and Practical Remarks on Consultation Midwifery in Private Practice.—Dr. E. COPEMAN (Norwich) read a paper on this subject, limiting his remarks to consultation cases only, most of them being of an unusually severe or complicated character. The total number amounted to 216, of which 198 recovered, 18 died—a proportion of deaths to cases of 1 in 12. There were 14 cases of craniotomy, with 1 death; 10 of convulsions, with 1 death; 78 cases where the vectis was employed, with no deaths; 23 of version, with 5 deaths; 6 of forceps, with no deaths; 12 of placenta prævia, with 1 death; 7 of previous separation of placenta, with 2 deaths; 19 of retained or adherent placenta, with 2 deaths; 28 of *post partum* hæmorrhage, with 1 death; 7 cases of twins, with 1 maternal death; 2 of ruptured uterus, both fatal. Craniotomy might be regarded as a safe operation, if not too long delayed. The crochet he regarded as a more or less dangerous instrument, and often very ineffective for accomplishing the object for which it was employed; he preferred the blunt hook. Twelve of the version cases were performed on account of placenta prævia. The vectis he look upon as a most valuable and efficient instrument, succeeding even where forceps had failed, being easier of application than the forceps, less formidable in appearance to the attendants as well as to the patient, and very seldom occasioning rupture of the perinæum or injury to the maternal soft parts.—Dr. BARNES remarked that the great and only fault of the paper was its extreme brevity. It scarcely afforded scope for discussion, as the conditions necessitating treatment were not given. There were two points worth noting: his preference for the vectis over the forceps; and, secondly, there were two deaths from hæmorrhage. This ought never to happen, if local treatment were regarded as the necessary complement to other remedies, and used at the proper time. The vectis was a lever, and must remain so; it could not be, strictly speaking, a tractor. We might bring the head down by pressing against the pubis. How it could be substituted for the long forceps, he could not understand, unless the handles were pushed into the vagina. When the head was in the pelvis, anything would do to effect delivery, uterine action being set up by the irritation or interference. The head being expelled, no tractile force was required; dislodgment of the head from an improper position was all that was requisite, and labour went on at once. The vectis might do as well as the forceps in some cases, where there was a want of adaptation of the head to the pelvis; but the vectis could accomplish less than the forceps, the latter being far better in most cases.—Dr. SAVAGE would have been glad to hear more about the treatment of convulsions, but nothing was said in the paper. The results seemed unusually satisfactory. It was a pity the treatment was not given.—Dr. EDIS thought that, in the cases given, the vectis had been resorted to where ordinarily forceps would have been applied by most practitioners; and, indeed, the sooner forceps came to be considered as aids to labour, supplementing defective uterine expulsion by traction, in place of their application being looked upon as a formidable operation, to be avoided as long as possible, the better for every one concerned. Dr. Hamilton of Falkirk had shown that the forceps might be used, not only with impunity, but with manifest advantage, in numbers of instances where even patients were allowed to exhaust their powers and expend their strength in fruitless efforts to overcome a difficulty that the forceps would remedy in a few minutes. Craniotomy would hardly be justifiable until forceps had been tried.—Dr. HAYES thought that the vectis lacked compressing force; it could only change the direction of the head. It was a question whether craniotomy had not been performed where the application of the forceps might have obviated the necessity. Statistics without details were practically useless.—Dr. WILTSHIRE presented to the notice of the Society a vectis procured from Dr. Copeman's instrument-maker at Norwich. He (Dr. Wiltshire) had gathered from Dr. Copeman's book that he regarded the instrument strictly as a tractor, and not as a lever. It was evidently a favourite with Dr. Copeman, as shown by the large number of cases in which he had used it; and, probably, in his hands was more efficient and safe than it was likely to be in those of others. The edges seemed very sharp.

Prevention of Post Partum Hæmorrhage.—Dr. BASSETT (Birmingham) read a paper on the propriety of administering iron during pregnancy, as a preventive of *post partum* hæmorrhage. Regarding pregnancy as nature's highest physiological work, and one that ought to go on without trespassing on the domain of pathology, he had been led to observe that those who had severe floodings during labour were uniformly out of health, weak, dyspeptic, nervous, listless, and evincing an aversion to animal food. The tone of the muscular system was impaired, and the blood in a watery condition, leading to irregular or feeble contraction of the uterus and hæmorrhage as a consequence. Iron, in these cases, had proved, in his experience, of great service in preventing *post partum* hæmorrhage, combined with potash where the urine was defective, or with soda if the liver seemed to be sluggish and the skin sallow, or with hydrochloric acid if the digestion were weak.—Dr. Barnes asked if any of the Fellows had ever seen any reason to suppose that premature labour had been caused by the administration of iron. He thought we had not sufficiently ascertained the changes and diminution of vital force induced by pregnancy. A series of changes of a most important kind occurred; and, if we only understood these, we might preserve our patients from the consequences. As a rule, pregnant women did not place themselves under treatment. He alluded to an instance where a pupil of his had given iron to a pregnant woman, who was, in consequence, accused of intending to produce abortion. Dr. Barnes himself had given it in dozens of cases, and had never witnessed any ill consequences, or instances in which abortion could be traced to its administration. He thought iron might safely be given where anæmia was present during pregnancy, to improve the patient's condition and lessen the risk of hæmorrhage during parturition.

New Method of Operating for Conical Cervix and Contracted Os Uteri.—Dr. Saboia (Rio Janeiro), read a paper on this subject. A silver suture was passed completely through the cervix, the wire was drawn out by means of forceps from the os uteri, divided, and the ends tied on either side, and allowed to work their way out, the wire being twisted and so tightened every eight days. They remained in one month, when the remaining tissues were divided by means of a bistoury.—Dr. Tilt thought that division would have been better in the ordinary way, the risk being less, and the advantage greater.—Dr. Edis concurred with the President, that it was hardly worth while making such a tedious operation, extending over a month, when it might have been done equally well, and more satisfactorily, in a few minutes, by a slight incision.

DUBLIN OBSTETRICAL SOCIETY.

Saturday, March 14th, 1874.

Lombe Atthill, M.D., Vice-President, in the Chair.

An Anomalous Labour.—Mr. C. D. Moutray read the notes of the following case. Mrs. D., who had gone through two tedious labours previously, entered her third labour on the evening of August 18th, 1873. The pains were frequent, but not strong, probably owing to an excess of liquor amnii, and there was anteflexion of the uterus, the fundus forming a conical projection behind the umbilicus. The atrophy of the abdominal uterine parietes was extreme. Suddenly a spasmodic and violent pain caused the discharge of the liquor amnii, and forced the head downwards, in front of the symphysis pubis, with the occiput in front, and carrying before it a pouch from the anterior wall of the womb. In this position, the head became wedged, and the forceps could not remedy the untoward state of affairs. After hours of anxiety, chloroform was given, and craniotomy performed successfully. The head of the splendidly developed fœtus was intensely ossified. The mother made a speedy and perfect recovery, and is once more *enceinte*.

Perchloride of Iron in Post Partum Hæmorrhage.—Dr. Atthill read a paper on this subject. He proposed three points as requiring to be decided, namely: 1. Whether cases of *post partum* hæmorrhage occurred which there was reason to believe would terminate fatally, or, at least, in which life was seriously endangered, notwithstanding the judicious use of the remedies ordinarily employed for the arrest of hæmorrhage; 2. Whether the injection of a solution of the perchloride of iron was of itself a dangerous remedy; and 3. If so, whether the dangers likely to follow its use were such as to outweigh its obvious advantages as an agent capable of restraining, with almost certainty, the further loss of blood? He detailed at length five cases occurring in his private practice, in which he had injected perchloride of iron to check *post partum* hæmorrhage. The only cases which seemed to demand this treatment were women in a previously bad state of health. Case No. 1 was that of a lady, who not only suffered from sickness to an excessive degree during pregnancy, but who, for a long time previously to, and, of course, during her pregnancy, consumed almost no food, and what she did take was of an improper character. No. 2 was markedly anæmic. No. 3 was in such bad health, as to cause much alarm to her friends on this account prior to labour. Cases Nos. 4 and 5 were the same patient. She, too, was on both occasions in a very bad state of health, so that the induction of premature labour seemed more than once demanded. In all, it might be fairly assumed that the blood was in an abnormal condition, probably destitute of its proper proportion of fibrine. In three of the four patients, pregnancy subsequently ensued—a fact which proved that the injection of the perchloride in no way injured the uterus. One patient died of peritonitis on the fifteenth day after delivery, although she had progressed favourably up to the tenth day. She had been very delicate during her pregnancy, and most copious hæmorrhage had followed the expulsion of the placenta. As the result of his experience, Dr. Atthill had arrived at these conclusions. 1. Cases of *post partum* hæmorrhage occur, in which the injection of the perchloride of iron, or some similar styptic, is alone capable of arresting the hæmorrhage. 2. The injection of such styptic does not necessarily increase the tendency which exists in such cases to the occurrence of pyæmia, septicæmia, or peritonitis. 3. This treatment is specially applicable to anæmic patients. 4. While it should never be had recourse to unnecessarily, it should not, on the other hand, be delayed too long. He never injected more than six or eight ounces of a solution, composed of one part of the liquor ferri perchloridi fortior (*B.P.*) to two parts of water. The end of the tube should be passed up to the fundus uteri, and the fluid should be injected slowly. In conclusion, Dr. Atthill pointed out the shortcomings of the ordinary means employed to arrest *post partum* hæmorrhage; the administration of ergot, pressure and friction over the fundus uteri, and the application of cold with the administration of stimulants.

Post Partum Hæmorrhage treated by the Application of the Solid Perchloride of Iron to the Interior of the Uterus.—Mr. A. Hill Ringland, having indicated the dangers possibly contingent on the injection of a perchloride solution into the uterus, as laid down by Dr. Snow Beck and admitted by Dr. Barnes, described how he had, in January 1872 (acting on the suggestion of Mr. W. Ormsby Wier), painted the bleeding surface of the uterine cavity with a small piece of the solid salt. The effect was instantaneous, the hæmorrhage stayed, the uterus contracted, vitality returned, and no untoward consequences resulted. Subsequently, out of a total number of 4,500 cases, he had applied the solid perchloride in twenty-three instances. Fourteen patients recovered well, three made tedious recoveries, one being the subject of constitutional syphilis, and two being threatened with pelvic cellulitis. There were six deaths. One patient sank on the ninth day, from phlebitis and advanced pulmonary consumption. A second suffered from complete adhesion of the placenta. A third died of the effects of hæmorrhage; and a fourth, on the ninth day, from simple asthenia. The two remaining fatal cases succumbed within three hours after delivery.—Dr. More Madden reviewed the opposite opinions entertained by obstetricians, as to the harmfulness or the efficacy of injection of perchloride of iron in *post partum* hæmorrhage. He believed this powerful agent to be, like every other active remedy, a two-edged weapon, its action for good or for evil depending on the manner of its employment. With Dr. Snow Beck, he was of accord in condemning its indiscriminate use. He himself had proof that the remedy was capable of producing the curative effects described by Dr. Barnes. Dr. More Madden had injected a solution of the perchloride in ten private cases since January 1st, 1870. In nine, the hæmorrhage was effectually arrested by the perchloride of iron, after the failure of all other remedies; and in one it failed completely. In seven instances the patients recovered perfectly; in three cases the patients died. But he believed the result in these cases had no connection with the use of the styptic, as in one case death resulted from typhoid pneumonia; in another, from secondary hæmorrhage in the course of small-pox; and the cause of death in the third was probably embolism. The last case was one in which Dr. Snow Beck, and those who adopted his views on this subject, would perhaps ascribe the fatal termination to the use of the perchloride of iron. But this opinion would not be justified by the facts of the case; for cases of sudden death resulting from embolism, as this clearly was, occurring after delivery, were unfortunately not rare. He had himself reported three such cases, which occurred whilst he was connected with the Rotunda Lying-in Hospital, and in which no perchloride of iron was used; and these cases were most common after hæmorrhage.—Dr. McClintock believed that Dr. Barnes had accurately described the use of the perchloride as a "new power". There were already powerful remedies for the suppression of uterine hæmorrhage; one was ergot, another was cold, a third was manipulation of the uterus, externally or internally (a most powerful agency, rather overlooked of late years), and a fourth was electricity. The use of the perchloride of iron was feasible, efficacious, and, as he believed, safe. He knew of but one case, reported by Dr. Bantock to the Obstetrical Society of London, in which death could only be attributed to the perchloride. In that case it had been used, not to stop, but to prevent hæmorrhage. It was possible that some of the fluid had escaped into the peritoneum. Dr. McClintock used a solution about as strong as the liquor ferri perchloridi of the *Pharmacopœia*. In Dr. Ringland's cases, he thought the arrest of the hæmorrhage was probably due to the powerfully stimulating action of the hand in the uterus. Dr. Collins had laid great stress on the efficacy of manipulation. With regard to the administration of the perchloride injection, Dr. McClintock attached importance to two points, viz., to carry the point of the tube well up to the fundus of the uterus, and to have the uterine cavity as free from blood as possible, so as to insure that the styptic fluid should come in contact with the interior surface of the organ. In his own practice, he had employed this remedy in four cases: in three, it was completely successful in stopping the hæmorrhage; and in one it failed, though twice resorted to, and the lady died of hæmorrhage. Symptoms of metroperitonitis ensued in one of the cases, but yielded to the treatment employed, and the patient recovered. On several occasions, where prolonged bleeding followed miscarriage, he had found good results from mopping the interior of the uterus with the perchloride solution.

On the motion of Dr. MacSwiney, the debate was adjourned.

Saturday, April 11th, 1874.

Evory Kennedy, M.D., President, in the Chair.

Hydatids of the Uterus.—Dr. Darby said that a hospital patient, under his care, had been seized with labour-pains early on the morning of the preceding day. Considerable hæmorrhage necessitated plugging, and the administration of ergot of rye. Ultimately, a large mass of hydatidiform growths came away. These he exhibited. The patient was a married woman, mother of several children, who had miscarried two years ago. Last November, the menses were interrupted, and the increasing size of her belly led her to believe she was pregnant. This was the fourth example of these growths he had met with. In one woman there was a second development, after an interval of ten months.

Perchloride of Iron in Post Partum Hæmorrhage.—Dr. MacSwiney continued the adjourned discussion on Dr. Atthill's and Mr. Hill Ringland's papers on this subject. With regard to the use of perchloride of iron, he thought the relative merits of the solid salt and of the solution should be decided. The application of the salt would, *à priori*, be less likely to be followed by peritonitis than the injection of a solution, which might escape through the Fallopian tubes into the peritoneal cavity. On the other hand, the introduction of the hand into the uterus—necessary in the case of salt—was objectionable. It was noteworthy that all Dr. Atthill's patients had been weakly, delicate, and anæmic women. Was this general? Again, what was the condition of the urine in these cases of *post partum* hæmorrhage? He himself had never seen a fatal case of flooding, or of the use of the perchloride in this accident; but he had employed the solution cautiously in a serious attack of menorrhagia, and with success. In two severe floodings, he had used friction, cold, and stimulants. He believed that vinegar was more than a popular remedy—it was an efficacious styptic; and, therefore, he would ask: Might not the introduction of a solution of vinegar into the uterus act as a styptic?—Dr. Ringland, sen., had felt constrained to employ the perchloride of iron in five cases in private practice. In three, he injected a solution; in two, he applied the solid salt. Of the patients treated by the fluid injection, one recovered, after transfusion of blood; a second, without a bad symptom; while the third sank. Hysteritis and peritonitis appeared shortly after the operation in this last case; the patient, however, rallied only to relapse, and died on the thirty-first day. She was an anæmic, delicate lady. It was a question whether the fatal termination was due to the perchloride, and yet the bad symptoms closely followed its use. Both patients treated by means of the solid salt made good recoveries. Several questions arose. First, was the remedy efficacious? Analysing the recorded cases, he found that it had failed to check the hæmorrhage in but one out of forty-three or forty-four instances. The cause of the failure was that the uterus had not been cleared of clots before the injection, so that the styptic did not come into contact with the uterine walls at all. A second question was, whether the remedy was comparatively safe. There had been eleven deaths, but several of these were due to other causes. In only two instances could death be fairly traced to the use of the remedy. Was its employment justifiable? He believed it was. What were the comparative merits of the fluid and solid preparations? He considered the solution hazardous. With respect to Dr. McClintock's remarks, as to the introduction of the hand into the uterus, he (Dr. Ringland) did not regard it as dangerous; and it was the custom, at the Coombe Hospital, to introduce the hand as a powerful stimulant. From physiological considerations, remembering the sympathy which existed between the stomach and uterus, and from experience, he looked upon vomiting as beneficial; and, indeed, he sometimes used a stimulant emetic, such as mustard, to induce it.—Dr. McClintock, in explanation, observed that he considered the introduction of the hand into the womb to be attended with a good deal of risk. It was a painful procedure, but, nevertheless, a most powerful stimulant to the uterine walls.—Dr. Henry Kennedy spoke of Dr. Green's arguments against the use of the perchloride. He, himself, thought that, if the remedy did harm to the peritoneum, the bad symptoms would set in at once; so that, where such symptoms were postponed, the drug could not fairly be charged with the mischief.—Dr. Darby had had some experience of this remedy. In the case of a lady, who miscarried in the third month, Dr. McClintock had injected a solution of iron. Subsequently, he had himself used it twice with success in two cases of miscarriage, and once in *post partum* hæmorrhage. He did not believe that the drug was absorbed by the sinuses of the womb, and that it passed through the Fallopian tubes was more than doubtful: it would tend to gravitate towards the open os uteri. The fluid was more certain than the solid preparation, which might miss the bleeding points.—The President was not opposed to improvements in the methods of treatment, on the one hand, while, on the other, he was not ready to adopt any novelty without due consideration. He could recall but one fatal case of *post partum* hæmorrhage in his private practice, which had been sufficiently extensive. The bleeding had always been checked by ordinary measures, and, accordingly, he held that there should be no precipitate adoption of the perchloride injection. From Dr. Ringland's remarks, he gathered that a mortality of 25 per cent. followed the practice of the method. Was this a larger proportion than should follow flooding? As was well known, its causes were imperfect contraction, hour-glass contraction, and morbid adhesion of the placenta. Of these, the first could be remedied by grasping the uterus, by stimulants, and by not too hastily removing the placenta. Styptics were of no avail in the second and third forms. The introduction of the hand was a measure not to be adopted rashly; but it was a most valuable means of controlling severe hæmorrhage, especially in hour-glass contraction. It should be remembered that the introduction of the hand was but a momentary stimulant, whereas the action of the iron solution was a continued irritant. In fine, he thought the iron by no means innocuous; that it predisposed to pyæmia was likely, and in any case it was to be used only as a *dernier ressort*.—Dr. Atthill had desired to elicit the opinions of the Society on this great question. It was not intended to supplant other or older methods of treatment, but cases occurred in which they could not be applied. The mortality from *post partum* hæmorrhage was undoubtedly small, but how disastrous were the sequelæ of this accident in too many cases! Of the eleven deaths mentioned by Dr. Ringland, sen., many were due neither to the hæmorrhage nor to the perchloride. Some of the patients died of phthisis, and others sank very rapidly. In his own fatal case, septicæmia occurred after ten days; but how could iron, an antiseptic, cause this complication? In hour-glass contraction, with retained placenta, the proper treatment was the introduction of the hand. But, although very efficacious in some instances, this manipulation was by no means perfectly harmless. He preferred the solution to the solid perchloride. The holding of the salt in the hand added to the difficulty of introducing the latter into the cavity of the uterus, and the salt most likely rubbed against the soft parts *in transitu*, causing corrugation of the vaginal walls, and contraction of the passage. Again, it was almost impossible to touch the whole surface of the uterus with the solid lump of perchloride. On the other hand, the Fallopian tubes, not open at the time of delivery, could scarcely be traversed by such a corrugating fluid as the solution of the perchloride. In conclusion, he emphatically stated that he was no indiscriminate advocate of the method by injection.—Mr. A. Hill Ringland replied. His cases were desperate, and required a desperate remedy. He had never experienced the slightest difficulty in introducing the hand into the uterus, and in manipulating the solid perchloride.

SURGICAL SOCIETY OF IRELAND.

Friday, February 13th, 1874.

John Denham, M.D., President, in the Chair.

Tracheotomy in a Case of Choking.—Dr. Macnamara detailed the particulars of a case of choking, in which life was saved by tracheotomy. Several days after the operation, examination with the laryngoscope revealed the presence of a large piece of fat bacon, just under the epiglottis. It was removed, and the patient did well. To the feel, the lump of bacon, *in situ*, resembled epithelioma of the larynx.

Dislocation of the Lens.—Dr. A. H. Jacob read a paper on this accident, dwelling particularly on those varieties of the lesion where there was disruption of the suspensory ligament, with complete luxation of the lens; luxation into the fundus oculi, the very rare subconjunctival luxation; and, lastly, spontaneous luxation. As regarded treatment, the lens should be left alone, unless it became opaque, when it was usually necessary to extract it by the linear method of Von Graefe, or some other operation. If thrown into the anterior chamber, it was advisable to replace it, by getting the patient to lie on his back. The paper was illustrated by the recital of numerous clinical histories of cases of the accident, and by wax models, showing the morbid appearances presented in its various forms.—Dr. MACNAMARA narrated a case, in which luxation of the lens into the anterior chamber occurred, from a sudden thrusting forward of the head, when some scent was squirted, from a compressible scent-bottle, into the eye.—Dr. R. McDONNELL mentioned a case where a missile broke the patient's spectacles, and the glass, being carried against the eye, cut the lower portion of the pupil, and caused luxation of the lens.

Recurrent Glossitis.—Mr. M. A. WARD detailed an instance of acute glossitis, occurring six times in the same patient. Mrs. R., aged upwards of 70, mother of a large family, was attacked, without any apparent cause, with acute glossitis, in the beginning of May 1867. The attack was comparatively mild, and readily yielded to local and constitutional treatment. On June 2nd, of the same year, she was again similarly affected; and on July 7th, a third attack set in. She then remained well until the last week of November, when she was awakened one night by an uncomfortable feeling in her tongue, which rapidly swelled (with a prickly sensation, but no acute pain), so as to render mastication impossible, and swallowing painful. There was also dyspnœa, with a copious flow of saliva. The parts were uniformly hard, rather elastic, and hot to the touch. A free incision into the tongue was quickly followed by relief. On June 29th, 1869, a somewhat similar train of symptoms showed themselves, and in a space of two hours the tongue swelled so as to protrude from the mouth, and to seriously imperil life by inducing asphyxia. The swelling was confined to the left half of the tongue, which occupied almost the whole mouth, keeping the jaws wide open, and pressing down into the sublingual space, which was also swollen. There was violent local arterial action. Free incisions, followed by warm, and then by cold fomentations, led to perfect recovery within twenty hours. On July 26th, of the same year, another attack occurred, which was treated with equally good results. She now was advised to give up wearing a set of false teeth, which were suspected of causing the local inflammation. Whether they did so or not, from this time until she died, some years later, of a pulmonary affection, she had no return of glossitis. In the meanwhile, she suffered for a considerable period from profuse salivation, and also from severe lumbago from time to time. No induration or hypertrophy of the tongue ensued from the repeated attacks of inflammation.

Fracture in Cancerous Cachexia.—Mr. E. HAMILTON detailed the following example of the lesion. M. H., aged 54, was admitted to Steevens' Hospital a year ago, suffering from mammary cancer. She was readmitted last June, with the axillary glands secondarily engaged. While in hospital, she stumbled and fractured her left thigh-bone. The fragments obstinately refused to unite, the limb increased in circumference, and presented an elastic sensation. The patient, who was a woman in apparently good health when admitted, died in November. The affected extremity was swollen and œdematous; large veins ramified over its surface, and its areolar tissue was filled with a thick curdy pus. The circumference measured twenty-two inches. A large tumour lay under the rectus femoris muscle. This consisted of encephaloid cancer, which extended into and engaged all parts of the bone.—Mr. STAPLETON spoke of a somewhat similar case, in which fracture was produced by the patient's foot merely catching in the bed-clothes.—Dr. HARLEY detailed a case, where fracture resulted from a slight tipping of the foot. The fragments would not unite.—Dr. F. KIRKPATRICK had met with a case of the same kind. A woman broke her leg while turning in bed. Cancerous deposits were found in nearly every bone.—Dr. FLEMING had brought forward two such cases at the Patholigical Society of Dublin. In one, the patient being a woman past 70, spontaneous fracture of the humerus occurred. The fragments remained ununited, and after death general cancerous deposits were found. In the other instance, a man, suffering from vesical cancer, broke his ribs while moving in bed. A deposit of cancer enveloped the seat of fracture.—Dr. McDONNELL alluded to the pathological appearances in Mr. Hamilton's case, which were those of carcinoma. The disease began in the breast and glands, and appeared secondarily in the bones.—Mr. RICHARDSON entered into the question, whether local or general changes in the osseous structures were the proximate cause of the fractures.

MANCHESTER MEDICAL SOCIETY.

WEDNESDAY, FEBRUARY 4TH, 1874.

J. E. MORGAN, M.D., President, in the Chair.

Diphtheria during Peritonitis.—Dr. HADDON related a case in which diphtheria occurred during the course of an attack of peritonitis. The infection was caught in an omnibus, and the period of incubation was eight days. The fever reached its height on the third day. On the fifth day, death was imminent from failure of the heart's action. Digitalis was then administered in frequently repeated doses, and, in a few hours, the pulse was found greatly improved. Improvement continued, and convalescence was uninterrupted.

Foreign Body in Eye.—Dr. LITTLE brought forward a young man, aged 21, having a foreign body projecting through the pupil of his left eye, which had existed there for over four years. It consisted of a long narrow chipping of brass, probably an inch in length, lying at an angle of about 45 deg. on the lower pupillary margin of the iris, projecting into the anterior and posterior chambers. The lens had become absorbed, and the pupil was perfectly circular. There was only perception of light.

Cancer of the Kidney.—Mr. CULLINGWORTH mentioned the case of a woman, aged 64, in whom there was a very large abdominal tumour, which she had not noticed until a few weeks before her death. For twelve months previously, she had been losing her strength, and during the last three months, had suffered a good deal of pain in the right loin, and occasional nausea and vomiting. When the pain was first felt, she is said to have passed a small calculus. Mr. Cullingworth first saw her on January 5th, 1874, when she was extremely thin, and lay groaning in constant pain. There was obstinate vomiting. A large solid tumour was found, dull on percussion, and soft to the touch, occupying the back from the external border of the lumbar muscles on the right side, bulging both there and laterally, extending into the front of the abdomen, and crossing obliquely downwards, below the umbilicus, into the left iliac region. Between this huge mass and the margin of the liver, a clear percussion-note was obtainable. The diagnosis was cancer of the kidney. The patient rapidly sank, and died on the 14th. The diagnosis of cancer of the kidney was confirmed by the *post mortem* examination made by Dr. Leech.

Unusual Development of Facial Muscles.—Dr. SAMELSON showed a case of extraordinary size and power of the temporal and masseter muscles, in a man of middle age.

Vascular Tumour of Eyelid, treated by Galvano-puncture.—Dr. SAMELSON reintroduced the patient, first seen at the meeting of last September, to show the favourable result obtained by six applications of Foveaux's battery, as suggested at the time by Mr. Lund.

Counterirritation.—Dr. ROSS read a paper on the theory of counterirritation. An abstract of it has appeared in the BRITISH MEDICAL JOURNAL.

REVIEWS AND NOTICES.

NOTES ON THE HEALTH-SERVICE OF ARMIES DURING WAR.

By Surgeon-General C. A. GORDON, M.D., C.B.

THESE notes, issued in the form of a pamphlet, are a reprint from the April number of the *British and Foreign Medico-Chirurgical Review*. They are descriptive of the organisation of the medical departments of the armies of Russia, Austria, Spain, Portugal, Italy, Switzerland, Belgium, and the United States; and, as the notes are contained within a space of thirty octavo pages, they are necessarily very compressed. Dr. GORDON explains that he has selected the term "Health Service of Armies" in preference to that of "Army Medical Service", adopting it from the French *Service de Santé*, because he considers it a more "correct designation to apply to the department, the principal duty of which is the preservation and restoration of health". Whether the designation Health-Service would be more advantageous and expressive than that of Medical Service may be a matter of doubt; but there can be no doubt about the terms "Army Medical Department", "Army Medical Service", and "Army Medical Officers", being so ingrained in army nomenclature and ordinary speech in this country, that it would be very difficult to change them for any others.

We do not intend to review the account furnished by the author of the constitution and hospital arrangements of the several army medical departments which he has brought together in his pamphlet; such a digest could hardly be given satisfactorily without occupying more space than we can afford for the purpose. Dr. Gordon's notes present a general survey of the leading features of the medical arrangements in the armies which have been before named, and to these notes we must refer such persons as desire only a passing glance at the subject. Those of our readers who seek for more precise and extended information on the organisation and administrative systems of the medical departments of armies, together with particulars of their interior economy, of the constitution and management of the hospital establishments as ordered for peace time and time of war, will naturally go for it to the authorised regulations issued by the War Departments of the respective countries to which the armies belong. Set codes of regulations on these subjects exist in all the leading countries of Europe, and are to be obtained through the authorised channels of communication, though in some instances, especially as regards persons not officially connected with the countries concerned, they can only be got after expenditure of a certain amount of time and trouble.

We are wrong, however, in saying that a code of army medical regulations is to be found in every leading country of Europe. There is one country, and that we regret to say is our own, in which no complete code of army medical regulations can be obtained at the present time, for none exists. We desire to call particular notice to the subject. We have, indeed, long ago called attention to this fact, and we have been led to do so from being occasionally asked, particularly by medical officers of the auxiliary forces, to point out to them where the English army medical regulations can be got by purchase or otherwise. Now that surgeons of militia regiments and medical officers of volunteer corps, whose time is chiefly passed in civil practice, are liable to be encamped with their regiments and to act in association with medical officers of the regular army, to join in military manœuvres on a large scale and in the hospital duties connected with them, they, of course, wish to become informed on the general regulations of the service and on the details of the system on which the hospital duties are to be conducted. The combatant officers of the auxiliary and reserve forces can obtain books of regulations and instructions for guiding them in their drills, exercises, examinations, correspondence, and in the discharge of all their duties whatever their nature, and why not the medical officers for their work? The reply to the inquiries we have instituted on the subject, for the purpose of answering our correspondents, has been that the book of army medical regulations is out of print, and has been so for several years. The latest code of "Regulations for the duties of army medical officers, for the organisation of general, regimental, and field hospitals, for drawing up sanitary and medical statistics and reports", etc., commonly called, for the sake of brevity, the Army Medical Regulations, was issued in the year 1859, and since that date no fresh edition of that code has appeared, nor any other book of regulations in place of it. Fundamental changes have since been made in the constitution of the army medical department and its subordinate establishments, the mode of conducting its business has been altered from time to time, new rules have been made with regard to the distribution, duties, pay, and allowances of the medical officers; and these changes have been announced in such a variety of warrants, amended warrants, War Office circulars, general orders, departmental orders, and memoranda, that we doubt if any one can have a general notion, much less a clear idea, of the actual organisation and regulations of the British Army Medical Department. We trust the new Director-General will not suffer things to remain in such a state of apparent chaos, but will direct some one of the staff he has about him, whosesoever function it may be, to gather together the scattered rules and regulations of the department over which he presides, and to reduce them to something like connection and order for the information and guidance of all persons whom they concern. We do not pretend to say that the task will be a light one; but surely it is by no means creditable that, while every department of the military service has had, and has, its code of rules for the guidance of its officers, the medical department alone, for so many years, should have been allowed to remain without one.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

HAMPSON'S SUGAR-COATED PILLS.

We have received from Mr. Hampson, of 205, St. John Street Road, samples of sugar-coated pills, of convenient formulæ. The advantages claimed for a coating of sugar, and we believe with justice, are its free solubility, pleasantness, and preservative effects. In water of the temperature of 60 deg. Fahr., the coating dissolves in about five minutes, and in water at the temperature of the body in three minutes. Spirituous solution of resins, placed upon pills to which French chalk or other earthy materials are added, are now much used. Such coverings are much less soluble than sugar; and in some instances pills with the resinous earthy covering pass through the alimentary canal without effecting medicinal action. Formulæ of any character can be prepared, and we believe that sugar-coated pills, made with proper skill and conscientious care, are likely to achieve permanent popularity.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

Subscriptions to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. Francis Fowke, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, MAY 30TH, 1874.

FANCY-WORK IN SANITARY ORGANISATION.

The recent Report of the Committee appointed by the Conference of Medical Officers of Health to combined sanitary districts, is not only in itself a very interesting and instructive document, but it also bears in many ways on our future sanitary progress as a nation. It embodies the conclusions of officers who are exceedingly well informed on their subject, and who have had already some experience in their work and its requirements, while it shows what singular expedients men of ability are driven to adopt, when called on to carry into effect a new system, without sufficient legal powers, without proper official instructions, and without support from the authorities under which they act. The whole of the late legislative change exemplifies the peculiarities of English administration, and the defects of a machinery in which each workman is left to his own inventiveness to supply himself with materials, with tools, and with directions for using them.

Fancy has done as much as any other noble faculty of the human mind for our sanitary administration. We need only mention the fancy displayed in the Acts of 1871 and 1872, and in the constitution of a central authority; the fanciful distinction between urban and rural local authorities; the fanciful formation of the districts adopted as areas of administration; the fanciful code of regulations, which neither the medical officers of combined districts, nor those of small single districts, can possibly obey as a whole; and, not least, the fanciful variety of schemes of organisation put forth at different times and by different inspectors under the Local Government Board. We are now favoured with the latest exercise of official fancy in a voluntary convention of skilled officers over united districts—each officer representing only portions of the area in which he was at first meant to act, that area being studded over by several unrepresented districts of various size, shape, and importance. Of course, the proceedings of such a conference, however practical, must be also, to some extent, a work of fancy; and no one can tell how soon these provisional combinations of districts, which are not planned on any consistent method, and have no element of permanence or general utility, may cease to exist, or become so modified in composition as hardly to be capable of identification.

One can easily imagine how vast might be the variety of questions handed in for consideration or decision by an anxious assembly of puzzled and undirected officers. As they confess, "no fact was so strikingly brought before the conference as the exceeding variety in practice, on almost every point discussed, which seems to prevail amongst the several sanitary authorities represented". They admit that a certain amount of latitude is permissible, and, we may add, inevitable, in carrying out "well-established principles, or in fulfilling clearly defined conditions". But since no principles of administration have been well established, and no conditions clearly defined by the central authority, it seems but natural that those who were appointed to act for and to advise the several authorities should meet to consider how they might establish for themselves such principles, and assist in defining such conditions as are not laid down by law or authority. The very first resolution passed by the conference proves that these combinations of districts have been formed for a single purpose, on no well considered system. The proposed "central committee" would be a simple outcome of each fortuitous concourse of (administrative) atoms; the *raison d'être* of the aggregation being simply that each contained district has agreed to appoint the same officer of health, who naturally prefers to report to one representative authority rather than to some dozen of small boards, his present masters. But there is another reason: a new and superior authority is required "for the purpose of conferring on matters of general interest in regard to the sanitary state of the district". With this object, it would become a sort of superintending body. The formation of central committees is, in effect, the creation of *intermediate* sanitary authorities. We know that the Royal Sanitary Commission, without any good reason, opposed the formation of such authorities, though recommended by most of the practical sanitary reformers examined. The powers of control vested in these "central committees" might at first be of the mildest description, but, with the growing experience of their many executive advantages, it is obvious that they would also grow and strengthen, either owing to the cession of some responsibility by the minor authorities or by fresh legislation; and, as far as the special objects of their formation are concerned, these powers might, ere long, be very considerable. If the formation of superior local authorities by delegates from minor authorities be conceded in principle, the conference would probably agree with us in recommending that it should be carried into effect by long established authorities, in ancient divisions, the boundaries of which might be improved, with regard to scientific and administrative considerations, on a comprehensive and uniform system.

We see among the signatories to the report at least two or three officers whose combinations are about as singular in form, as abnormal in arrangement, and as unconformable to existing areas of jurisdiction, as they well can be. To constitute a machinery of central committees on a merely capricious and utterly indefensible basis of combination, and thus to make another and about the worst possible addition to the many existing systems of territorial division, would be to act directly in opposition to our highest statistical authorities, and to ignore, almost contemptuously, the strong and just protest made by the Royal Sanitary Commission against our multiplication of overlapping areas of various kinds, each group of units having in view only its own particular object, regardless of the objects, however correlative, of other kinds of district. Now, there exists a division of the kingdom, of the highest antiquity, tested by centuries of vigorous administration, and commanding the respect and confidence of the people. Why, then, cannot Parliament accept our old counties? Why not utilise our old county authorities (courts of Quarter Sessions), aided by a well-informed and scientific central commission, as the agency for devising these combinations, for constructing the proposed new authorities, and for adjusting their areas of administration?

To create a new order of districts and authorities all over the kingdom, without reference to the county areas, would increase the difficulty of an adjustment which will have to be made some day, while it would augment the perplexities of present administration; for the governing body of the county is still an authority in several matters of sanitary import, and its functions in this respect are on the increase. When we are informed by the conference that "the appointment of medical officers of health to large combined districts does not appear to have been expressly contemplated by the Public Health Act of 1872, though powers were given by it of which the Local Government Board has availed itself, with considerable success, for promoting such appointments", we decline to acknowledge the "considerable success"; we are not aware that any such combination can as yet fairly claim to have proved its success. The commendable zeal and high qualifications of the members of this conference does not prove it; and we know that several of these combinations have been held up to public ridicule, as specimens of unreasonable and unskilful grouping, without any practicable means of working the groups for the effective execution of sanitary law.

There is something manifestly absurd in officers constituting their own authorities, yet in effect this is what these gentlemen propose to accomplish. The competency of the Local Government Board to constitute new authorities has certainly not been proved by its past acts, which hardly justify the grant of fresh powers. Would it not, then, be the wiser course to call on Parliament to give the necessary powers of combination in conformity with the older and more successful administrative divisions of the kingdom, even though such a reform might lead to some alteration in the areas just put in charge of the new medical officers of health?

The remaining resolutions may be more briefly considered. The second, for the compulsory formation and action of "sanitary committees" by local boards, etc., has our unconditional assent—for none of our present so-called sanitary authorities, urban or rural, were originally constituted for the care of the public health, and it is clear that there should everywhere be some executive body appointed or selected specially for that object. The third resolution relates to returns of sickness and mortality, and asserts a simple truism when urging the necessity of these returns being made on an uniform system, though the Local Government Board, in its present state, is certainly very little qualified for "agency". We regret that the conference did not point out that the supply of sickness returns, which are to be mere extracts or copies made by the clerks of unions from the weekly relief returns of the district medical officers (as recommended by the Local Government Board), will be a most inefficient and fallacious provision, and cannot secure an accurate, scientific, and trustworthy record of disease, while it is unjust to the Poor-law medical staff, as appropriating their cursory information without any means of correction or any pretence of remuneration. The fourth resolution calls for detailed house survey under sanitary supervision. The fifth proposes uniformity of forms for survey and other purposes. The sixth would relieve the medical officers of health from the conduct of ordinary legal proceedings against nuisances. The seventh proposes special remuneration for water-analysis, when performed by medical officers of health. In our opinion this function might, in many districts, be advantageously left to a skilled county analyst. The most debatable resolution is the eighth, yet there will probably be a large medical *consensus* to its main provisions. The demand is for amendment and enlargement of sanitary law, and the principle is the substitution of compulsion for permission in its execution.

The committee of conference divide their propositions on this subject under six heads. The first (*a*) relates to the enlargement of the coercive powers of the Local Government Board, especially in the compulsory combination of sanitary authorities for objects which, in the opinion of the Board, can only be effectually carried out by such combination. And this, as we have shown, is an unavoidable preliminary to the first resolution, for no "central committee" of combined authorities can exist until the combination has been effected. But many thoughtful persons will demur to vesting so great a power in the present incompetent Local Government Board. The committee also suggest that every sanitary authority be compelled to provide, by itself or in union with other authorities, a proper place for the reception of infectious diseases. The compulsory power, we think, should be committed, in the first instance, to a superior or county authority, with right of appeal to the Central Board, when that is improved in constitution, or duly directed by its chief medical officer. The second (*b*) also relates to infectious diseases, and would empower some controlling authority to enforce a report of every case of such disease from the friends or the medical attendant to the local authority; also to compel the isolation of all cases for which adequate provision cannot be made by the friends of the patient, and to inflict penalties for neglect of practicable precautions when the neglect leads to the spread of disease. All these are reasonable and necessary requirements, and we think that medical men will not object to bear their share of the duties and responsibilities involved.

The report enters at length into the arguments on each question, and only admits want of unanimity on the last point. The suggested reference to justices of the peace in disputed cases we think preferable to committing any absolute power of the kind to the medical officer of health. The third proposition (*c*) relates to the pollution of rivers and other sources of water for drinking. The superiority of the Public Health Act of Scotland (1867) in this respect is pointed out. Few, except river-pollutors, would differ from the conference on this point. Under (*d*) it is proposed to enlarge the powers of sanitary authorities in the supply of water to limited portions of their districts, and to the tenants of single houses. The defects in the present law are well described. Proposition (*e*) treats of the vexed question of house-accommodation, and (as Dr. Bond recommends in his report, noticed recently) would include the erection and repair of dwelling-houses below a certain value in the category of improvements which existing sanitary authorities are empowered already to carry out, after full investigation and under certain conditions, in the case of sewers, waterworks, and other sanitary improvements. That the provision of sufficient wholesome cottage accommodation should be made compulsory on local authorities we have no doubt; but we think that the area of liability, as regards expenditure and taxation, should be extended beyond that of a single district—that is, to a county. Proposition (*f*) would empower and compel every sanitary authority to see to the scavenging and cleansing of all receptacles of excrement and refuse. This is a most essential demand, under any system of refuse-removal.

The last resolution which requires notice (the ninth), proposes that the Local Government Board shall prepare a code of bye-laws, to be compulsory on all local authorities not previously provided with bye-laws. The conference was generally of opinion that the present distinction in the law between urban and rural authorities, without regard to their actual position and requirements, is indefensible in theory and mischievous in practice, and that it should be abolished.

We entirely agree with the conclusions of the conference on this subject; we heartily applaud the movement they have so ably initiated, and we strongly recommend the careful study of this elaborate report to all concerned in the administration of public health law.

THE NEW REGULATIONS OF THE ARMY MEDICAL DEPARTMENT IN ITALY.

THE medical department of the Italian army has been recently reorganised; and, as much attention is being directed at the present time to the medical department of the British army, and many suggestions are being put forth for its improvement, it may be useful to observe the changes which the Italian, among other governments, is making in this branch of the public service. A short analysis of the new regulations for conducting the duties of the sanitary direction and of the military hospitals (*Regolamento di Servizio interno delle Direzioni di Sanità et degli Ospedali militari*), published on December 20th last, and now being put into force, will serve the purpose of showing the manner in which the new arrangements are being conducted. But we must go further back, to the close of the year 1872, when a royal decree was issued on the subject, to understand thoroughly the principles on which the medical department in Italy has been reformed; for the recent regulations above mentioned may be regarded principally as an exponent of the manner in which these principles are to be applied in regard to the distribution of particular duties and to the daily service of the hospitals.

The essential feature of the reform of the medical department in the Italian army by the royal decree of 1872, was the placing all the different functionaries acting in a military hospital under the direction of the principal medical officer. A Sanitary Direction was constituted in each territorial division of the country, analogous to those of the Engineers and Artillery; and the Director, an army surgeon of a certain rank, was invested, under the authority of the General commanding the territorial division, not only with the technical direction, but also with disciplinary command, of all the medical *personnel* of the hospitals of the division. Moreover, the Director was invested with authority over all the non-professional hospital functionaries. The sanitary service of the district and the military hospitals were thus formed into compact establishments, having the same advantages of unity of direction and authority as a regiment of troops or a corps of engineers, and, like them, responsible and subordinate to the general officer commanding the district in which the sanitary services were employed and the military hospitals were in function. The new regulations, in distributing and defining the duties, responsibilities, and limits of authority of all the persons employed in these establishments, maintain intact the principles which were put forth in the royal warrant of 1872. The few extracts which follow, from the regulations on the general organisation and subordination of the hospital services, will sufficiently show this fact.

General Organisation of the Hospital Service.—In each territorial division, the command of the hospitals is confided to a colonel-surgeon,* who exercises the technical, administrative, and disciplinary direction of them, with the title of Director of the Sanitary Service, and with all the authority as well as all the responsibility of the chief of a corps.

The technical service of the hospitals, with all that appertains to it, is performed by the medical officers.

The administrative service belongs to a permanent Council; the service of supply and account is confided to purveying officers. These two services are ruled by the same regulations as those for administration, and supply and account, in bodies of troops.

Under the authority of the Director, the maintenance and supervision of discipline belong, in the interior of the hospital, to the medical officers; in the interior of the sanitary company, this mission devolves on the purveying officers.

A sanitary company is attached to each territorial division, for the service of the principal and subsidiary hospitals of the division.

In each sanitary direction, a subaltern medical officer, chosen by the director, is named adjutant-major surgeon, with the same functions as devolve on adjutant-majors of bodies of troops, and also with the mission of serving as secretary to the director.

The military hospitals are placed under the authority and supreme superintendence of the divisional commanders.

Subordination.—The Director of the Sanitary Service is subordinate to the Commander of the territorial military division, both in his quality of chief of the hospital service, and in that of director of the sanitary service of the division. As director of the sanitary service of the division, the obligation devolves on him—1. To submit to the commandant of the division all proposals calculated to favour the sanitary state of the troops; 2. To direct the technical service of the medical officers with bodies of troops; 3. To visit and inspect the regimental infirmaries whenever the order is given by the divisional commandant.

The medical officers of regiments have to do duty at the garrison hospitals, with the exception of one per regiment. This last, who is changed every year, is responsible for the sanitary duties of the corps.

Directly subordinate to the director of the sanitary service are: the secretary of the administrative council of the direction, who is also the purveyor-in-chief of the hospital; the surgeons treating the sick; the captain-surgeon inspector; the officer commanding the sanitary company (hospital attendants); the principal apothecary; and the minister of religion. All other officers, *employés*, and soldiers attached to the hospital, are in addition subordinate to the sanitary director, through the medium of the chiefs of their respective services.

The sanitary director, in his quality of commandant of the hospitals of the division, is the chief of the directors of all the subsidiary hospitals; they are subordinate to him as officers commanding detachments.

The extracts just given will sufficiently show the principles on which the new regulations for the medical department of the Italian army are based. The regulations furnish particular directions with regard to sanitary police and hygienic arrangements, inspections, the hospital guards, the pharmaceutical service, the religious services, the store and issue duties, the company of hospital attendants and their duties—in short, respecting all matters bearing on the general administration and interior economy of the hospitals; but it would occupy too much space, and would be foreign to the purpose of this notice, to refer to them here. The chief point that attracts attention in considering the organisation embodied in these regulations, is the centralisation and unifying of responsibility that are secured by it, at the same time that, with the responsibility, adequate authority and power are conferred for meeting it. There is no dual government, no divided responsibility. The hospitals are managed by medical directors, who have supreme authority over all the persons engaged in carrying on the work in them, and who are directly responsible, as they rightly can be under such a system, to the general officers commanding the districts in which the hospitals are placed for the manner in which they are managed. Italy, in this organisation, has but followed the example of North Germany, Austria, and the United States; and the establishment of a similar arrangement in the military hospitals of the British army is probably only a question of time.

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* The medical officers in the Italian army have now substantive rank, and are assimilated in their titles to those of combatant officers of corresponding ranks. Thus they are designated General-surgeon, Colonel-surgeon, Lieutenant-colonel-surgeon, Major-surgeon, Captain-surgeon, etc. Oddly as this may sound to English ears, it has the advantage of being systematic, which our Surgeon-major, ranking as Lieutenant-colonel, etc., can hardly aspire to be.

REGISTRATION OF BIRTHS AND DEATHS.

THE Bill now before Parliament does not profess to cover all the ground of recent complaints and suggestions. It has long been urged by medical and sanitary authorities that our established system is most defective: not only does it register births and deaths very imperfectly, and with unknown, though probably numerous, omissions of births, but it likewise omits altogether the registration of Still-Births. The present Bill deals with the subject but partially, yet its defects are those of caution. Mr. Stansfeld's objections last year (see BRIT. MED. JOURNAL, April 5th, 1873) to the registration of still-births appeared to us fanciful and unpractical. Still-births are, in fact, registered on the Continent, and, therefore, we know that the thing *can* be done. That it might be at first imperfect, is no reason why it should not be tried. If Parliament determined that such registration should be commenced, any defects in the inquiry or machinery would gradually come to light; and, as in the registration of births and deaths, experience would lead to amendments in the method. That the registration of children, admitted to be born alive, should be made compulsory, is unquestionable, and this Bill would doubtless improve the record.

The matter of most interest to the profession, in a medico-legal point of view, is the registration of the *cause* of death as a necessary preliminary to burial. What is called the burial certificate (permission to bury), should not be legally given until a reliable statement of the cause of death shall have been obtained. We have all along protested against requiring this medical certificate, *under penalty*, from the medical attendant. The scientific certification of the cause of death should remain, as now, at the option of the medical attendant, who acts in this matter confidentially, and who may have unanswerable reasons for declining to give the desired information. This Bill would, in some way, compel him to certify, even though a penalty may not be attached, as in Scotland, to his refusal or neglect to certify. We entirely object to any despotic interference with an unendowed profession, especially as the object may be much better attained and the facts more correctly ascertained in another way. Where there is no medical attendant, or, in his absence or default, the inquiry into the cause of death, if not instituted by the coroner, should be made by the medical officer of health, or by the union medical officer, acting as his deputy. One of these should certify to the best of his knowledge; hence the necessity of a State-Medicine qualification for both. Payment for the certificate would of course be included, as far as pauper deaths are concerned, in the salary of the public officer. In any other death, the medical officer of health certifying should be entitled to a moderate fee; and the medical attendant who certifies for private patients should also be legally entitled to claim fair remuneration from the family or the estate of the deceased for this as for any other medical service. By one of these means the cause of death would be properly certified. The present form of certificate, however, must be so altered that the medical man should not be made to assert anything as a fact which does not come to him from his own personal observation. On these conditions, it might be enacted that no dead body should be permitted to be buried before the cause of death is certified. With such amendments, we hope that Mr. Sclater-Booth's Bill may pass.

THE SOHO HOSPITAL FOR WOMEN.

THE statement which Lord Cholmondeley pressed us to publish last week, and which we did publish, on behalf of the old Committee of the Soho Hospital, was one which unfortunately obviously invited a rejoinder. For this we have to find space this week. With the points therein discussed the profession and the public have, however, now only a retrospective interest. The Committee have conceded, in fact, the principles for which the medical officers contended. This they only did, however, after the medical officers had been forced into resignation, and when they found themselves virtually without a staff. They have now to pursue the salutary work of reconstruction. This can easily be done by taking the logical and just step of inviting the staff to resume office on the new and improved conditions which they have resolved to offer. Meantime, we must once more express the hope that, until this is done, no medical man will be found to be willing to accept the vacant offices. A certain measure of justice is due from the Committee to their old officers. This is the least which they can offer, and the profession cannot be content with anything less.

DR. HUGHLINGS JACKSON has been elected a Fellow of the College of Physicians of Philadelphia.

IT is proposed to confer honorary degrees at the Cambridge Commencement upon Sir James Paget and Dr. Helmholtz.

A MEDICAL College for coloured students has been established in connection with the Straight University, at New Orleans.

THE Gresham Lectures will be delivered in Gresham College, Basinghall Street, by Dr. E. Symes Thompson, on Friday and Saturday, May 29th and 30th.

DR. FINLAYSON and Dr. D. Campbell Black have intimated their intention of becoming candidates for the Chair of Medicine shortly to be vacant in the Andersonian University of Glasgow.

IT is intended to hold the annual general meeting for 1874 of the Association of Certifying Medical Officers of Great Britain and Ireland in Norwich, during the meeting of the British Medical Association.

THE distribution of prizes at the Charing Cross Hospital will take place on Thursday next, June 4th. Mr. Beresford Hope, M.P., will preside on the occasion.

ADMIRAL RYDER will deliver a lecture this evening at the Royal United Service Institution, on Her Majesty's Ship *Victor Emmanuel* as a Hospital-Ship during the late Ashantee Campaign. Sir A. Armstrong, K.C.B., will preside.

THE Friday evening lecture, on June 5th, at the Royal Institution, will be delivered by Dr. Burdon Sanderson. The subject is the electrical phenomena which accompany the contraction of the leaf of *Dionæa*, with experiments showing their identity with those of muscle.

THE Council of the London Hospital Medical College have requested Dr. Morell Mackenzie to continue his annual course of lectures on the use of the laryngoscope and diseases of the throat, which lapsed when he resigned his appointment as physician to the hospital.

IT is very difficult for men who have a full day's work to get through to finish dinner and reach the societies by eight o'clock. We are glad to hear, therefore, that it is proposed that the meetings of the Pathological Society shall, after this session, commence half an hour later—viz., at half-past eight o'clock.

MR. ALFRED COOPER, who accompanied the Duke of Edinburgh and the Grand Duchess on their journey from Russia, has received from the Emperor of Russia the decoration of the order of St. Stanislaus.

PROFESSOR VON RECKLINGHAUSEN of Strasburg, who, it was expected, would succeed Rokitansky in the chair of Pathological Anatomy in Vienna, and who has been in negotiation on the subject with the Austrian Minister of Public Instruction, has finally declined the invitation offered to him.

WE learn from the *Chemist and Druggist* that a Local Committee has been formed to make arrangements for the meeting of the British Pharmaceutical Conference in London next August. The Council of the Pharmaceutical Society has offered its premises for the use of the conference. We understand that it has been decided to hold an exhibition of articles of interest to pharmacists.

THE NAVAL MEDICAL SERVICE.

THE First Lord of the Admiralty has arranged to receive a deputation of the Parliamentary Bills Committee of the British Medical Association on Wednesday, June 10th, at 2 P.M., on the subject of the present grievances of the medical officers of the navy, and the causes which interfere with the recruiting ranks of that department in the profession.

CLINICAL SOCIETY.

THE final meeting of the past session took place last Friday, when the usual "Massacre of the Innocents" occurred. Seven papers were read, and the time that could be allowed for their discussion was necessarily much curtailed. Dr. Hermann Weber's valuable paper on the "Communicability of Consumption from Husband to Wife", read at the previous meeting, could not be debated; and the three papers which came last in the evening, viz., those of Dr. Buzzard, Dr. Greenhow, and Mr. Trehern Norton, were obliged to be read without comment. Such a procedure fails to repay authors for the trouble and attention which are bestowed upon their papers. The present system is obviously open to improvement. It would be well worth consideration, whether it might not be preferable to take as many communications as would occupy the evening, giving the preference to those which relate to any living subject who may be present for exhibition, or which would lose in interest by being deferred; and to postpone the other papers to the next session. An additional plea for such a course may be found in the fact that, last October, the Secretary of the Society was compelled to acknowledge that papers were not forthcoming until almost the very day on which they were to be read.

THE PATHOLOGY OF PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS.

DR. LOCKHART CLARKE'S paper, read at the Royal Medical and Chirurgical Society, on Pseudo-hypertrophic Muscular Paralysis, this week, was one of great interest. This disease, of which the clinical peculiarities were first described during the present decade by Dr. Duchenne of Boulogne, has not hitherto received any satisfactory explanation of its pathological characters. Dr. Barth and Mr. Kesteven had observed certain changes in the cord, but of a different nature, and much less extent than those which Dr. Clarke has discovered. In the case recorded, there were extensive disintegrations in the grey substance, atrophy of the nerve-cells of the anterior cornua, with sclerosis of the lateral and posterior columns, chiefly in the cervical region, and frequent destruction of the anterior commissure, with exudation and extravasation of blood around the vessel. These pathological changes will serve to account for the atrophy of pseudo-hypertrophy of muscle, the accompanying paralysis, and the contraction of joints which existed. The intellect was in this case perfectly unaffected, and the brain and medulla oblongata were found to show no signs of unsoundness. A paper from Dr. Lockhart Clarke at any of the societies always affords a solid contribution to the knowledge of the symptoms or the pathology of nervous disease, which he has done more than any other man in this country to advance: this was no exception. Dr. Clarke was assisted in working out the case by an able young physician, Dr. Gowers.

AN ACTION FOR AN ARTIFICIAL EAR.

AN action in one of the New York courts about an artificial ear is thus reported by the *Herald* of that city. In December 1872, the plaintiff, having lost the greater portion of one of his ears, applied to the defendant to make for him an artificial ear, which, he said, the defendant agreed should be made durable, of a flesh-like colour, and so as to be worn with ease and comfort. After it was completed, he had it attached to the portion of his ear that remained, but could not wear it continuously on account of the intense pain it caused. Exposure to the sun also changed its colour. He accordingly took it back to the defendant, who promised to make another of a different material, but failed to do so, and plaintiff brought this action to recover the 200 dollars he paid for it. The defendant said that when the plaintiff first applied to him, he told him he did not wish to undertake it, as it would be a very troublesome affair, and he probably would not be satisfied with it; but the plaintiff was very anxious, and said he was willing to pay for experimenting. When it was completed, the plaintiff expressed himself as entirely satisfied, paid him, and took it away. He expended a great deal of time on it, and it was made as well as an artificial ear could possibly be made. The jury rendered a verdict for the plaintiff for 100 dollars.

PROVIDENT CLUBS.

DR. KELLY of Taunton has issued the following circular to each member of the West Somerset Branch of the British Medical Association.

"I am about to convene a meeting of the Council, in pursuance of the following resolutions, passed on the 7th November last, after discussing the question, "Is club practice conducive to the interest and welfare of the profession?" viz., resolved: "1. That club practice, as at present paid for, is not conducive to the interest and welfare of the profession, but that if proper rules for preventing the abuse of clubs and provident societies were insisted upon by medical men, such institutions are not to be condemned by the profession. 2. That, with a view to arriving at some practical conclusion on the subject, the Council be requested to take into their consideration the question of club practice, and to frame such rules as they may consider appropriate for preventing the abuse of clubs and provident societies, and generally for giving effect to the preceding resolution; and, as soon as they can conveniently do so, to report the same to a general meeting of the Branch." I shall be much obliged if you can supply me with a copy of the rules of any clubs or provident societies (employing a surgeon) which may exist in your neighbourhood, or with which you may be acquainted, that I may submit the same for consideration to the Council. Any suggestion you may be good enough to offer I shall be glad to receive."

Dr. Kelly would also be glad to be supplied with the rules of clubs and provident societies (employing a surgeon) in other counties besides Somerset.

SUICIDE IN THE ARMY.

THE following is an abstract of a paper on Statistics of Deaths by Suicide among Her Majesty's British Troops Serving at Home and Abroad during the Ten Years 1862-71, read before the Statistical Society, May 19th, by Mr. W. H. Millar, Statistical Subdivision Army Medical Department.

The returns of mortality among the non-commissioned officers and men of Her Majesty's British troops, 1862 to 1871 inclusive, show 663 deaths under the head of suicide, being in the annual ratio of 0.379 per 1,000 of the strength. The returns published by the Registrar-General show that in the male population in England, between the ages of 20 and 45, during 1861-70, the deaths from the same cause were in the annual ratio of 0.107 per 1,000 of living, or less than one-third of the rate in the army. The statistical returns of the French army show the ratio of deaths by suicide to have been 0.49. In the Belgian army the deaths were 0.45 per 1,000; in the Prussian army they were 0.64; while in the Austro-Hungarian army they amounted to 0.85 per 1,000 of the strength. These results show that, compared with the civil male population in England at corresponding ages, the ratio was excessively high; it was slightly lower than in the French or Belgian armies, considerably under the ratio in the Prussian army, and less than half that of the

Austro-Hungarian army. Suicide was considerably more prevalent among the troops serving in India, while there was only a small fractional difference in the ratio among those serving at home and in the colonies. The ratio in India was four times, while in the other parts of the force it was three times as great as that among males of similar ages at home. The highest ratio occurred in the year 1869, and the lowest in 1865. With the exception of the years 1864 and 1865, there appears to have been a steady progressive increase up to 1869; a decrease of more than one-third took place in 1870, probably a consequence of an order issued that the "service ammunition should be placed in the magazines". No considerable variation took place in the prevalence of suicide among the civil population during the period. More than half the deaths in the army were the result of gunshot-wounds, while one-sixth were caused by wounds inflicted by cutting weapons (cut-throat in almost every case). Among the civil male population of similar ages, hanging was the most frequent cause of death, followed by cut-throat, drowning, and poisoning—gunshot-wounds causing only one-twelfth of the deaths. The decrease among the troops in the two years 1870-71 appears to have been confined to deaths by fire-arms. The difference between the military and civil rates is almost entirely due to the use of fire-arms. The tendency to commit suicide bore the same rate of increase with advancing age as the mortality did among the troops at home: it was rather higher among troops in the colonies at the higher ages, while in India it was more than doubled at each quinquennial period, while the general rate of mortality was only doubled at each decennial period. The returns of the Registrar-General show the ratio of increase with advancing age among the troops at home appears to coincide almost exactly with that of the civil population. Suicide was considerably more prevalent in the cavalry of the line than in any other arm, and lowest in the household cavalry, in which it was only half the rate among the troops generally.

REGISTRATION OF STILL-BIRTHS.

MR. SCLATER-BOOTH, in his new Registration of Deaths Bill, appears to have fallen into the very common error of supposing that by the Registration Act provision is made for ensuring the registration of every death before the body can be buried; whereas all that the Act requires is, that whoever buries a dead body without receiving a certificate that the death has been registered, shall be liable to penalty, unless he inform the registrar within seven days after such burial. The natural and usual, but not invariable, effect of thus imposing trouble and risk of loss upon those who bury without certificate, is that, with one very important class of exceptions, nearly all, but not all, deaths are registered before burial. The proof, however, of the statements registered, is often very far from satisfactory, being often made on the authority of informants who do not of their own knowledge themselves know what they cause to be inserted in the register. This is pre-eminently the case with respect to the alleged causes of death. A very large proportion of those who die are not even seen, still more not properly attended, during their last illness, by any one competent to give a medical opinion; and in all these cases the cause of death is rather guessed at than known; and, until inquiry is made by a competent officer, equivalent to the "médecin vérificateur" in France, as to the cause of death of every case not properly certified by one who has really been the medical attendant, there must continue to be great doubt as to the correctness of the registration of the causes of death, which it is very important should be as correct as possible. It is evident that, if inquiry were invariably made as to the cause of death whenever it is not satisfactorily certified, a great check would be offered to secret crime, and still more to culpable or ignorant neglect, to which so many of our fellow-creatures and fellow-subjects fall victims. Though the provision of the Registration Act does produce a general registration of the fact of death, it fails to do so with respect to a class of deaths which it is of extreme importance should not be neglected—namely, the registration of young infants, who, dying soon after birth, are often buried as if they had been still-born. The motive for this evasion is most generally merely to escape the extra cost commonly charged for the burial of a child that has lived at all, more than for one that is stated to have been still-born. The excuse for such extra charge is, that there is a funeral service for a child, but not for one still-born; and that extra trouble should be paid for. As, however, it is clear that those who evade the payment by a false statement do not value the service so much as its cost, it would be good policy to enable them to escape the payment, without compelling them to resort to a false statement. This could easily be done by reviving everywhere a custom still followed at many places—that of burying without charge for funeral service very young children who have died unbaptised—if there were included with them those whose parents are unable or unwilling to pay the extra charges for such service. If the temptation to misrepresent children born alive as still-born were removed by abolishing such extra fees for their burial, few such misrepresentations would be made; and, if very few children born alive were buried as if they were still-born, those who did so bury would almost certainly incur suspicion of doing it for some more improper motive than merely to avoid an extra charge; and it would be much less easy than it now is to conceal births, or the deaths of young children from neglect or worse than neglect. Another danger to be avoided is the secret burial of the bodies of young children in other than well known public places of sepulture—a danger which will be increased if the burial of those really still-born in burial grounds be rendered more troublesome or more costly. At present, there is no clear law forbidding secret burial, and no easy mode of preventing what may cause very serious injury or annoyance, and which, if common, would offer great facility to the concealment of crime. If, for example, the body of a child were found in a private garden, it might seriously compromise the characters of any women connected with such garden; and yet those who placed the child's body there might have been guilty of a trespass only, and that might be very difficult of proof. The offence is one against public decency, is *contra bonos mores*, and should, as such, be punishable on summary conviction of those committing it or abetting in its commission. While, however, the secret burial of any human body should be forbidden under penalties easily enforced, no avoidable impediment should be offered to the proper burial of any child, whether born alive or not; but satisfactory evidence ought to be given where the body of any child alleged to have been still-born is brought for burial really is so. At present, the practice is to accept as evidence the certificate of any one calling herself a midwife, even though she be unable to write her name, and who may be, and often is, entirely unknown to those who receive her certificate. No reasonable reliance can be placed upon such certificates; and no body of any child alleged to have been still-born ought to be buried as such, unless it be either so small that it is scarcely possible that it could have been born alive, or to have survived if it were, unless the fact of its having not been born alive be certified by a regular medical practitioner who was in attendance on the mother, until it has been seen by the officer of health of the district, who shall satisfy himself that the child was not born alive, either by examination of its body or by other inquiry. Until some such check to the burial of children really born alive or still-born be offered, not only will the record of deaths be very erroneous, but, what is of far more importance, the great facility now offered to the criminal concealment of births, and to the culpable neglect of the lives of young children, will continue to disgrace our country.

MIDWIFERY IN A BRITISH COLONY.

THE following revolting statement comes to us from a correspondent in British Guiana:

An instance of the shocking and barbarous treatment pursued by ignorant midwives in the country districts has just come to light in the West Bank district, and is now the subject of judicial investigation. There are a number of women scattered over the country who style themselves "midwives," generally old, ignorant, decrepit creatures, who are unfit for field work, but who think they are quite qualified to attend to their sisters in labour. That they are altogether unfit for such an important service, it is almost unnecessary to state. If the patient be strong and active, and nature be on her side, the midwife's services may not be sufficient to kill her; but where the contrary is the case, and difficulties arise that require the doctor's science, then the midwife's opportunity comes to show her skill and her experience, and the result is too often death. The case to which we allude is a fearful one, though not so unusual as may be supposed. It happened at Petosi Village, close to Vive la Force estate, on the West Bank. A midwife, named Amsterdam, waited on a woman named Mary Ann Hope. The poor woman Hope had a protracted time, during which she suffered a deal of torturing by her midwife, but all without purpose. Her ordinary rough and ready appliances having failed, Amsterdam saw it was a case to demand extra exertion; in fact, requiring the utmost limit of her skill and former experience. She deliberately tied the woman with a rope and stretched her, then manipulated her body in a violent way, expecting this energetic treatment to help the birth; and at last, the kneading process having failed, she belaboured the poor woman's body, being unable to think of anything that could better help the poor, suffering, tortured patient out of her trouble. It was on the 28th of March that Amsterdam was called; it was on the evening of the 30th that, after suffering awful agonies, Hope died, her child still unborn. Information of the case having reached the police, the principal practitioner and her assistants were arrested. Some of the evidence taken down at the magistrate's examination is so revolting, that we dare not publish it. Dr. Alexander, who held the *post mortem* examination, says that Hope was a fine healthy young woman, sixteen years of age, and there ought to have been no difficulty in her confinement, if the ignorant people who were with her had had the least skill; but they brutally used her, and from the effects of the treatment she died. The "stretching" with the rope, which we have already spoken of, is described by a witness: Three women tied the deceased's wrists with tarred rope, twisting her up to the beam of the room with her legs dangling. . . . . One beat her with a strap with a buckle to the end. They repeated this every now and then, the deceased begging them to let her down, as she was so weak. She was lying from Friday to Monday on the bare boards. The case is not yet closed.

THE ADULTERATION OF DRUGS.

SOME important evidence upon this subject was given on Thursday last before the Select Committee of the House of Commons, which is sitting, with regard to the Adulteration Act. The first witness examined was Mr. Horner, who stated that very few drugs were imported into this country in a state of absolute purity. A good deal of the adulteration or admixture took place abroad, in the process of collection or gathering. With regard to scammony, he mentioned that an article containing 80 per cent. of scammony was considered very good. Opium was also very largely adulterated; and he mentioned that there was a sale in the City that day of adulterated opium, which would be sold for about 7s. 6d. per lb., while good opium was worth 32s. per lb. Sulphate of quinine was formerly made from one bark (calisaya), but now chemistry had advanced so much that there were a great number of other kinds of barks utilised; and if the use of such barks were prohibited, the country would go without quinine, as the bark from which it is supposed to be got does not exist. He also stated that essential oils are greatly adulterated, especially since there have been no duties. He was not of opinion that these impure drugs should be prohibited from coming here; it would drive the trade away. There was a large consumption of opium in this country, but not in proportion to the population. Another witness (Mr. Hodgkinson) said that drugs, generally speaking, were adulterated abroad. Prescriptions made up in one part of the country should certainly have the same effect as in another. Of late years there had been much more equality in this respect. The retail druggists, he said, were not in the habit of adulterating. Good country druggists could supply as good medicines as those in London. Mr. Carteighe said that there were some important chemicals and pharmaceutical preparations which deteriorated by being kept. He instanced Prussic acid, which, unless kept in a sealed tube, lost its volatile strength; and there were certain articles, he said, in a druggist's shop which could not be dealt with fairly by a hard and fast law. If a person came into his establishment and asked for quinine, he would not get quinine—he would get bisulphate of quinine—that was quinine *plus* something else. This was the cheaper and more convenient article, and generally ordered by medical men. To chemists this act was a very serious matter, inasmuch as it involved the loss of repute and the confidence of their customers. There was not much difference between medicines prescribed in town and country. Other evidence having been given, especially to the effect that the present system of analysis is unsatisfactory, the Committee adjourned.

HOSPITAL SUNDAY FUND.

THE preparations for the carrying out of this movement for the present year are now well in hand. The day falls this year on the 14th June. The Council feel confident, and express every hope that the contributions for 1874 will considerably exceed those of 1873. The Lord Mayor receives contributions towards this fund; and all those interested in the movement, but unable to make their donations on the day, are requested to send their subscriptions to the Mansion House, addressed to Mr. Henry N. Custance, the Secretary to the fund, who will furnish every information on the subject. The metropolitan clergy and other ministers of religion have again come forward to offer their ready cooperation.

MANCHESTER EDINBURGH UNIVERSITY CLUB.

ON Friday evening last, the inaugural meeting of a new local club in connection with this University was held at the Clarence Hotel in this city. The project, which has often been discussed by old alumni resident in this city, took shape a few months ago, and, at a preliminary meeting of those interested, it was determined to issue invitations to all the members of the Council of the University within a radius of twenty miles of Manchester to meet on Friday evening for the purpose of establishing the Club. In response to this invitation, twenty-two gentlemen assembled, while many others expressed their warm concurrence in the proposal, although regretting their inability to be present. Dr. Thorburn was called to the chair, and a series of resolutions was adopted establishing the Club and framing its rules. The name is to be "The Manchester Edinburgh University Club", and its objects are, in the words of the rule, "to maintain good fellowship among its members, and to promote the interests of the University of Edinburgh". The following gentlemen were then elected office-bearers for the ensuing year:—*President:* Professor Balfour Stewart, M.A., LL.D.; *Treasurer:* John Thorburn, M.D.; *Honorary Secretary:* James Hardie, M.D. Business over, the company proceeded to dinner, the chair being taken by Dr. Stewart, and Dr. Hardie officiating as croupier. The Chairman gave the toast of the evening, with which he coupled the names of Dr. Thorburn and Dr. J. Roberts, to the former of whom is due the credit of having originated the Club. "The University of Edinburgh", by Professor Gamgee, was responded to by Professor Core and Dr. J. Crichton Browne. "The Sister Universities", proposed by Mr. Vannan, was responded to by Dr. Deas. Other toasts of a complimentary nature followed, interspersed with songs by Dr. Davies, Dr. Deas, Dr. Hamilton, and Mr. Vannan. Much satisfaction was expressed by the speakers at the formation of the Club, as affording opportunities of renewing old friendships and keeping warm their affection for their Alma Mater.

THE SUNDERLAND INFIRMARY.

A SUBCOMMITTEE was appointed a short time ago at the Sunderland Infirmary, to report upon a proposal for establishing a provident dispensary as a means of relieving the out-patient department and also upon the mode of electing medical officers. This subcommittee made its report at the last meeting of the General Committee, as follows.

> Your subcommittee, being advised by the Medical Board of the Infirmary of the many abuses arising from the practice of granting relief by the present system of dispensary tickets, has resolved, after long and anxious deliberation on the subject, to recommend to the Committee to consider whether it may not be advisable to give up altogether the practice of gratuitous relief to out-patients; or so to reorganise the system that a separate and more complete control be established over the dispensary. Your subcommittee has been led to this proposition in consequence of the frequent applications from persons who do not come within the range of the charity, a large proportion being paupers, for whose medical care provision is made by the Poor-law; and many others being in receipt of good wages, who should not seek gratuitous medical care, and thus sacrifice that feeling of independence which ought to characterise the working man. Your subcommittee would have been glad to have proposed the substitution of a provident dispensary (which should, as in some other towns, shortly become self-dependent); but has grave doubts as to their competency to do more than suggest that

such an institution would meet all the exigencies of the case, and thus not only relieve the Infirmary of a constant source of expense, but supply a public want, without destroying the independence of those who might avail themselves of its means of relief. In making these suggestions, your subcommittee is fully aware that, to a great extent, your funds might be diminished by the abolition of a system which involves a certain amount of patronage to which your subscribers have long been accustomed, and therefore earnestly begs the closest attention of the General Committee to the subject. Your subcommittee has also had its attention drawn to the subject of the admission of in-patients, and would suggest that in-patients be admitted free, the receiving medical officer to decide which are fit cases for admission; and that where there appears an ability to pay the whole or part of the cost, payment be made at the rate of 10s. to 20s. a week; also—That the election of the honorary medical staff be placed in the hands of the Committee of Management; because—(*a*) The Committee of Management is so much better able to estimate the qualifications required in the office than the general body of Governors; and the transference of the elective power into their hands, in the case of house-surgeon, has proved of such signal service to the institution; and (*b*) The majority of the medical profession of the town desire such a change.

These recommendations appear to us very wise, and likely, if carried out, to be attended by great benefit. A busy seaport town like Sunderland is just the place for the provident system. The only point about which we feel a doubt is the payment to be made by in-patients, where they can afford it. This is a plan about which, in the interests of the general practitioners, we have some misgiving. But, no doubt, the subcommittee have well considered this particular suggestion. There is certainly a class of persons to whom the arrangement is likely to be a boon, and no objection can be made to it provided that it can be administered in such a way as not to add to the burden of unpaid labour which already falls upon the medical officers of public hospitals.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MR. G. W. CALLENDER, F.R.S., will commence his course of three lectures, "On the Formation and Early Growth of the Brain of Man," in the theatre of the Royal College of Surgeons, on Monday next; and will be succeeded by Professor Timothy Holmes, F.R.C.S., who will deliver six lectures, "On the Surgical Treatment of Aneurism in its various Forms," in continuation of his course of last year, commencing Monday, June 8th.

DR. BARTHOLOW'S EXPERIMENTS.

WE publish in another column a letter from Dr. Bartholow of Cincinnati, on the subject of his recent experiments, to which we last week referred. It will be seen that Dr. Bartholow states the reasons which led him to anticipate that the experiments would not be in any way injurious to his patient, and adds that consent was given by the patient. He concurs, however, in the judgment which we rather implied than expressed. Altogether, his letter is, we believe, one which is likely to disarm further criticism. It is a frank apology, due, we think, to his profession and to humanity, with a statement of the circumstances which led him into error.

THE HEALTH OF LONDON.

WE learn, from the Registrar-General's Report, that scarlet fever continues fatally prevalent in Leeds; and 18 deaths were referred to small-pox in Birmingham, raising the number of fatal cases recorded within the borough, since the beginning of the year, to 235. In London, 2262 births and 1326 deaths were registered last week. The 1326 deaths included 26 from measles, 17 from scarlet fever, 12 from diphtheria, 41 from whooping-cough, 21 from different forms of fevers, 21 from diarrhœa, and not one from small-pox. The 21 deaths referred to fever were but half the corrected average weekly number, and included 4 certified as typhus, 9 as enteric or typhoid, and 8 as simple continued fever. Different forms of violence caused 54 deaths; 44 were the result of negligence or accident, including 16 from fractures and contusions, 5 from burns and scalds, 7 from drowning, and 10 from suffocation. Five cases of murder were registered in Mile End Old Town; and five deaths by suicide were recorded. Two of the deaths from fractures and contusions, resulting from negligence or accident, were caused by horses or vehicles in the streets. From this class of accident, 55 cases of injury and maiming came under the notice of the police, within the London registration area, during the seven days ending 24th instant; of these, 48 occurred in the metropolitan, and 7 in the City police districts. In the large public institutions, 262 deaths were recorded, or 20 per cent of the total deaths; of these, 149 occurred in workhouse establishments, 104 in hospitals, and 9 in lunatic asylums.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

THE annual meeting of the friends and supporters of the North-Eastern Hospital for Children was held on Wednesday last. The report stated that new premises are being erected for the better accommodation of the out-patients, the cost of which will be £5000, towards which £4200 has been subscribed. The sum of £2728 had been received during the year from the parents of the out-patients. The average cost of each bed in the hospital is calculated to be £30 *per annum*, the income for the general fund of the year amounted to £1625 : 18 : 5, and the balance £449.

MEDICAL OFFICER FOR THE CITY OF LONDON.

AT a meeting of the Commissioners of Sewers for the City of London on Tuesday last, Mr. Deputy Farrer proposed that that portion of the report presented which related to advertising for candidates for the office of Medical Officer of Health for the City of London, in the place of Dr. Letheby, resigned, should be expunged, as he believed it was perfectly well understood that one gentleman should have the appointment, and that the majority of the court had pledged themselves to that point. The proposition was opposed by Mr. Bedford and Mr. Knight, the latter stating his disbelief that the majority of the court were pledged to support a particular person. It was finally decided to advertise for candidates for the vacant post.

LUNACY LAWS.

A PARAGRAPH in the *Globe* announces that the first of a series of public meetings "in furtherance of a reform of the lunacy laws" was held on Tuesday evening at Lawson's Rooms, Gower Street, the Rev. Page Hopps presiding. Mrs. Lowe spoke at some length, complaining strongly of the injustice of the existing laws, of which she stated she had been a victim; and other cases of the confinement of sane persons in private lunatic asylums were mentioned. A resolution in accordance with the object of the meeting was adopted almost unanimously. The movement is, we believe, of the serio-comic order.

BRITISH HOSPITAL AT NAPLES.

THE Neapolitan correspondent of the *Times* writes on the 22nd instant about the proposed British Hospital in Naples:—"It is needed not merely as a seaman's infirmary, but quite as much for sick strangers of our race who might otherwise be sent to Italian hospitals or be compelled to pay the enormous prices demanded at hotels in such circumstances. Since I last adverted to the subject, a meeting of the British residents has been held, when it was agreed to present a memorial to Her Majesty's Secretary of State for Foreign Affairs, embodying the following prayer: 'That Her Majesty will grant £1,000 for this purpose, and also £2,000 from the Naples British Burial-ground Fund, now invested in England, contingently on the collection by the memorialists of £1,000. This collection has already reached the sum of £500, of which £300 has been contributed by British residents; and it cannot for a moment be supposed that an institution not merely of local, but of national importance, involving the comfort and lives of many of our fellow-subjects, will be suffered to fall through.' The scope of the projected institution is thus briefly stated. 'It shall be open to all British subjects, especially to seamen, and to Protestants of all nationalities. 2. Private rooms, comfortably furnished, shall be provided for patients of superior station and pecuniary resources who may be overtaken by sickness while travelling, etc.' The great importance of this last regulation cannot be too highly estimated; for, in the course of a long residence, it has been my lot to visit many a friend in hotels or private lodgings, where they have lingered long in suffering, or have died from the want of the comforts and constant attendance which might have been supplied to them in such an institution as it is now proposed to form. What their fate was, may be the fate of any future traveller in these lands."

ST. MARY'S HOSPITAL MEDICAL SCHOOL.

On Wednesday last, Professor Rolleston, F.R.S., distributed the prizes gained during the past year at the St. Mary's Hospital School. He afterwards delivered a most eloquent address to the students, in the course of which he deprecated the outcry which has been raised of late years against lectures. So far from these being "flagrant anachronisms", he thought that nothing could supersede the necessity for oral teaching, let books be never so cheap and widely diffused. Men were taught by lectures the habit of working at fixed times and in regular order, and acquired also the faculty of attention; but, above all, there was the personal influence of the teacher—"as iron sharpeneth iron, so man sharpeneth the face of man". No doubt, lectures were sometimes tediously elaborated or delivered in a perfunctory manner; but, if not too numerous, and if earnestly given, they were invaluable. He assured the senior students that, though much is made of occasional glaring exceptions, real worth and worldly success do generally coincide. He insisted on the value of sympathy for the patient. The science of medicine is, unfortunately, not sufficiently exact for the principles of ratiocination to be of much value; we arrive at our conclusions more often by processes of intuition, and to be able to enter into the feelings of the patient was a great aid to success. "Put yourself in his place" should be the first maxim of a young doctor.

THE HISTORY OF CLINICAL LECTURES.

At the meeting of the Royal Medical and Chirurgical Society on Tuesday evening, the President, Dr. Williams, announced the presentation to the library, by Mr. Vevers of Hereford, of a manuscript volume containing part of the course of clinical lectures delivered in Edinburgh by Dr. Rutherford in 1750. The president's announcement was supplemented by a statement by Dr. George Harley, who reminded the members present of a discussion which took place in a contemporary last year, as to the priority of Edinburgh or Dublin in the institution of clinical lectures. Dr. Mapother had claimed the merit for Dublin, where wards were set apart for clinical teaching in 1785. With the aid of Dr. Sharpey, Dr. Harley had ascertained that Dr. Rutherford, the Professor of Botany in the University of Edinburgh, had been appointed to give a course of clinical lectures in 1748. Among the correspondence which the discussion called forth, was a letter from Mr. Vevers, announcing his possession of the volume referred to, which he had found in the library of an old gentleman whose practice he had purchased. At the request of Dr. Harley, Mr. Vevers had sent the volume for his inspection, and had ultimately consented to present it to the Society. Dr. Harley then made some remarks on the origin of clinical lectures in London. Dr. Billing, whom he had consulted on the subject, had informed him that the first clinical lecture in the metropolitan schools was delivered by Dr. Hamilton at the London Hospital in 1804; but that no systematic course had been given since 1824. In conclusion, Dr. Harley said that his object in calling special attention to Mr. Vevers's interesting donation was, that the volume presented was only the first, and that possibly some member of the profession might possess the second volume and be willing to place it in the hands of the Society.

THE GOVERNMENT FACTORIES BILL.

Mr. Cross's Bill "to make better provision for improving the health of women, young persons, and children employed in manufactures, and the education of such children, and otherwise to amend the Factory Acts," has been printed. The hours of employment of "a child, young person, or woman" in a factory are to be between 6 A.M. and 6 P.M., or between 7 A.M. and 7 P.M., but no such person is to be employed continuously for more than four hours and a half without an interval o at least half an hour for a meal, and two hours are to be allowed for meals every day, one hour, at least, of such time to be before 3 P.M. This latter provision does not apply to Saturdays, when work is to cease at 1 P.M. or 2 P.M., according to the hour of commencing work. Children may be employed in morning or afternoon sets, or for the whole day or alternate days; but a child employed on Saturday morning is not to be employed in the afternoon, and no child is to be employed on Saturday in two successive weeks, nor on Saturday in any week, if on any other day in the same week he have been at work for more than five hours. The hours of meals are to be simultaneous, and employment during meal-time, or remaining in work-rooms during that time, is forbidden. There is a saving clause as to the recovery of lost time, under certain conditions which are set forth. There are also saving clauses as to youths in lace-factories, and as to the application to print and bleaching and dyeing works, of the permanent modifications contained in the schedules to the Factory Acts Extension Act, 1867, and the Factory and Workshop Act, 1870. The age at which a person is deemed to be a child is to be extended from thirteen to fourteen years, unless an educational certificate be obtained. A child is not to be employed in 1875 if under nine years of age, and after that year if he is under ten. Enactments authorising the employment of children in silk-works, during longer hours than those authorised in the case of a child in other factories to which the Act applies, are repealed; but a child between the age of eleven and twelve may be employed in the winding and throwing of raw silk during one year after the commencement of the Act, as if he were a "young person," and between twelve and thirteen during two years after the commencement of the Act.

IRELAND.

The salary of Dr. Hughes, of Oranmore Dispensary District, Galway, has been increased to £190 *per annum*.

SMALL-POX.

In the Belfast Union Hospital, for the week ending May 16th, there were forty-five patients suffering from small-pox; and during that period seven deaths were registered as occurring in that town, and six in Londonderry from the same disease.

THE IRISH CONJOINT EXAMINATION SCHEME.

The fellows of the College of Surgeons resolved at their annual meeting, on the 25th inst. to instruct the Council to proceed no further with the conjoint scheme without having previously summoned the entire body to a special meeting. The election of officers takes place next Monday, and it is feared that the opponents of the Conjoint Scheme may carry the day, especially as its advocates were also the originators of the new system of examination which is universally unpopular. All students have now the option of proceeding by the three examinations, or the two formerly in force.

THE PUBLIC HEALTH (IRELAND) BILL.

The King and Queen's College of Physicians, at a meeting held on Friday last, adopted a report of its Parliamentary Committee pointing out the faults of Sir Michael Hicks Beach's Bill, and appointed a deputation, consisting of the President, the Registrar, Dr. Evory Kennedy, and Dr. Grimshaw, to proceed to London and wait on the Chief Secretary for Ireland, with a view of having the objectionable provisions altered. The objections raised by the College are almost identical with those pointed out by us in our remarks upon the Bill last week. Similar objections have been urged by some of the Dublin newspapers, especially the *Morning Mail*, a well known supporter of the present Government. This journal remarks: "These blemishes in the measure, however, when pointed out to Sir M. Beach, are sure to be remedied." We trust our contemporary is right; and certainly Sir Michael's professions lead us to a similar conclusion. The Irish Poor-law Medical Officers' Association has also determined to send a deputation to Sir M. Beach, to point out some of the defects of the Bill. A conjoint Committee, formed of representatives from the Parliamentary Bills Committee of the College of Physicians, a similar Committee of the College of Surgeons, the Poor-law Medical Officers' Association, the Irish Medical Association, and the Sanitary Associations of Dublin, Cork, and Waterford, are holding almost daily meetings, with a view of discussing and amending the defects of the Bill. We may mention, *en passant*, that the Bill shows marks of considerable carelessness in its draughting; for Acts of Parliament are quoted, as to be administered by the newly constituted authorities, which have no real existence, not ever having been extended to Ireland.

THE KING AND QUEEN'S COLLEGE OF PHYSICIANS AND THE APOTHECARIES' HALL OF IRELAND.

WE understand that the Irish Apothecaries' Company have addressed a rather peremptory demand to the College to withdraw its Irish Pharmacy Bill, and support that of the Apothecaries' Company. We are not surprised to learn the College firmly refuses to withdraw its Bill, as the Bill has met with the almost unanimous approval of the Irish press as well as that of many of the professional journals in England. The Irish Chemists and Druggists' Association has repudiated the proposals of the Apothecaries' Hall, and, we hear, will give its support to the College Bill.

ROYAL COLLEGE OF SURGEONS.

THE election for President, Vice-President, Council, and Secretary, will take place on next Monday, June 1st. The present Vice-President, Mr. Joliffe Tufnell, will be elected President; and for the vice-presidency the contest will lie between Dr. Mapother and Mr. Edward Hamilton of Steevens's Hospital. Without referring in any way to the merits of the two candidates, we believe we are correct in stating that the latter gentleman will be the one selected. As regards the election for the Council, since we referred to this matter last week, we find, as then stated, that several additional names have been put forward. Mr. Barton of the Adelaide Hospital will also offer himself as a candidate for the office of Councillor, and we consider that his chance is a very good one.

PASS AND PLUCK FOR THE FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DURING the past week, the Primary Examination for the Fellowship has taken place. The following questions had to be answered in writing.

1. Describe, in their relation to each other and to the several parts in contact with them, the muscles which form the floor of the posterior triangle of the neck. 2. Name the structures, in their relative order, which would be necessarily divided in cutting out the last rib through an incision made in the skin over it.—1. At what period of embryonic life does the formation of the liver commence? Describe the process of its development up to the period of birth, and the changes it undergoes during the first year after birth. State what functions it performs during intrauterine life. 2. What arrangements exist for neutralising the effects on the brain of shock, in jumping from an elevation on to the feet? Describe the mechanism of these arrangements, and how they act.

Four hours were allotted to this paper; and it was notified that "*all* four questions *must* be answered". It will be seen that two questions in anatomy and two in physiology were set. Each candidate had also on a subsequent day to undergo a *vivâ voce* examination upon anatomical specimens at two tables, a quarter of an hour at each.

It may, perhaps, be as well to remind students how the final result as regards each candidate is arrived at. It depends, then, upon his proficiency in four points—(1) his written answers to the two questions in Anatomy; (2) ditto in Physiology; (3) his replies at table A; (4) ditto at table B. And he must obtain a "good" mark in three of these four particulars to pass; if he receive only "moderate" marks in any two of the four points, his rejection follows. It would appear that the examiners are determined to maintain the standard which was contemplated when the examination for the Fellowship was instituted; for at the recent examination sixty-nine gentlemen presented themselves, and of that number forty-five failed to pass. Such a result has naturally led to much complaint; and we hear opposite statements on the subject. We are assured, however, on good authority, that no unusual rigour has been shown, but that the candidates from the schools generally were very ill prepared. It is intimated that demonstrators nowadays do not work as hard as heretofore, or students either. Demonstrators driving about at noon in well appointed broughams, and with dainty kid gloves, find their students only then beginning to set to work. We do not know how this is, but somebody must be responsible for the many lamentable failures of this week. Who is it?

The second or pass examination in Pathology, Therapeutics, and Surgery took place on May 28th. The following four questions were set, all of which were required to be answered.

1. In which directions may the astragalus be dislocated? and how does this accident usually occur? Describe the attendant signs, possible complications, and consequences of this injury; and state how you would deal with it according to circumstances. 2. What is meant by degeneration? Describe the minute characters presented by its principal forms in those structures in which they most commonly occur. 3. Describe the varieties of inguinal hernia which occur in association with an open state of the vaginal process of the peritoneum in both sexes. 4. A man received a severe kick in the perinæum, which was rapidly followed by considerable swelling there and retention of urine. State the probable nature of the injury and its immediate and remote effects, the mode in which you would investigate such a case, and the treatment you would adopt.

ASSOCIATION INTELLIGENCE.

CUMBERLAND AND WESTMORLAND BRANCH.

THE spring meeting of the above Branch will be held at the Keswick Hotel, Keswick, on Thursday, June 4th, at 12.30 P.M.; ROBERT TIFFEN, M.D., President, in the Chair.

Gentlemen intending to read papers, or be present at the dinner, are requested to give early notice to the Secretary.

HENRY BARNES, M.D., *Honorary Secretary.*

Carlisle, May 5th, 1874.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.

THE next meeting of the above District will be held at the Royal Sea House Hotel, Worthing, on Tuesday, June 9th, at 3 P.M.; WM. J. HARRIS, Esq., in the Chair.

The dinner will take place at 5.15 P.M. precisely. Charge, 5s., exclusive of wine.

The Chairman kindly invites members and their friends to luncheon at his house from 1.15 to 3.45 P.M.

Gentlemen desirous of attending the dinner, are requested to give me notice by Saturday, June 6th.

Notice of the following communication has been received: "Case of Obstruction from Gall-Stones", by A. H. Collet, Esq.

WM. J. HARRIS, *Honorary Secretary.*

Worthing, May 25th, 1874.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting will be held in the Town Hall, Blackburn, on Wednesday, June 17th, at 1 P.M.—CHARLES WHITE, Esq., President; JOHN SKAIFE, Esq., President-elect.

The following papers have been promised.

1. Remarks on Pleuritic Effusions, and their Treatment. By Dr. Waters (Liverpool).

2. On the Treatment of the Bites of Dogs by Lunar Caustic, as being unsound in theory, injurious and unsuccessful in practice. By Dr. Haddon.

3. Retro-pharyngeal Abscess in the Child. By Dr. Oxley.

4. Specimens of rarer forms of Contracted Pelvis. By Dr. D. Lloyd Roberts.

The Honorary Secretary of the Branch will briefly call attention to the proposed erection of a County Convalescent Hospital with the surplus of the "Cotton Famine Relief Fund".

The dinner will take place at the Town Hall at 4.30 P.M. precisely. Tickets, 7s. 6d. each, exclusive of wine.

A. B. STEELE, *Honorary Secretary.*

54, Rodney Street, Liverpool, May 27th, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Midland Hotel, New Street, Birmingham, on Tuesday, June 23rd, at 3 P.M.; when an address will be delivered by the President, W. C. GARMAN, Esq.

The annual dinner will also be held at the Midland Hotel, at 5 P.M. precisely. Dinner tickets (exclusive of wine), 7s. 6d.

T. H. BARTLEET.
BALTHAZAR W. FOSTER, M.D. } *Honorary Secretaries.*

Birmingham, May 26th, 1874.

SOUTH MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the Town Hall, Buckingham, on Thursday, the 25th June, at 2 P.M.—Dr. BRYAN, President; Robert DE'ATH, Esq., President-elect.

Refreshments kindly provided from 1 P.M. to 1.30 P.M. previously, by Robert De'Ath, Esq., at his residence.

Dinner, at the White Hart Hotel, at 5 P.M. Tickets, 6s. each, including waiters.

Gentlemen intending to furnish papers and cases, are requested to send the titles of same at once to Dr. Bryan, or to

W. MOXON, *Honorary Secretary.*

Northampton, May 27th, 1874.

MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the Guildhall, in the city of Lincoln, on Thursday, June 25th.

Members wishing to read papers are requested to communicate at once with C. HARRISON, *Honorary Local Secretary.*

Lincoln, May 25th, 1874.

CORRESPONDENCE.

THE HOSPITAL FOR WOMEN, SOHO SQUARE.

SIR,—Unwilling as we are to continue the discussion on the affairs of the Hospital for Women, we feel constrained to ask permission for a little space in reply to the statement of the Committee published in your last issue.

It may be perfectly true, as stated by the Committee, that no official communications passed between the two Committees on the subject of the nursing within the dates specified; but it is none the less true that the question was constantly under the consideration of the staff; that complaints were frequent; and that many hours were spent by the staff in investigating these, and in endeavouring to effect improvements in the general character of the nursing. Over and over again, the matron, who was the official head of this department as well as the superintendent of nurses, attended the Medical Committee for this purpose; and it was not until we had exhausted all the means in our power that we thought it well to make complaint to the General Committee, inviting them to appoint a joint subcommittee for the due investigation of the subject. The way in which they received our complaint was this: they first refused to accede to our request, on the ground that it was "unconstitutional", though they had appointed just such a subcommittee, on their own motion, for another purpose, two years previously; and then they expressed their opinion that the charges which we had preferred had "little or no foundation", and "did not in the least weaken their confidence in the matron".

Thus it will be seen that our anxiety to improve the nursing by the aid of the Committee was curtly dismissed; and the only defence now urged by that body is, that we did not make complaint earlier!

We respectfully submit that the willingness of the Committee to adopt our recommendations for the improvement of the nursing in 1870 does not exonerate them from the blame which attaches to their proceedings in this matter three years later; yet it will be observed that the entire defence of the Committee for the action, or no action, taken by them in 1873 is based upon what they did in 1870; for they are careful to say nothing in explanation of their recent proceedings on the nursing question.

We refrain from making any comment on the fact, that we learn now for the first time, from the pages of the BRITISH MEDICAL JOURNAL, that a resolution was passed by the Committee which might have changed the aspect of affairs, but which was never transmitted to us. This resolution, however, effectually disposes of the "constitutional" theory upon which our request for a joint subcommittee was refused. In regard to the remark, that "the Committee would emphatically deny the correctness of the assertion, that they have treated the staff with discourtesy or want of consideration", we beg to state that, in a letter dated February 20th, 1874, they distinctly charged us with "subordinating the interests of the charity, and the welfare of the patients committed to our charge, to personal and entirely secondary considerations", these "personal and entirely secondary considerations" being our declining to investigate any further with them the utter inefficiency of the nursing, on the ground that we could not any longer continue in our offices under the terms of their new bye-laws (notice of which had then been sent to us), altering, as it did, the conditions upon which we accepted our appointments. We venture to think that the profession will scarcely be in accord with the Committee on this point.

We beg, further, to quote from the last paragraph of our published statement (copies of which, together with the entire correspondence between the two Committees, we shall be happy to send to any who wish for them), in order to show what our feeling on the whole subject in dispute really was. "We cannot conclude this statement without expressing our regret at the conduct of the Committee, and our surprise that they should have treated the staff, some of whom have been officers of the Hospital for a great many years, with such scant courtesy and consideration. We regret very much that the charity should suffer by this action, and, after years of faithful service and much hard work for the welfare of the Institution, we are sorry to have had our resignations forced upon us as they have been; nor can we believe that the true interests of the charity, as is declared by the Committee (Letter 13, p. 16), required such meddling legislation as is exemplified in the passing of the new bye-law."

If the Committee had acted fairly by us in the investigation of the nursing, which we desired only in the interests of the patients, or if they had frankly and unreservedly, without casting imputations on our professional honour, withdrawn the offensive bye-law, as they have done since we resigned our offices at the Hospital, the present scandal would not have existed; and few persons, we venture to think, will deny that the true interests of the charity would thereby have been served.

We are, etc., ALFRED MEADOWS, M.D.
JOHN SCOTT, F.R.C.S.
CHRISTOPHER HEATH, F.R.C.S.
ARTHUR W. EDIS, M.D.
London, May 1874. CHARLES E. SQUAREY, M.B.

P.S.—Mr. Edgelow does not sign this statement solely on the ground that, as Surgeon-Dentist to the Hospital, he had little or nothing to do with the in-patients, and does not, therefore, feel himself competent to express any opinion on the nursing question. He resigned his appointment at the Hospital in consequence of the new bye-law.

DR. BARNES AND DR. SNOW BECK.

SIR,—Were I permitted to express an opinion, I would say, that Dr. Barnes exercises a wise discretion in resolutely refusing to enter into any scientific discussion. But, as the reasons he adduces in the present instance for this decision involve certain charges against myself, I can scarcely be expected to endorse them. These charges appear to consist of—1. That I have made some mistake in my arithmetic; 2. That I have committed the heinous offence of not giving him all he has asked for.

1. I am not aware of any mistake in my arithmetic; and certainly I cannot accept that which Dr. Barnes wishes to force upon me. In this position, it may be well to go over the subject, and show how the numbers were made up. When I was unexpectedly asked by Dr. Playfair, during the discussion, how many cases of death, following the injection of the perchloride of iron, I had seen, I answered, offhanded, "Some nine or ten". Afterwards, I found this was substantially correct, and did not feel it necessary to alter the figures. Subsequently, I stated I had had an opportunity of examining the uterus and appendages in four of these cases, and in all the appearances were identically the same. In strict language, perhaps, I was wrong in saying I "had seen" these cases; for, in two of them, I did not see the women during life, and only had the opportunity of carefully examining the uterus and appendages after death. But, as this examination enabled me to speak with confidence as to the cause of death, I cannot think I committed any serious fault in speaking of them as I did. These four cases have been fully recorded, with all their faults, in this JOURNAL; and, in a postscript added to them, I said: "I find that eleven cases of death, and 'one unsuccessfully', after the injection of the perchloride, were mentioned by different Fellows of the Society at the partial discussion which was permitted. These cases, with the four now recorded, make a total of fifteen or sixteen cases of death, besides others which are known to have occurred." Exception, however, is taken to these eleven cases, which are made up as follows: 1, Dr. Routh; 2, Dr. Graily

Hewitt; 3, 4, 5, Dr. Murray; 6, 7, Dr. Phillips; 8, Dr. Bantock; 9, 10, 11, Dr. Protheroe Smith; "one unsuccessfully", Dr. Playfair. I have again referred to the *Obstetric Transactions*, vol. xv, and it still appears to me that this account is perfectly correct. And, as these eleven or twelve cases do not include either of the four previously recorded, the total number is fifteen or sixteen. Dr. Playfair's "one unsuccessfully" case is thus left doubtful whether it arose from the effects of the hæmorrhage, or followed the injection of the perchloride; for, when a case is reported in this ambiguous way, there is doubtless some special reason for the ambiguity.

Dr. Barnes, however, endeavours to make out that I have counted the same case "twice over", and that I have "thrice been guilty of counting one case as two". This, however, is not the fact; each of these cases is a separate and distinct case. Dr. Barnes also affirms that one of the cases referred to by Dr. Protheroe Smith is the same as that described by Dr. Hewitt. Again, this is not the fact; for these are two distinct cases, according to the more detailed notes I possess of both. And, considering the facilities Dr. Barnes has for obtaining correct information, there is no excuse for his making these statements, which are contrary to the facts. The case recorded in the *Obstetrical Journal* for February, and the case briefly referred to by one of the speakers, may, or may not, be "one and the same". But, in the doubt, I have counted these accounts as one case only. The case related is, no doubt, very characteristic; and, being one which so aptly illustrated the result in practice of the erroneous dogmas at present taught in the schools, I could not pass it over. Sufficient details are given to enable anyone acquainted with the facts to recognise the case; but all names were omitted, for the simple reason that it was not intended to be personal. I took great pains to ascertain the facts correctly, and firmly believe they are accurately reported. The facts were confirmed by one of the medical gentlemen in daily attendance, who also told me that, if I had not given the particulars, it was his intention to have published them. And, were I now to add any further account, Dr. Barnes, who writes as if he were aware of all the circumstances, must know that it would lay me open to the attentions of those legal gentlemen who have wistfully considered the subject, but whose favours I am not desirous to facilitate: whilst the designation, "a professor of midwifery in one of the largest medical schools", would as correctly apply to Dr. Barnes himself as to any other individual.

2. The further cases Dr. Barnes seems so earnestly to seek will be furnished in due time; but, as I am unable to see of what use they can be in a scientific point of view, I have not been in any haste to record them. In none of these remaining cases had I an opportunity of examining the body after death, and of some I have no written record. Dr. Barnes remarks: "In due time and place, he will recognise the duty of recording his own experience"; and I am unable to understand why I should not follow so excellent an example. Instead of being irritated by such phrases as "worthless or non-existent cases", or the various carefully concocted sentences which are intended to be so severe, I can only regard these as the outpourings of a disappointed and embittered spirit, who has discovered that mere visionary assertions, without any foundations in facts, cannot stand the test of ordinary scrutiny. Having vainly endeavoured "to manipulate the facts", and after beating the air in the fruitless search of what never existed, Dr. Barnes reaches the culminating point: "Here, then, I dismiss Dr. Snow Beck." A severe sentence, no doubt, yet one I still hope to survive. But Dr. Barnes must not imagine that such an assumption of the "schoolmaster" will cause me to forego the consideration of his various fireside fictions, such as—the physiological hypertrophy of the spinal cord developed with each pregnancy; the assertion that the action of the uterus during labour is a series of convulsions; that this action depends upon the effect of some imaginary nerve-force emanating from the spinal cord; the Higginson's syringe action of the gravid uterus during *post partum* hæmorrhage, pumping blood out of the body which it sucks up from the aorta and vena cava; the chemical action and crackling effect on the inner surface of the gravid uterus from the injection of the perchloride of iron; *cum multis aliis*. I can assure him I have not any intention of forgetting these wonders of medical literature. On the contrary, I trust to continue to work at the subjects involved in this discussion, with as much care as I am capable of, in the hope that I may contribute somewhat to our knowledge respecting them, and, in some degree, be instrumental in diminishing, for I cannot anticipate we will ever be enabled entirely to prevent, those fatal terminations which too frequently occur from *post partum* hæmorrhage, or from those deadly affections after parturition so long known under the term of puerperal fever. And this I must continue to do, notwithstanding the *ad misericordiam* appeal to the "company of martyrs" which Dr. Barnes so pathetically parades.

I am, etc., T. SNOW BECK.

Portland Place, May 1874.

DR. DOBELL'S PAPER AT THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

SIR,—In the report of the discussion on my paper, at the Royal Medical and Chirurgical Society, on Hæmoptysis, Dr. Theodore Williams is made to say: "The chief point attempted to be established was, that loss of weight always preceded hæmoptysis; but the author must remember that, in order to ensure his cases being those of undoubted phthisis, he has eliminated all cases of hæmoptysis unaccompanied by loss of weight, thereby making sure of his conclusion beforehand." Will you kindly allow me space to explain that, if this were what Dr. Williams intended to say, it was a total misapprehension of the scope and meaning of my paper? I cannot be much surprised at this, because, for its length and complicated characters, only certain portions of the paper were able to be read.

In the first place, the paper did not "attempt to establish" any point whatever, but was an *open inquiry* into the meaning of the clinical facts presented by the cases.

In the second place, the question, whether or not weight had been lost, had no influence in the selection of the cases. I explained these points in my reply to Dr. Williams at the Society, but they seem to have escaped the reporter. I am, etc., HORACE DOBELL.

84, Harley St., Cavendish Sq., W., May 26, 1874.

EXPERIMENTS ON THE FUNCTIONS OF THE HUMAN BRAIN.

SIR,—A case of epithelioma exposing the brain, on which I ventured to make some experiments, has excited unfavourable comment in your widely circulated JOURNAL and elsewhere. Under these circumstances, I beg to offer some explanations, which, whilst they do not justify the experiments in question, at least, it appears to me, put the matter in a less offensive shape.

1. The patient was hopelessly diseased, with a rodent ulcer, which had already invaded the dura mater. The ulcer was rapidly extending, and threatened an early extinction of life.

2. The patient consented to have the experiments made.

3. It was believed that fine insulated needles could be introduced without injury that would affect the progress and termination of the case, for the following reasons. The brain has been incised to permit the escape of pus, a notable and successful example of which has recently occurred in London. Portions of the brain-substance have been lost, and yet the patient survived; for example, the Massachusetts case, in which a tamping-iron was driven through the brain, the patient recovering, and dying many years afterwards of another malady.

4. The faradic current was used; and this has, as is well known, no electrolytic action.

5. The fatal result was attributable to the progress of the epithelioma. The erosion of the skull already had existed thirteen months. The thrombus found *post mortem* in the longitudinal sinus could not have been caused by the needles, which were introduced some distance from it on each side.

Notwithstanding my sanguine expectations, based on the facts above stated, that small insulated needle electrodes could be introduced without injury into the cerebral substance, I now know that I was mistaken. To repeat such experiments with the knowledge we now have that injury will be done by them—although they did not cause the fatal result in my own case—would be in the highest degree criminal. I can only now express my regret that facts which I hoped would further, in some slight degree, the progress of knowledge, were obtained at the expense of some injury to the patient. I am, etc.,

ROBERTS BARTHOLOW, M.A., M.D., Professor of Practice
of Medicine and of Clinical Medicine in the
Medical College of Ohio.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

MR. JOSEPH BLACKSHAW, late medical officer for the workhouse and Stockport district of the Stockport Union, Cheshire, has obtained a superannuation allowance of £100 *per annum*.

REPORTS OF CASES OF DISEASE.

SIR,—The Bury Improvement Commissioners are considering the feasibility of the collection of reports of fresh cases of sickness from the medical men of the borough. Being the medical officer of health, I have been asked to get information which may enable them to fix the remuneration to be offered to the gentlemen who furnish the returns. As the profession generally is interested in the collection of returns of sickness, particularly as it seems probable that it will become general throughout the kingdom, I venture to ask your assistance, and that of any member of the Association whose position enables him to give it, in determining on a fair fee for furnishing the returns.

It is proposed to issue to the medical man printed forms. He will be required to give the number of the fresh cases of the diseases mentioned on the form which have occurred in his practice during the week. The situation of each case of zymotic infectious disease must be stated, so that the sanitary officer may visit it, if necessary. This return is to be sent weekly by post to the sanitary authority. How much ought the practitioner to receive for doing this? Here the registrars of births and deaths, who make weekly returns of the deaths on a similar form, receive £4 4*s. per annum*, when the registration district is entirely within the borough, and half that amount when the district is slightly so. Would £4 4*s. per annum* be a sufficient payment for returns of new cases of sickness?

I shall be glad to be informed of any town or place where payment is made for returns of sickness. I am, etc.,

Bury, May 7th, 1874. THOMAS B. BOTT.

⁂ The suggestion made as to the remuneration of medical practitioners appears to be open to two objections: 1. That the same sum (say £4 4*s.*) is to be paid alike to the man who returns one hundred cases *per annum* and to him who only returns ten, which is neither equitable nor politic; 2. That, if the proposed rate were adopted, it would entail an expense upon sanitary authorities which, so far as our experience of them goes, nothing short of legislative compulsion would, in the great majority of cases, induce them to incur. Thus, taking a city with 50,000 inhabitants, in which there are not more than fourteen practitioners, the cost would be nearly £60 a year—little enough, it may be said, considering the value of the object in view, but enough, we fear, to induce the authorities of the city to make very decided objections to incurring it. In the case of rural sanitary authorities, the objections would be even still stronger, as anyone who has had any experience of the difficulty in getting them to pay twopence an entry to the registrars for death-returns must be aware. In a district where there are only three or four subregistrars, there probably may be a dozen medical practitioners; hence an expense which might be comparatively small in the case of fees to the former would be serious in that of the latter.

To meet these difficulties, we would suggest that a retaining fee of a given amount (say £2 12*s.* 6*d.*) should be offered to each practitioner, in return for which he should be required to make a weekly return of any of the forms of disease contained in the schedule issued by the Local Government Board, which have occurred in his practice; and that, where such returns amount to more than one hundred in the year, he should be paid for the excess at the rate of sixpence per entry. This fee should be paid only in case the *addresses* of the cases are given, which are to be communicated only to the medical officer of health, and to be treated as confidential by him.

Query 1. Whether any fee should be offered in cases where *addresses* are refused, but a numerical return of patients offered?

2. Whether the full fee should be paid to Poor-law medical officers for returns of pauper cases, the information respecting which may be obtained from the returns which they are bound to send in to Boards of Guardians?

PUBLIC HEALTH APPOINTMENTS.

ORMSKIRK.—The absurd proposal to establish a Medical Officer of Health for the Ormskirk Urban Sanitary District, at a salary of £25 for one year, has, we are glad to see, attracted wholesome local comment. A correspondent of the *Ormskirk Advertiser* says:—"The determination arrived at by the Ormskirk Local Board of Health to appoint a medical officer for the township, at the handsome *(sic!)* salary of £25 for one year certain, is a sure sign that the gentlemen composing that Board have no desire to improve the condition of that town in a sanitary point of view, or have any idea that improvement is necessary. Such a salary cannot entice any professional gentleman of ability to become a candidate, it being so totally inadequate to remunerate for the necessary duties; and should any medical man in the town be appointed, it will be to his interest to devote as little time as possible to the work of the office, seeing that his practice is so much more important and valuable to him. It would only be serving the Board as they deserve, were the resident practitioners unanimously to agree to take no notice of the vacancy, and to compel the Local Authority to offer a salary more consistent with the dignity of the noble medical profession."

MACCLESFIELD.—Dr. George Bland, who last year was appointed Medical Officer of Health for the Borough of Macclesfield for a period of twelve months, has been re-elected. The Town Council has unanimously resolved to make the appointment permanent.

EXPLANATION.

SIR,—Since making a statement in the last number of the BRITISH MEDICAL JOURNAL (page 664), to the effect that the Census of England (1871) does not record the *areas of the Local Board districts*, a subsequent reference (suggested by the clerks at the General Register Office) to vol. iv, Table 32, has shown me that almost all the towns and local board districts of England are therein entered, with the *acreage*, houses, and population of each. This valuable information is now, for the first time, added to the Census; but no one can discover it unless he examines vol. iv. Let us hope that in the next Census all essential particulars concerning each locality may be contained in the same volume and page. I am, etc.,

THE WRITER OF THE ARTICLE ON "REPORTS OF
May 18th, 1874. MEDICAL OFFICERS OF HEALTH".

MILITARY AND NAVAL MEDICAL SERVICES.

AN error occurred in last week's JOURNAL (page 697, column 1) with reference to the distribution of heads of department at Whitehall. The correct statement is as follows. On the promotion of Sir John Muir to be Director-General, Surgeon-General Rutherford, C.B., succeeded him as head of the *sanitary* department, and Chief Surgeon-General Monro succeeded Dr. Rutherford at the *medical* branch.

NAVAL APPOINTMENTS.

Staff-Surgeon (second class) A. B. Johnson, from half pay, to H.M.S. *Nankin*, additional, for temporary service during the absence of the Staff-Surgeon on leave.

Staff-Surgeon James Long, M.D., and Surgeon A. W. Flood, of H.M.S. *Black Prince*, to H.M.S. *Aurora*, commissioned.

Staff-Surgeon (second class) J. Mockridge, additional, H.M.S. *Black Prince*, to H.M.S. Aurora, additional for *Flirt* tender.

Dr. Edward Alexander Watson, of East Wemyss, Kirkcaldy, Fifeshire, has been appointed Admiralty Surgeon and Agent for the new coast-guard station of Wemyss, with Dysart and seven detachments.

Mr. William Mark Whittaker, M.B., of Brighton Lodge, Monkstown, co. Dublin, has been appointed Admiralty Surgeon and Agent at Knightstown and Portmagee.

ARMY MEDICAL OFFICERS.

A CORRESPONDENT writes to us:—I am glad to see, by your JOURNAL of April 25th, 1874, that you are still working for the good of the service and of the army medical service, and I have great hopes that, under the present Government, your efforts will be crowned with success.

Under paragraph 3, you point out a glaring grievance. Why should a surgeon-major attached to a regiment pay more to the mess and band funds than the lieutenant-colonel commanding? And I would add, why cannot the names of medical officers be put in the Army List according to their relative rank, and not after the junior officer of the regiment?

NAVAL MEDICAL GRIEVANCES.

SIR,—I beg to thank you for your able advocacy and efforts to cause our naval medical grievances to be redressed. The old staff-surgeons feel that they have been hardly dealt with of late. They have been unceremoniously packed off into sea-going ships (their juniors in hospitals), and men of more than thirty years' standing afloat in cabins like those of the darkened cock-pit of former days. In the flagship of the Channel Squadron, the senior staff-surgeon is in this position, while a lieutenant of eight years' standing and a youthful chaplain of five occupy daylight cabins. This is a poor prospect for beginners, but it is what awaits them should they join this disagreeable service, which does not offer corresponding compensation compared with its drawbacks.

Another glaring injustice which we all feel is the appointment of a civilian to Greenwich Naval College, which should be the legitimate birthright of a staff-surgeon. Mr. Goschen, when asked about this unfair appointment, stated in the House that it was only a temporary arrangement. The Admiralty sinned in making this appointment, and in keeping it. It is high time the question was repeated. Unless a change for the better take place soon, we may expect to see a Nemesis in our day. I am, etc., STAFF-SURGEON.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College, on May 20th and 21st.

Amyot, Thomas H. E., Diss, Norfolk
Blanch, Henry J. T., Shacklewell
Campbell, Colin George, Dublin
Day, Charles Henry, Brightwell, near Wallingford
Farnell, Henry Dawson, Great College Street, Camden Town
Garlick, George, Great James Street, W.C.
Harpur, General Samuel, Christ Church, Canterbury, New Zealand
Heddy, William Jackson, Redcliffe Gardens, West Brompton
Lawrence, Thomas George, Rutland Street, N.W.
Lees, David Bridge, M.B., Manchester
Lilley, George Herbert, Ware, Herts
Moore, George Edward, Hoxne, near Scole
Parker, Alfred Edward, Finborough Road, S.W.
Prichard, Arthur William, Clifton, Bristol
Prockter, Alfred Edgcumb, Cheltenham
Reid, Thomas Whitehead, Canterbury
Ross, Douglas M'Kissock, Brighton
Scott, Edward, L.S.A., Honiton, Devon
Simpson, Walter Samuel, Pontefract, Yorkshire
Slaughter, John Edward, Farningham, Kent
Sparrow, Walter W. B., Saltby, near Birmingham
Talbot, Russell Main, Bromley, Middlesex
Tattershall, Lord, L.S.A., Bacup, Lancashire
Walby, Thomas, Liverpool
Williams, William Blundell, Singapore

Of the sixty-five candidates examined during the week, nineteen failed to satisfy the Court, and were referred to their professional studies for six months.

The following gentlemen passed the primary examination for the diploma of Fellow on the 25th May; and, when eligible, will be admitted to the "pass" examination.

Bird, Cuthbert Hilton Golding, B.A. and M.B.Lond., Elgin Crescent, Notting Hill: diploma of membership dated April 16th, 1872.
Brietzcke, Henry, L.R.C.P.Lond., Margaret Street, Cavendish Square: July 29th, 1863
Chicken, Rupert Cecil, Guy's Hospital: April 30th, 1872
Halsham, William Johnson, M.B.Aber.: November 17th, 1871
Hinterbottom, Augustus, Sloane Street: November 13th, 1872
M'Gill, Arthur Fergusson, L.S.A., Park Square, Leeds: November 18th, 1868
Mackenzie, Lewis, L.R.C.P.Lond.: November 15th, 1871
Osborn, Samuel, L.S.A., Gresham Park, Brixton: January 26th, 1871
Pughe, Rhinallt Navalw ap Joan, Mornington Road, N.W.; April 23rd, 1873
Rossiter, George Frederick, St. Thomas's Hospital
Sanders, Thomas, L.S.A., Woburn Place, Russell Square: May 24th, 1864
Thane, George Dancer, Montague Street, Russell Square: Nov. 15th, 1871

The following passed on May 26th.

Carter, Frederick Heales, St. Bartholomew's Hospital
Cock, Williams, Guy's Hospital
Footner, John Bulkley, King's College
Giles, George Michael James, St. Mary's Hospital
Haines, George Henry, St. Bartholomew's Hospital
Wilkins, Robert Bird, University College

The following passed on May 27th.

Edwardes, Edward Joshua, St. Mary's Hospital.
Murphy, Henry Howard, B.A.Cantab., St. George's Hospital
Pitts, Bernard, B.A.Cantab., St. Thomas's Hospital
Phillips, Arthur Owen Henry, St. Thomas's Hospital
Symonds, Chaters James, Guy's Hospital
Wakefield, Thomas, B.A.Cantab., University College

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, May 21st, 1874.

Holland, Lucius, Wylam-on-Tyne
Mason, Richard, Tenby, Pembrokeshire
Walker, William, Manchester

The following gentlemen also on the same day passed their primary professional examination.

Evans, Frederick William, St. Bartholomew's Hospital
Gawith, James Jackson, St. Mary's Hospital
Hitchins, Thomas John, St. Mary's Hospital
Johnson, William Boyten, London Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

BORRISOKANE UNION, co. Tipperary—Medical Officer to the Workhouse: £60 per annum.—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Borrisokane Dispensary District; £100 per annum.

CANCER HOSPITAL—Surgeon. Applications, 2nd June, to the Chairman of the Weekly Board.

CARDIFF RURAL SANITARY DISTRICT—Medical Officer of Health: £200 per annum for three years. Applications, 5th June, to W. P. Stephenson, Clerk.

CARLISLE DISPENSARY—Assistant House-Surgeon: £90 per annum, with apartments, gas, coal, and attendance.

COUNTY AND COUNTY OF THE BOROUGH OF CARMARTHEN INFIRMARY—House-Surgeon: £100 per annum, lodgings, etc., and the privilege of taking two apprentices. Applications, 2nd June, to H. Howells, Secretary.

CROYDON GENERAL HOSPITAL—House-Surgeon: £80 first year, with annual increase of £10 up to £100, with board and furnished apartments.

DENHOLME GATE URBAN SANITARY DISTRICT—Medical Officer of Health: £50 per annum. Applications, 3rd June, to George Burr, Clerk, Keighley.

DERBY COUNTY LUNATIC ASYLUM, Mickleover—Assistant Medical Officer. Applications to John Barber, Esq.

DERBYSHIRE GENERAL INFIRMARY—Assistant House-Surgeon. Applications to Samuel Whitaker, Secretary.

GATESHEAD DISPENSARY—Resident Medical Officer: £200 per annum, furnished apartments, and £10 per annum towards cleaning, etc. Applications, 2nd June, to Joseph Jordon, Honorary Secretary.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff—House-Surgeon: £100 a year, board, washing, and furnished apartments.

GLASGOW ROYAL LUNATIC ASYLUM—Resident Physician-Superintendent: £600 per annum, house partly furnished, coal, etc. Applications, 12th June, to J. Roxburgh Strong, Secretary, 110, West George Street, Glasgow.

INDIAN MEDICAL SERVICE—Fourteen Surgeons. Applications, to T. P. Pears, Major-General, Military Secretary.

LAMBETH, Parish of—Resident Medical Officer and Dispenser for the Infirmary in Princes Road: £100 per annum, board, apartments, etc. Applications, 8th June, to W. B. Wilmot, Clerk, Brook Street, Kennington Road.

LEICESTERSHIRE and RUTLANDSHIRE LUNATIC ASYLUM, near Leicester—Assistant Medical Officer: £100 per annum, board, and lodging. Applications, 6th June, to W. Napier Reeve, Esq., Leicester.

LONDON, City of—Medical Officer of Health, £500 per annum; Public Analyst, £200 per annum (or £600 per annum for both). Applications, 2nd June, to Joseph Daw, Principal Clerk.

MONAGHAN COUNTY INFIRMARY—Registrar and Apothecary: £60 per annum, rations, and apartments. Applications, 10th June, to P. J. Loughnan, Acting Registrar.

NEWCASTLE-UPON-TYNE INFIRMARY—Junior House-Surgeon: £50 per annum, board, and residence. Applications, 30th instant, to R. Y. Green, Sec.

NEWTOWNARDS UNION, co. Down—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Grey Abbey Dispensary District: £110 per annum, and fees. Applications, 5th June, to R. O. Young, Honorary Secretary, Innishargie, Kirkcubbin.

OXFORDSHIRE—Public Analyst.

PRESTON URBAN SANITARY DISTRICT—Medical Officer of Health: £100 for one year. Applications, 8th June, to Robert Ascroft, Clerk.

ROYAL FREE HOSPITAL, Gray's Inn Road—Junior House-Surgeon. Applications, 3rd June, to J. T. Blyth, Secretary.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician. Applications, 4th June, to C. Lowther Kemp, Secretary.

ROYAL SOCIETY OF MUSICIANS—Aural Surgeon.

SALFORD UNION, Lancashire—Medical Officer for the Workhouse: £80 p. ann.

SCHOOL FOR THE INDIGENT BLIND—Consulting Physician.

SKIRLAUGH UNION, Yorkshire—Medical Officer for the Aldborough District: £18 per annum.

SOUTHAMPTONSHIRE LUNATIC ASYLUM, Knowle—Two Assistant Medical Officers: £100 per annum, increasing to £130; and £80 per annum, increasing to £100, lodging, board, etc., respectively. Applications, 4th June, to Dr. Manley.

STOCKTON-ON-TEES FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Surgeon: £100 per annum to commence, £30 per annum for rent and taxes, and Midwifery and Vaccination Fees. Applications to S. Gordon, 14, Sydney Street, Stockton-on-Tees.

SWAFFHAM UNION, Norfolk—Medical Officer for the Soham Toney District: £70 per annum.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne—Professor of Medicine.

WARNEFORD, LEAMINGTON, and SOUTH WARWICKSHIRE HOSPITAL—House-Surgeon: £100 per annum, board, lodging, etc. Applications, 30th instant.

WELLINGTON (Salop) UNION—Medical Officer and Public Vaccinator for the Northern Division of No. 2 District, and the Workhouse: £80 per annum, and fees. Applications, 11th June, to George Marcy, Clerk.

WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £80 per ann., board, residence, etc. Applications, 15th June, to P. D. Bennett, Hon. Sec.

WESTERN INFIRMARY, Glasgow—Superintendent: £250 per annum, with board and lodging. Applications, 15th June, to W. H. Hill, Honorary Secretary, 106, Ingram Street, Glasgow.

WESTMINSTER HOSPITAL—House-Physician. Applications, 1st June, to F. J. Wilson, Secretary.

WOLVERHAMPTON and STAFFORDSHIRE GENERAL HOSPITAL—House-Surgeon: £100 per annum, board, furnished apartments, etc. Applications, 1st June, to the Chairman of the Medical Committee.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

Colthurst.—On May 18th, at Wincanton, Somerset, the wife of J. B. Colthurst, M.R.C.S.Eng., of a son.

DEATHS.

Dibb, Edward N., Esq., Surgeon, at Mexborough, aged 32, on May 5th.

MacGarvey, Matthew, C.M.Glasgow, for more than eighteen years Medical Officer to the Borrisokane Workhouse and Dispensary, aged 58, on May 11th.

The Corporation of the City of London has just voted one hundred guineas to the Royal South London Ophthalmic Hospital.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Dr. John Williams will show a specimen of Calcified Fibroids. Dr. Tilt, "On Lymphangitis in Pelvic Pathology"; Dr. Robert Gray, "Separation of the greater portion of the Cervix Uteri during Labour"; and other communications.—Royal Microscopical Society, 8 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

INQUIRER.—We are unable to give the information you require.

HOMO.—No; certainly not.

PERHAPS "An Admirer of Good Plain English" would kindly state his objection in a more argumentative form. His argument shall have attention; and, if desired, publication.

REMARKABLE TWIN DELIVERY.

SIR,—After carefully reading Dr. Umpleby's case of "Remarkable Twin Delivery", published in the JOURNAL of May 23rd, I can come to no other conclusion than that it was one of hour-glass contraction of the uterus.

I have never met with such a case myself; but yet I cannot see why a second child should not be retained from this cause, in the same way as a placenta after an ordinary labour.

I am, etc.,

J. G. SWAYNE.

Clifton, May 23rd, 1874.

THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AT VENTNOR.—By a clerical error the amount of contributions at the biennial dinner of this Institution was stated to be £500 instead of £5000. The Baroness Meyer de Rothschild also only erects one house; not two, as erroneously stated in the account whence our own was drawn.

TREATMENT OF LARGE ABSCESSES BY THE ASPIRATOR.

SIR,—I would feel very much obliged if those readers of the JOURNAL who may have treated large abscesses by means of the aspirator, will give me the result of such treatment.

I have under my care a young lady with psoas abscess, consequent on spinal disease. The matter points at present in the upper and inner part of the thigh. Would it be good practice to use the aspirator in this case? If so, what quantity of matter should be drawn off at first? and how often should the operation be repeated? Are there any such cases so treated published? If so, where?

I am, etc., SURGEON.

May 1874.

A CUMBERLAND ASSOCIATE.—Thymol hydrate is a stearoptin from thyme. It is a strong stimulant and disinfectant. It is very useful in pharyngitis and laryngitis when associated with exanthemata. Thymol, like camphor, is an useful addition to many essential oil inhalations. The formula for vapor thymolis, from the *Pharmacopœia* of the London Throat Hospital, is: R. Thymol, 20 grains; rectified spirit, 3 fluid drachms; light carbonate of Magnesia, 10 grains; water, to 3 fluid ounces: mix. A teaspoonful in a pint of water at 150 deg. Fahrenheit for each inhalation.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

MEDICAL ETIQUETTE.

SIR,—Will you help the cause of medical etiquette, and enlighten the profession, by inserting the following?

On March 14th, Mr. Thomas H. L. Heath (L.R.C.S., Ireland) was sent by one of our medical agents to look after my practice during my illness (pneumonia). He writes me (while away for change) "he cannot possibly remain longer than 14th May, as he must be in London on the 15th". On the morning of May 14th, he leaves me, saying he was going to London, etc. Two hours later, he comes back, saying he was going to "set up" in this town. Circulars (as enclosed) were posted to my patients and some other of the inhabitants. He told where he was going to lodge, and was very particular to point out the exact spot, and that he could attend them after the 14th. On the day he left me (May 14th), his brass plate was placed on his door.

I am, etc.,

GRIFFITH R. THOMAS, Surgeon and L.S.A.

Midhurst, Sussex, May 18th, 1874.

"With Mr. Heath's compts. Midhurst.

"Mr. Heath, Surgeon, begs to inform the residents of Midhurst and its neighbourhood that he has commenced the practice of his profession in this town entirely on his own account, and that he can be consulted at the original apartments of Mr. William Ingram daily as follows: Noon, 8.30 to 10.30; afternoon, 2.30 to 4.30; evening, 7.30 to 10.30.

"N.B. Mr. Heath requests as early notice as possible for all midwifery engagements, in order that he may dispose of his time to the advantage of his patients.

"N.B. On Sundays, Mr. Heath can be seen at any time except during the hours of Divine service."

CORBYN'S IMPROVED DOUBLE VALVE-INHALER.

SIR,—Referring to a letter in your issue of the 9th instant, we beg leave to state that it has never been asserted by us that our inhaler is superior to all other inhalers, nor have we stated that its special features are entirely novel; nor, indeed, if we understand the term "eclectic" correctly, do we suppose that Messrs. Bullock and Reynolds would assert each feature of their apparatus to be original. All we attempted was to improve on the already convenient instrument of Messrs. Maw, Son, and Thompson. It would not be difficult, however, were the matter of sufficient importance, to show that we have also improved on that of Messrs. Bullock and Reynolds; and there is at least one important particular not mentioned by those gentlemen—viz., that we have been able to produce an inhaler, admitted by them to be efficient (complete in case, with thermometer and nasal-piece), at half the cost of the "Eclectic", similarly fitted, and that we have done away with all necessity for the trouble and expense of a spirit-lamp.

We are, etc.,

CORBYN AND CO.

300, Holborn, W.C., May 19th, 1874.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Carlisle Patriot, May 23rd; The Ayr Advertiser, May 21st; The West County Lantern, May 23rd; The Scotsman, May 21st; The Brighton Examiner, May 26th; The Leicester Advertiser, May 23rd; The Blackburn Standard, May 27th; The Hull Evening News, May 23rd; The Sunderland Times, May 23rd; The Auckland Chronicle, May 22nd; The Blyth and Bedlington Star, May 23rd; The Northern Daily Express, May 26th; The Sussex Advertiser, May 20th; The Newcastle Daily Journal, May 20th; The Bridgwater Mercury, May 20th; The Richmond and Twickenham Times, May 23rd; The Brighton Daily News, May 25th: The Sussex Advertiser; The Bradford Observer: The Naval and Military Gazette; The Dorset County Chronicle; The Cork Daily Herald; The Cork Examiner; The Rochester and Chatham Journal; The Yarmouth Independent; The Northern Echo; The Hastings and St. Leonard's Chronicle; The Royal British Guiana Gazette; The Cork Examiner; The Manchester Guardian; The Glasgow News, May 25th; The Birmingham Daily Gazette, May 25th; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

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LECTURES
ON
THE FORMATION AND EARLY GROWTH OF THE BRAIN OF MAN.

Delivered at the Royal College of Surgeons of England.

By GEORGE W. CALLENDER, F.R.S.,
Lecturer on Anatomy and Physiology in the College; Surgeon to St. Bartholomew's Hospital; etc.

Lecture I.

I propose to describe the general plan of the formation and early growth of the brain of man—a subject which I trust will be considered to fall within the scope of the objects for which these lectures were instituted.

The subject is one of practical interest to all surgeons; for we are often called upon to diagnose and to treat injuries of the nerve-centres which collectively constitute the brain (by which term, it may be stated once for all, that those structures are indicated which lie above a horizontal line drawn through the foramen magnum in the erect position of the subject); and of late years our attention has been especially attracted to the possibility of our being able to localise with considerable accuracy the seat of some of these injuries by the recognition of specific symptoms. And, although there may be little prospect of our being helped by such knowledge to a more successful treatment of these hurts, yet, through a more precise diagnosis we certainly obtain the advantage of greater accuracy in our prognosis; and, further, we may be enabled to throw some light upon the relations which subsist between various brain-regions and varied life-functions; and this is alone a subject of such broad and high interest as must always possess, for those who practise our profession, attractions of the very first order.

The work by which this greater sureness in diagnosis has been aimed at, has been carried on in two directions: in one, by making experiments upon the lower animals, from which experiences it would seem that specific regions of the brain are in relation with the discharge of certain definite manifestations of life—experiences as to questions of fact, which need careful and independent repetitions before they can be accepted as conclusive; in another direction, by clinical observations of the life-symptoms which are associated with disorganisation or irritation of particular brain-districts. Amongst such may be named, merely in illustration, the symptoms of aphasia following injury of a part of the left hemisphere outside the corpus striatum; and the evidence which I brought forward, and which is confirmed by the experience of Dr. Brown-Séquard (*Archives of Scientific and Practical Medicine*, March 1873, p. 264), to show that injuries to the right hemisphere are more rapidly fatal than are equal injuries to the left; and, further, that the right side brain-lesions are more often associated with convulsions than are similar hurts on the opposite side.

In working in either of these directions, however, some difficulty is met with, owing to the uncertainty which exists as to the precise relations one to another of the various parts of the brain; and although, no doubt, physiological research will have to be chiefly relied upon in clearing up these uncertainties, yet I think it may at least help to facilitate investigations as to the functions of the various parts of the brain, if the order of the early growth of its parts be carefully considered. I do not venture to hope that it is possible to give an absolutely definite exposition of the formation of so complicated a structure as the human brain; but there are at least some details on which we may obtain precise information; and there are inferences which may be fairly drawn, when precise information may not be attainable.

In dealing with the subject, the dissections of the brain will be described at several stages of its growth during fœtal life; such descriptions being, it may be observed, of facts such as any who will be at the trouble may observe for themselves. As reference must often be made to the precise period of development to which given observations refer, this table will show, with sufficient accuracy for all practical purposes, the length of a fœtus in correspondence with its age; so that, when the length (from vertex to heel) of any specimen is named, a glance at the table will give a close approximation to its age in days and weeks.

Table I.

Length of Fœtus, in inches.	Age, in weeks.	Age, in days.
.12	3	7 to 14
·4	6	35 to 42
·5	7	42 to 49
·7	8	49 to 56
·9 1.1	9	56 to 63
1.5	10	63 to 70
2.3 3 3·5 3·7 3·8	12 to 16	84 to 112
4		
4·3 4·7 6.5 6.7 7	16 to 20	1 2 to 140
9 10	22 to 24	154 to 168

I am aware that this table differs somewhat from others which have been published; but it has been prepared from specimens which have been carefully considered, and may be accepted as fairly correct.

It has been my object to work out these dissections unbiassed by the observations of others; for, however valuable are their investigations, it is, I think, important to free oneself as far as possible from lines of thought which have been worked through. And, further, I have abstained from associating this work in any way with that of comparative anatomists. The following remarks apply solely to the human subject. What there is that is exact in them will, no doubt, fit in with what is accurate in investigations conducted on the lower animals; but the common goal should be gained by independent approaches. Indeed, were my wishes otherwise, my knowledge of comparative anatomy is not sufficiently great to justify me in moving within its lines.

In explaining the plan of growth of the human brain, it is necessary to refer to the formation of the case which encloses the cerebro-spinal ganglia, and extensions from which protect the cerebral and spinal nerves. Most of the steps in the development of these structures are familiar to us through the precise and able demonstrations of them which have been given in this theatre by Professor Huxley. They must, however, be briefly mentioned, to give continuity to the consideration of our subject, and to enable reference to be made to some facts to which attention has to be especially directed.

In the earliest stage of development, when the primitive groove is first seen, there is a rising up of the mesoblast and epiblast to form the dorsal, or, as they may be termed, the axial laminæ, which, by mesial union, complete the axial arches. I prefer the use of this term axial, because it enables us to range as subaxial and as preaxial the various arches which have been grouped hitherto under special titles, as the mandibular and the hyoid, and as the visceral arches. By naming the arches connected with the cranium subaxial, and the remaining arches preaxial (visceral), we obtain a definite series on the one side of the axis cord, as on the other.

The axial (dorsal) arches (Fig. 1 c), slightly dilated towards their lower extremity, are expanded at the superior, and are marked before long by four constrictions, one of which is terminal; and at this end the axial laminæ unite, and close the groove rather earlier than elsewhere. In the intermediate layer which underlies the primitive groove, is the axis notochord, of the same length as the groove. At a very early period, it bends forward at its superior extremity (in the human fœtus) at a point opposite the second anterior constriction; and with this curve of the notochord, the extremity of the axial arches (which now enclose the cerebro-spinal canal) is flexed nearly to a right angle with the rest, and, growing forward, bulges in front of the extremity of the notochord. This notochord tapers at its superior extremity, and terminates behind the fossa in which the pituitary body is lodged; and it is, it will be

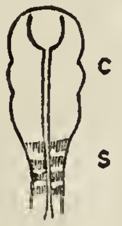

Fig. 1.

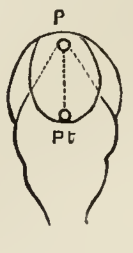

Fig. 2.

observed, on the tissue which surrounds the end of the notochord, that the anterior portion of the cerebral vesicles now rests.

The anterior dilatations of the cerebro-spinal canal are the parts from which the coverings of the brain and of the cerebral nerves are formed; and the appearance of three dilatations is supposed to be due to the shape assumed by the brain, which now consists of three lobes, commonly called the anterior, middle, and posterior vesicles. As the pituitary gland is found in relation with the end of the notochord, so on the upper surface of the anterior vesicle, or rather on the constriction dividing it from the middle vesicle, is the site of the pineal gland.

The distinction between the spinal and the cranial portions of the axis is marked at a very early period by the appearance of the protovertebræ in the anterior portion of the cervical region (fig. I, S.); and this distinction seems to indicate, although there may be points of resemblance between the cephalic and the spinal divisions of the axis, especially during the first stages of development, yet that a clear line of demarcation is soon drawn between the two. The ring of tissue from which the cephalic development (fig. I, C.) takes place may indeed be looked upon as the first or highest of the vertebral series, but the changes which this tissue undergoes so modify its characters in correspondence with the great development of the encephalic structures, as to make it evident that the details of its formation do not admit of close comparison with those of the parts of one of the vertebræ.

Another change which occurs at this early period, and which is of some importance, is that of the superior and inferior limitation of the cerebro-spinal axis. At the inferior extremity, the canal is closed by the conjunction of the tissues forming the last axial arch; and, in the subsequent growth of the spinal column in length, the connection between the closed end and the spinal cord is preserved and indicated by the persistence of the filum terminale. Just beyond the end of the notochord, and at the point of closure of the canal, there is found the gland of Luschka. At the superior extremity, the canal is closed by extension of tissue from the upper border of the first, or cranial, axial arch; and the line at which this forward growth takes place corresponds to that of the second cranial constriction, the anterior vesicle being an outgrowth from the axis cylinder; and in the middle line, in front and behind, there is placed beneath the line of closure the pituitary body and the pineal gland (fig. ii, Pt. P.). Beneath the enclosing tissue may be traced the anterior portion of the brain, and on the edges of its side-pieces are the peduncles of the pineal gland. It is known of the pituitary body that it exists, with the infundibulum, from an early period, and both it and the pineal gland, retaining for the present the names usually given to these structures, may be recognised in a fœtus one inch long.

There exists, therefore, a marked distinction between the cranial and the spinal portions of the axis from a very early period of their development; and where the axis is limited superiorly are found two remarkable structures, the pituitary and the pineal, on a line between which, from before backwards, the tissue coalesces to close the canal and to cover in and protect the vesicles of the brain.

The tissue in which the development of the skull now proceeds consists of the cartilage (as it presently becomes) which surrounds the end of the notochord, and which is prolonged backwards (after the fashion of an axial arch) to enclose the vesicles as far forward as the line of constriction between the anterior and the middle, and beyond this of the indifferent tissue which developes from this arch to cover in the anterior vesicle, and which rapidly extends forward in correspondence with the growth of the brain in this direction (fig. vii, between Pt. and P.). It is in this tissue that the bones which form the vault of the skull are developed, including the portion of the occipital bone above the level of the internal occipital prominence.

The singular fact that the lower portion of the occipital bone is the only part of the structures forming the vault of the skull developed in cartilage is explained by the relation of this bone to the first axial ring, of which it forms part so far as its occipital prominence (fig. iii, I. C.), this prominence being the point at which the pineal gland is attached (fig. III, P.), the gland being developed at the junction of the laminæ to form this arch; thus the occipital bone, to the level of its protuberance, is formed in part of the ring of cartilage in which are also formed the bones of the base of the cranium.

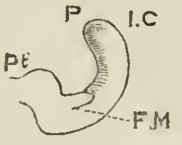

Fig. 3.

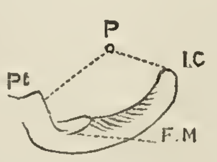

Fig. 4.

From that portion of the ring of cartilage which surrounds the notochord, here grow out two processes (trabeculæ), at first distinct, but soon curving towards each other and then uniting, before and after doing so throwing up slight elevations of tissue. This is a remarkable disposition, which results in their forming between them a pit or depression surrounded by the four elevations to which the membrane developed with the outgrowth of the two processes is attached. These processes, or trabeculæ, when united, extend forward, retaining on their upper surface a mesial groove, which marks their original division (fig. V, I), and throw down nearly vertical plates, one mesial (the septum nasi), and two lateral (the ethmoidal masses). They terminate in front in the cartilages of the nose and in the intermaxillary bones. These trabeculæ are formed in connection with the forward growth of the brain and with the development of the olfactory lobes, the nerves from which find protection within the plates which descend to bound the nostrils.

Before the trabeculæ have advanced so far as to complete their descending plates, a growth from the brain on either side has pushed forward the membranous covering of the anterior vesicle. At the same time, two spurs of cartilage grow out from the trabeculæ (fig. V, 2, 3), one passing above and the other below the round tubular projection of nerve-tissue. These processes check the outgrowth of the membrane, and cause it to be doubled over so as to make an envelope for the membrane pushed forward by the outgrowing nerve. This, with its membranous covering, is the eye, and the enveloping membrane is part of the orbit. The growth of cartilage about the protruding nerve is the tissue in which the presphenoid and the orbito-sphenoid are ossified, and it springs from the trabeculæ just in front of the pit (pituitary fossa).

Whilst these changes provide for the support of the fore-brain, and for the protection of the olfactory and optic nerves, the occipital plates are being deflected backwards (fig. iii, I. C., and iv, I. C.), by the development from the basal cartilage of the cartilage for the auditory apparatus, which is thrust out between the sphenoid and exoccipital tissue; thus, too, space is provided for the increase of the middle and posterior vesicles of the brain. By this occipital deflexion, the internal occipital protuberance is seen in a fœtus 1.5 inches long, to be moved back from the pineal gland (fig. iv, P.), and, but that its connection with that body is distinct at an earlier period, it would now escape recognition. The two are, however, still united, as will be seen when the relations of the membranes are explained.

In the growth of the periotic mass, and in that of the exoccipital cartilage, provision is made for the passage of the facial, auditory, and hypoglossal nerves, to the exterior of the cranium.

By prolongations of cartilage and of membrane from the basal structures, the various subaxial arches are developed. In a fœtus, five-tenths of an inch long, the eye is formed, and the orbit is nearly completed. In the middle line, the cartilage of the trabeculæ, as seen on its facial aspect, consists of a shield-like plate (fig. v, I I), growing forwards and downwards. This shield supports the anterior lobes of the hemispheres, but it likewise protects the first cerebral or olfactory nerves, and it is consequently convenient to regard it as a mesial and duplicate subaxial arch, the first, or highest, of the series, and bounding by its three plates two clefts, which are also the first on each side, and afford an exit to the nerves from the olfactory lobes, and an area for their distribution. On the outer side of each lateral plate of the subaxial arch, there is, at this stage of development, a cleft, the second in order, (fig v, 2), between it and the membrane which at all other points surrounds the orbit. This membrane is prolonged from the cartilage which has grown out from the trabeculæ around the optic and following nerves to the sixth inclusive, and constitutes the second subaxial arch. In this tissue, the malar and the superior maxillary bones are formed, and by the growth from the latter of the nasal process, the second cleft is closed on its inner side, and the orbit, lodging the eye, is completed; whilst, by the development of the incisor process, the maxilla covers in the intermaxillary bone, and in man prevents its maxillary protrusion. The nasal passage of either side is thus completed. By a growth of the second subaxial arch, the pterygoid and palatal bones are at this time outlined, the union in the middle line to form the palate, it may be noticed, taking place from before backwards; the palate bones joining in this direction at a later period than do the palatal processes, from the maxillæ.

The third cleft (Fig. v, 3), forms the mouth, and is bounded by the third subaxial arch. This is an outgrowth from the cartilage, in which the internal ear is developed. In a fœtus, nearly five-tenths of an inch long, the mandible (inferior maxilla), is united at its symphysis.

The fourth cleft (Fig. v, 4) is that for the auditory nerve, and is limited below by the outgrowth of the fourth subaxial arch. In a fœtus half an inch long, it consists anteriorly of a thickened nodule; and so rapidly do the changes now under consideration progress, that in a fœtus .55 of an inch long, this ill defined thickening has acquired the shape and position of the tongue. In a fœtus .9 of an inch long, this arch, which may be called the lingual, consists of a globular cartilage, connected with the periotic tissue below and behind the root of Meckel's cartilage (part of the mandibular arch). In a fœtus 1.8 of an inch long, this arch consists of five portions, cartilage and membrane alternating; the lowest nodule of cartilage joining the hyoid arch, and constituting, in the adult, the lesser horn of the hyoid bone: from this the tongue rises.

It is not necessary here to refer in any detail to the remaining arches connected with the base of the skull: they are the hyoid, the laryngeal, and the exoccipital. In their development they follow the growth of the cerebral nerves; the most remarkable being, perhaps, that of the laryngeal, with its extension into the thorax, in association with the pneumogastric nerve, and the development, from the single tube of which it at first consists, of the larynx with the trachea, and of the lower part of the pharynx with the œsophagus. (For a description of these arches, see the *Philosophical Transactions*, 1871, p. 121, pl. i.)

If we take a cartilaginous base of the human skull, upon what must we consider that the fashion of its apparently irregular growth depends?

In a fœtus 1.9 inches long, we see that the cartilage forms a central mass, from which, at various points, there are lateral outgrowths (Fig. vi). The central cartilage commences in front, with the flexure of the trabeculæ, and, after dividing, to allow of the passage of the spinal cord, reunites and ends at the internal occipital protuberance. From around this cartilage, membrane extends to form the sides and vault of the skull; and of this membrane, the parts which have undergone chondrification on each side from before backwards are the following: 1. In front of and surrounding the optic nerve; 2. Beneath the optic nerve, and joining the preceding; 3. Behind No. 2, deeply notched in front, and posteriorly; 4. Surrounding the facial and auditory nerves. If we examine these outgrowths of cartilage with reference to the position of the cerebral nerves, we can but come to the conclusion that they are developed in connection with, and for protecting, the nerves. The relation in this sense of the olfactory with the trabeculæ, of the optic with the presphenoid and orbito-sphenoid cartilages, and of the fissure of the exoccipital cartilage with the exit of the hypoglossal nerve, are evident.

The growth of the ala sphenoidalis (No. 3) leaves in its front a fissure for a group of nerves (Fig. vi, 3) [third, fourth, first and second of fifth, and sixth], and one of these, lying in a deep notch (Fig vi, 4), the second branch of the fifth nerve, is at a late period shut off from the rest by closure of this notch in front; whilst at the back of the ala sphenoidalis, a second notch (Fig. vi, 5), which at first is common to the third branch of the fifth, the carotid artery (Fig. vi, 5*a*), the eighth pair of nerves (Fig. vi, 7), and the jugular vein (Fig. vi, 7*a*), is modified by the closure of the notch to form the oval foramen, and by the outgrowth of the cartilage of the internal ear (Fig. vi, 6), which partially surrounds and diverts the course of the carotid artery, and which interposes between the foramen anterius and the foramen posterius, which previously formed parts of a common passage for nerves and vessels.

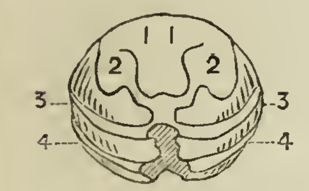

Fig. 5.

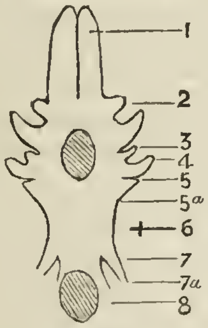

Fig. 6.

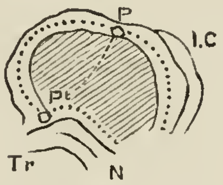

Fig. 7.

If the subaxial arches be followed in their growth, it will be seen how the cartilage, membrane, and bone, of which in parts and at times they are composed, mould themselves during development to the nerves they grow with. Thus the second division of the fifth determines the formation of the fissures at the back of the orbit, and keeps open the notch in the upper jaw, which does not become a foramen (infraorbital) until after the twenty-fourth week; the process from the frontal membrane ossifies over the nasal nerves; and the course of the anterior dental nerves determines the line of articulation between the maxillæ and the corresponding intermaxillary bone (see *Philosophical Transactions*, 1869, p. 166); the provision, by divided growths from the ala sphenoidalis, for the nerves which descend between the palate, pterygoid, and superior maxilla; and, more remarkable than any, the outgrowth of the pneumogastric with the larynx and other structures with which it is functionally related, give further illustrations of the influence of the nerves in determining the growth of various parts.

THE HASTINGS PRIZE ESSAY,

1873.

ON THE PATHOLOGY AND TREATMENT OF OVARIAN DISEASES.

By LAWSON TAIT, F.R.C.S.,
Surgeon to the Birmingham and Midland Hospital for Women, etc.

II.

THE ovaries are liable to certain displacements, which may give rise to many disagreeable symptoms without any actual disease of the glands. Thus one or other, or both, ovaries may, by a relaxation of their peritoneal investments, drop into the retro-uterine *cul-de-sac*, and there be sources of great trouble. This will be especially the case if there be at the same time retroflexion or retroversion of the uterus; for I have known such a displacement of an ovary to utterly prevent the application of any apparatus for the replacement of the uterus, and cause so much suffering as almost to make us discuss the question of ovariotomy. In such displacement, pressure on the gland gives rise to the same sickness and faintness as pressure on the testicle produces in the male, and the passage of a hard motion will give rise sometimes to most alarming symptoms. A more rare displacement of the ovary is forwards, this being generally an excess of embryonic transition, and it may be carried so far as to take the ovary into the labium, after the manner of the descent of the testicle. Cases of this kind are given by Oldham and Rigby; and Percival Pott (*Chirurgical Works*, by Earle, vol. ii, p. 210) actually removed both ovaries displaced in this way; and Dr. Meadows has removed one (*Obstet. Soc. Trans.*, vol. ii).* Cystic degeneration is said to have occurred in this position, and a Spanish surgeon has recorded the removal of a cystic ovarian tumour from outside the inguinal ring. I have had no experience of this displacement.

Klob has described a twisting of the ovary on its axis which is probably congenital, and has not yet been found to be of any pathological importance in an otherwise healthy ovary. In the cystic ovary, a similar twisting has been observed to a more complete extent and with disastrous results. The ovary is sometimes completely detached from its normal position and relations, and forms new attachments elsewhere. This occurs with the healthy ovary, and, as Mr. Spencer Wells has shown, also probably after it has undergone degeneration. How and when it occurs have not yet been satisfactorily explained. In uterine procidentia and prolapse, corresponding displacement of the ovaries occurs.

There is a large class of ovarian disease due to altered hæmic nutrition of the gland, which clinical experience proves to be far more common than pathological investigation has yet shown. Of the prime factors in these cases we are as yet ignorant; but, clinically, they range themselves naturally into three groups, differing probably only in degree of severity, save in the cases where acute ovaritis has a specific origin. They are:

I. Ovarian Hyperæmia.
II. Chronic Ovaritis.
III. Acute Ovaritis.

It may seem a metaphysical refinement to make a distinction between the first and second of these classes, but I have long satisfied myself that it actually exists. Ovarian hyperæmia is the result of an oversufficient and generally precocious ovarian activity, and is, therefore, the converse of the condition I have detailed under ovarian amenorrhœa and dysmenorrhœa. It is far from being a rare affection, and is invariably well marked in its history, the chief detail of which will generally be found to be menorrhagia. In a typical case which I have now under my care, the following is a summary of the facts. The young lady is the child of parents of markedly nervous temperament, is well-grown, I might almost say prematurely developed in every way, and, when little over 13, began to menstruate. From the first, her periods were profuse and at first painless. She enjoyed excellent health for many months after the accession of menstruation, during which time the flow continued profuse, generally lasting for six days or a week, and necessitating the use of from four to six napkins daily. By the time she was 14, it was, however, evident that her health was suffering. She became listless, sleepy, fainted when at her lessons, gave indications of loss of memory, and, when I saw her first, she was decidedly anæmic. At that time, it wanted but two or three days before the accession of her period, and steady pressure over the ovaries gave her great pain, which she described as turning her quite sick. During menstruation, this pain was induced by less pressure, and, in the intermenstrual period, it could not be produced at all. She always seemed better in health during the flow, and it was this very common peculiarity that prevented her parents from applying earlier for the much needed advice.

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* I have now to add a hitherto unrecorded displacement of the ovary in a case where it had become developed at the umbilicus during embryonic life and become cystic, and from which situation I successfully removed it.—May 18th.

In such a case, there cannot be a doubt that there is hyperæmia, not only of the ovary, but of the whole sexual apparatus, due to, it may be, or more probably only accompanying, the increased ovarian activity. This of itself is not a source of danger, for that lies in the menstrual loss producing anæmia. I have not yet had an experience sufficiently extended to trace such a case throughout its course; but, meeting with many instances which I have had reason to regard as identically of the same nature in later stages, I believe that their menstrual history is much the same as that of other women after they have had a child, the process of gestation seeming to rectify in great measure the abnormal excitement. If they remain unmarried, they go on suffering from menorrhagia, become extremely anæmic, and have the menopause at the usual time, but marked with abnormal profuseness, as might be expected. Marriage, even without resulting pregnancies, seems to modify the menorrhagia in very great measure, as I have repeatedly had occasion to observe.

The treatment of such cases should, if possible, be begun in the first stage. There is no cause of deteriorated general health so certain for a young woman as profuse menstruation due to ovarian hyperæmia. The spanæmic condition induced by a few years' continuation of it is one over which iron seems to have no control; indeed, all ferruginous preparations ought to be sedulously avoided until the menorrhagia has completely ceased.

In the case I have narrated, my first advice was, that the patient should be removed from school, and that, for six months, all instruction, especially in music, should cease. I notice music especially, for I am quite certain that instruction in that art, as carried out in boarding-schools, has to answer for a great deal of menstrual mischief. To keep a young girl, during her first efforts at sexual development, seated upright on a music-stool, with her back unsupported, drumming vigorously at a piano for several hours, can only be detrimental. It is usually the habit of those who superintend the education of girls to make no difference whatever in their physical and mental exercises during their menstrual periods; and at a time when the great necessity of the system is perfect rest, laborious efforts have to be made. This is most pernicious, and I have repeatedly had to trace to it the existence of serious disease in young ladies. Musical exercises are especially hurtful, for the further reason that music, in those who are devoted to it and gifted with its necessary peculiarities, is a strong excitant of the emotions; while, to those not so gifted, and who do not care for it, it is an intolerable and useless burden. Absolute rest is an essential part of the treatment of the early stage of ovarian hyperæmia, and I need scarcely say that it is in its early stage that the treatment is most likely to be successful. This rest ought to be rigorously carried out by the patient being confined to the prone position for a few days before, during and for a few days after the catamenial flow. The application of a counterirritant over the ovarian region just before the period is very useful; but the most potent part of the treatment consists in the administration of ergot before and during the period, and of bromide of potassium continuously during the intermenstrual time. The ergot is best given in the form of ergotin, my favourite formula being half a grain of Bonjean's ergotin made into a pill with sufficient lupulin. The bromide I give night and morning, after meals, in doses from five to ten grains. There is a good deal to be done in moral treatment. It may be only a coincidence, but I have noticed this affection chiefly in girls who have had no brothers, or brothers only younger than themselves, and I am quite certain that great harm is done to many girls by their rigid social seclusion in youth from the companionship of boys. Under proper supervision, no wrong could happen from more unrestricted association of boys and girls at their critical periods; and it seems to me that it is a mischievous plan to draw wide barrier-lines between the sexes at a time when they ought to begin to understand themselves and each other, and, by harmless intercourse, many of the risks may be obviated which afterwards beset them when an unaccustomed association is opened out at an age when passion has the chief ascendancy.

All the cases of ovarian hyperæmia which I have met with at puberty have yielded to the treatment I have detailed, and many cases which I have had reason to regard as of this nature, but in a later stage, have been benefited by it. It is, however, in the perfect fulfilment of the function of the utero-ovarian organs that we have the radical cure.

Ovarian hyperæmia is sometimes met with as the result of marriage, but only when the marital acts have been indulged in to excess, and then especially when pregnancy has not resulted. This, in fact, is only the mildest form of a serious disease which may end in total inflammatory disorganisation of the ovaries of newly married women. It is not unusual to find a delicate woman, who had menstruated normally previous to her marriage, suffer from severe menorrhagia for the first three or four years of married life, and to find an explanation of this in the vigour of the husband. In these cases, ovarian tenderness is always present, and very frequently there are violent pain and tenesmus, lasting for hours after connection, so that soon the unfortunate sufferer dreads the idea of a marital embrace. The menstrual period becomes prolonged, so that there is left only an intermenstrual interval of a few days. In prostitutes of a tender age, this affection is of extreme frequency, and often ends in the chronic ovaritis with adhesion of the Fallopian fimbriæ to the ovary, and the subsequent atrophy of all the sexual structures so often found in their bodies. The cure depends, of course, on the removal of the exciting cause and the employment of such treatment as has been before alluded to.

In these cases, no line can be drawn which will define where simple hyperæmia ends and acute or chronic ovaritis begins. As acute ovaritis is, however, always, or has been at least in my own experience, due to specific causes, it is more than likely that the ovarian hyperæmia passes into chronic ovaritis without an intermediate acute stage.

Concerning chronic inflammation of the ovary, but little is to be found in the writings of our authorities in gynæcology; and it has only been by the careful grouping of the symptoms of a large number of cases that I have been able to satisfy myself that the condition may be accurately defined and readily diagnosed, and, further, that it may be successfully treated in the majority of cases.

As I have already indicated, chronic ovaritis may be a later stage of moliminal hyperæmia. It may also be the result of acute ovaritis, but the majority of the cases occur from sexual excess and masturbation, or as a sequelæ of exanthemata and rheumatic fever, and probably of syphilis. I have only once had an opportunity of dissecting a case where I had recognised chronic ovaritis in life, and then it certainly was the result of acute rheumatism. It occurred in the case of a girl 17 years old, who had suffered from eight or nine attacks of rheumatic fever. In two of them, she was under my care as a dispensary patient; and, after the recession of the articular affection, an attack of pelvic pain came on, which was increased by pressure, and the attack was accompanied by an irregular menstrual flow. The whole passed off in a few days after the application of a blister, but ever afterwards her menstruation was irregular, profuse, and painful, and she suffered more or less from the symptoms I shall describe immediately. I regarded the attack as one of mild acute or subacute ovaritis, followed by a chronic stage. She died subsequently of embolism of a cerebral artery, and I found her ovaries large, soft, covered with lymph, and dotted with enlarged follicles, and the peritoneum thickened round them. The left ovary was partly adherent to the rectum, and it had nearly the whole of the fimbriæ of the corresponding tube glued on to it.

There is probably a chronic ovaritis of occasional occurrence in chronic phthisis; for, though the rule in that disease is to have ovarian atrophy, evinced first in dysmenorrhœa and finally in amenorrhœa, yet I have seen a few cases where the menstruation was profuse, irregular, and characterised by the other symptoms of chronic ovaritis. I have seen such conditions temporarily after small-pox, and frequently after scarlet fever in adolescent women. One case I have also satisfied myself of in early acquired syphilis. There is a distinct form of syphilitic metritis, as pointed out long ago by Mr. Langston Parker, and no doubt in these cases the ovaries are involved. Chronic metritis, the result of subinvolution or other uterine accident, and chronic endometritis from catarrh or gonorrhœa, in all probability have some amount of accompanying chronic ovaritis.

Out of eighty-one dissections, Henning found the ovaries diseased in fifty-three cases, and of the latter number six had exudation over them that was, in all probability, inflammatory. Chronic ovaritis, then, is not an uncommon disease. Chronic ovaritis is very often unilateral, and in these cases it probably has had an origin more or less independently of the uterus. Thus, as the result of acute septic ovaritis, it has been, in my experience, invariably unilateral. When it is the result of sexual excess or moliminal hyperæmia, it is generally, though not invariably, symmetrical.

The symptoms which, in my experience, have enabled me to class a number of cases together as chronic ovaritis are, first, in the history of the case, that from the molimen the periods have been irregular, generally too frequent, and that they have been too profuse. If the affection have a subsequent origin, then there can be obtained some story of a reason for the disease, either in a gonorrhœal infection or a puerperal accident leading to acute inflammatory attack, or an overindulgence in sexual congress. There is always a sense of weight and fulness in the ilio-hypogastric regions, and there may be positive tympanitic swelling. The discomfort is often so great, that the patient cannot bear her stays tightened or the weight of her dress. Sickness and nausea are frequently present, and almost always for a few days before the menstrual periods. The sufferings from sick headache are often intense. There is always more or less tenderness on pressure over one or both ovaries, and this is invariably increased before, during, and after the catamenia. By tactile examination, this tenderness may easily be demonstrated to be ovarian, and in very many cases the ovaries may be found to be enlarged and tender by the bimanual method of examination. Sometimes examination by the rectum permits a better investigation, especially if the patient be anæsthetised. As a rule, there is not much menstrual pain; for the uterus, sympathising in the disturbance, is often enlarged, and the discharge comes away almost painlessly.

The treatment should consist mainly of organic and systemic rest as perfect as possible during the menstrual periods, and the administration of ergot. Between times, counterirritation may be used with advantage, and the best form of that I have found to be painting a circumscribed spot of skin in the inguinal region, about two and a half inches in diameter, with linimentum iodi every morning as long as the skin will bear it. When the spot has become too painful to allow a repetition of the painting, the cuticle is allowed to peel off and the skin to become firm, and then the process is repeated as often as may be found necessary. I have had patients going on with this for months, and it nearly always does them good. Further, I give bromide of potassium internally, sometimes combined with ergot. I have also found arsenic and cod-liver oil very useful, and one case yielded to large doses of quinine when everything else had failed.

It is probable that a good deal of the disturbance in these cases is kept up by the extravasations of small clots into the peritoneum by a want of adjustment to the ovary of the Fallopian mechanism, and the majority of the ova are lost in the retrouterine *cul-de-sac*.

As far as I know, acute ovaritis is the result of three conditions only:

I. Injury;
II. Gonorrhœal infection;
III. Septic poisoning in the parturient condition.

In one woman, I diagnosed acute ovaritis following injuries inflicted by her husband kicking her; and, though it may have been general pelvic peritonitis, yet the uterus never became fixed as it does in that condition, and the subsequent permanent disturbance of menstruation, accompanied by other signs of chronic ovaritis, confirmed me in my opinion.

Acute ovaritis from gonorrhœa is a common result of the infection, and is a frequent cause of sterility. It seems to be precisely similar to the acute epididymitis of the male, as first pointed out by Bernutz and Victor de Méric. In this affection, the patient is found with an anxious face, agonising pelvic pain generally only on one side, the knees drawn up, and all the signs of a severe inflammatory attack. The patient can lie with comfort only on the back, and micturition and defæcation are productive sometimes of excruciating pain. It is often impossible to make a vaginal examination without anæsthesia, and this had better be used at once, for it is a matter of consequence to diagnose between acute ovaritis and pelvic cellulitis. In the latter case, the tumour will be found attached to the uterus, and, moving with it and with the whole roof of the pelvis, will be found to be more or less fixed, while in ovaritis the enlarged ovary may usually be easily made out. The treatment should consist in leeches to the perinæum, a blister over the ovary, diuretics, and small frequent doses of opium. The rectum should be well evacuated by an enema, and the bowels kept quiet for a few days. This affection, as far as is known, generally results in disorganisation of the gland and the formation of adhesions round it; if both glands be affected, permanent amenorrhœa may result. I have seen this in one case. I have not met with any indication of the formation of abscess in this affection, nor do I know of any record of such a result. I do not think the hypothetical stages and varieties into which the affection has been divided of any practical use.

Of acute ovaritis from septic causes in childbed, I have had no experience; but Simpson, Bernutz, and others, give cases, and in some of them abscesses have resulted. The symptoms are shivering, pain, increased temperature, night-sweats, drawing up of the knees, inframammary pain, and pain shooting down the thigh and leg. When an abscess forms, the result seems always fatal from its bursting and producing general peritonitis. The chief remedies are counterirritants, as turpentine stupes and blisters, together with the administration of quinine and opium. If the presence of pus can be determined, it ought to be removed by the aspirator *per vaginam*. A large number of cases are on record of so-called ovarian abscesses which were only suppurating ovarian cysts, frequently dermoid.

The ovary is, of course, always, or at least frequently, involved in pelvi-peritonitis or perimetritis; but I do not regard this as an ovarian disease. Ovarian apoplexy would seem to be an occasional accident of ovulation, found in *post mortem* examination, but without much clinical importance, unless, by the same process, a pelvic hæmatocele is formed. Hæmorrhage into an ovarian cyst, described by Kiwisch as a variety of ovarian apoplexy, cannot be considered in any such light.

Hypertrophy of the ovaries occurs in two forms, as it affects the follicles of the gland or its fibrous tissue. There may be, as Dr. Ritchie and Dr. Fox have pointed out, an increased formation of the number of follicles, this, in all probability, forming a pathological feature of the ovarian hyperæmia I have described. Follicular hypertrophy may take the form of increase in size of individual follicles, and form, as first shown by Rokitansky, a variety of cystic formations. Hypertrophy of the stroma of the ovary is a more common affection than is supposed, and seems to be one especially frequent in the better ranks of life. Cases may partake of a combination of one or other variety of the follicular hypertrophy along with the fibrous.

The fibrous hyperplasia is probably very often the result of chronic ovaritis of a kind which attacks less the peritoneal surface of the gland, and more its internal structure. It results in follicular atrophy, or arrest of development of the proper ovarian cells, and cirrhosis of the trabeculæ.

The cases which I have seen have all been in the middle and upper ranks of life, with one exception in a hospital patient, but even she had a look and air of delicacy and refinement that belied her station; and she, moreover, is the only one in whom I have yet succeeded in getting the utero-ovarian function fulfilled. She is now pregnant. To illustrate my observations, I may quote at length from my note-book the case of Mrs.——, as illustrating many of the points of ovarian pathology on which I have dwelt, and as a typical case of fibrous hypertrophy of the ovaries, resulting probably from chronic ovaritis. She is now 24 years of age; is a pretty delicate blonde of nervous temperament and most refined caste of features, and has been married nearly three years. She has a history of hyperæmia of the ovaries at an early age, and has had always very profuse, and generally irregular, menstruation until within the last three or four years, when it has been scantier and less frequent. From November 1871, until she came under my care, she had had only one normal period (in seven months), and another in April 1872. Since the former date, a constant, offensive, brown discharge had been present, which was increased by exertion. She had pain and straining after coitus, pain on defæcation, loss of appetite, and frequent sickness. Examination revealed a condition of enlargement and tenderness of the uterus, openness of the cervix, and decided retroflexion of the fundus, with a tendency to retroversion of the whole organ. The cavity was not larger than normal, but the passage of the sound gave great pain. The displacement was easily reduced, and then it was found that both ovaries were very much enlarged and tender, the left especially. They could both be distinguished by bimanual touch as quite free from adhesion, readily moving about. I introduced a ring pessary to rectify the displacement, much to her comfort, and directed the use of iodine paint in the manner previously described. She also took a tonic mixture consisting of cinchona and angostura, and the uterine cavity was occasionally washed out with a weak solution of neutral acetate of lead. The latter part of the treatment was discontinued after a few months, but the counterirritation and the pessary were persevered in, along with occasional recourse to tonics. In October last, the brown discharge had almost disappeared, and the right ovary could be felt to have distinctly diminished in size. The uterus was also straight and the cervix closed, and the whole organ of a much less size. Early in November, there was a slight menstruation lasting three days, and, in January of this year, there occurred quite a normal period of four days, followed by rather profuse leucorrhœa. In February, as the expected period did not occur, I ordered her small doses of iron in the form of ten drops of Parrish's syrup of the phosphates, taken thrice daily. In March, she was unwell from the 16th to the 20th, and I have little doubt that her patience will be rewarded by complete recovery of the functions of the right ovary, and possibly the occurrence of pregnancy.

Such a condition of the ovaries as I believe exists in a case like this is frequently met with in *post mortem* examinations, and has recently been twice found by Chantreuil, who does not, however, give its microscopical characters. I have not been fortunate enough to have examined an ovary so affected.

I have met with a small group of cases which I can only class under the head of ovarian neuralgia. They have been characterised by acute lancinating pain, referred to the region of the ovaries, generally on both sides, coming on paroxysmally, without any reference to the ovarian functions. No physical signs of disease have been found in these cases, and they have all occurred in women approaching the menopause. They have all been addicted to outbursts of overindulgence in drink, taken, as they allege, to deaden the pain. Whether this inebriety was a cause or a result of the neuralgia, or whether the neuralgia in some of the cases may have had any actual existence, I am unable to say; though the special character of the pain and its site have been described by the sufferers with a constancy which would seem to vouch for its reality. In connection with this affection, I would here strongly urge the necessity for the medical profession combating strongly against the wrong women are often allowed to do themselves by taking spirits to relieve ovarian and menstrual pain. No habit can be more pernicious, or more likely to lead to the most deadly mischief, both physical and moral.

As one of the unusual conditions described in connection with ovarian abnormalities, I may here just allude to ovarian gestation, only to say that I cannot recognise its occurrence. With the solitary exception of a case referred to by Ritchie, as reported by Dr. Willigk in the *Prager Vierteljahrschrift* for 1859, all the cases have broken down on examination. I have been unable to gain access to the original account of this case, so that I am not in a position to give an opinion on it. I have had occasion elsewhere to investigate the pathology of extrauterine gestation, and I have quite satisfied myself that all such cases are tubal in their origin, and that even those cases where it has been asserted that the sac was formed by the trumpet-like expansion of the tube united to the ovary are open to suspicion.

[*To be continued.*]

CLINICAL LECTURE

ON

A CASE OF CEREBRAL TUMOUR: GLIOMA.

Delivered at the Bristol Royal Infirmary.

By R. SHINGLETON SMITH, M.D.Lond., B.Sc.,
Physician to the Infirmary.

WM. PARSONS, aged 38, labourer, married, was admitted to the Bristol Royal Infirmary on January 17th, 1874. Six years ago, he met with an accident—"some concrete fell on his head". He was stunned at the time, but soon recovered, and was not obliged to give up work. After that time, he complained occasionally of pain in the head, but continued his work till two and a half years ago, when he was admitted to the Infirmary in consequence of a fit. Twelve months ago, he again gave up work, and was admitted for "whitlow". At that time, he complained of pain in the right side of the head; there was some tenderness over the right parietal eminence; he had several attacks of convulsions whilst in the house, and he was found to have well-marked optic neuritis. His mental condition was also defective; memory was very deficient, and he talked in an imbecile manner. He occasionally got out of bed, and went back to another bed by mistake. There was no motor paralysis. The distal phalanx became necrosed from the whitlow, the finger was amputated, the wound healed, he was sent home, and he again continued his work.

Five months ago, he was again admitted for fits and other nervous phenomena. The optic discs were in a condition of commencing atrophy, but he did not complain of any defect in vision. His mental condition was that of semi-imbecility, but no local paralysis, either motor or sensory, could be detected. He still complained of pain, and some tenderness on pressure, always at the same spot, the right parietal eminence. The head showed a want of symmetry, in consequence of slight but distinct prominence at the right temporo-parietal region. There were no gastric phenomena requiring notice.

He again left the house, and endeavoured to work as before. He continued to go through his regular daily work as a navvy on a new railway in process of construction, till eight weeks ago. His master, however, had noticed his condition, and, although he accomplished a fair amount of work, did not consider it safe to trust him in any post of danger. He seemed so senseless and careless that there was some risk of his being run over by the engines at work on the line.

Eight weeks ago, he fell off a plank, and again struck his head on the right side; he lost his senses for a time, but walked home afterwards, and in the night following he had a fit. Since that time, he had two other attacks of convulsions. Six weeks ago, some weakness in the left arm and the left leg was first observed; this was gradually increasing, and he, therefore, again applied for admission to the Infirmary.

No history of syphilis could be gathered from him at any time, nor were there any traces of syphilis to be discovered. He was looked upon by his friends as a steady, hard-working, strictly temperate man.

His condition, on admission, was as follows. He dragged his left leg in walking; the left arm was weaker than the right; no deviation of features or strabismus. He was half conscious; answered questions in a slow and hesitating manner. He complained of giddiness, and occasional pain on the right side of the head. Pulse 56; appetite good; no vomiting; temperature, in the evening, 99.4. On the following day, January 18th, he was noted less conscious than before; he only spoke when roused, and then muttered unintelligibly. Both pupils were insensible to light; the right widely dilated, the left small. There was very little motor power in the left arm, but he drew the left leg up when directed to do so. His tongue deviated slightly towards the left, but there was no asymmetry of the mouth, nor strabismus. Sensation was unimpaired; the bladder was distended and overflowing, requiring the catheter. He seemed very restless, occasionally shivered, and the left leg and left arm were drawn up and became rigid. He took any food given him, but did not ask for anything. There was no vomiting. The urine was specific gravity 1020, not albuminous. Temperature, morning, 99.6; pulse 64; respiration 28. Some thickening in the skin over the right temporo-parietal region was noticed, but he did not indicate any manifestation of pain on pressure over this part.

During the day, he had five or six attacks of bilateral convulsions, became completely unconscious, was sick only once, after a purgative powder had been given, and died at half-past ten in the evening.

POST MORTEM EXAMINATION. *Head.*—There was some induration in the scalp of the right temporo-parietal region; no abnormal adhesion of the scalp. The cranium was slightly unsymmetrical, being somewhat more prominent on the right side. The calvarium was thin at the right parietal eminence; the bone was paler than elsewhere, slightly softened, and allowing the light to be seen through. The dura mater separated without difficulty from the bone. The right side of the brain was visibly larger than the left. Induration was to be felt over the right temporal and parietal convolutions (middle and posterior lobes) with firm adhesion of the dura mater. Two distinct nodular masses were embedded beneath the convolutions of this region; one of the size of a small orange, but more of an elongated oval shape; the other, of the size of a large walnut, with fairly distinct outline, "shelling out" with some difficulty from the brain-tissue. In section, these masses were of a greyish yellow colour, marked with vessels, here and there, of distinctly harder and firmer consistence than the surrounding brain-matter; the convolutions around these tumours were flattened out, and gelatinous looking, but indurated. There was sclerosis of a considerable portion of the surface of the middle and posterior lobes of the right hemisphere, with considerable thickening of the dura mater, and partial adhesion. The central white substance was pale and somewhat softened. Both lateral ventricles were distended with an opalescent fluid containing flakes of lymph. Nothing abnormal was seen at the base of the brain, and there were no traces of any former injuries (from accident) to the bones or meninges.

Thorax.—The left side was contracted; the left lung was firmly adherent everywhere, a mass of old cavities, quite honey-combed, the cavities being lined with a smooth shining membrane and having vessels running across and through them. The lung-tissue between the spaces was in a fibrous condition. The right lung was large; crepitant everywhere. The other organs were healthy; there were no traces of syphilis, nor any other tumours besides those found in the right hemisphere of the cerebrum.

Microscopic Examination.—The tumours were found, on section, to present a finely granular appearance, with a faintly visible reticular stroma, studded sparingly with blood-vessels. In parts, a cellular structure could be made out, the cells being scattered about in a fine stroma in an irregular way, with no tendency to any alveolar arrangement. For the most part, the cells seemed to have undergone granular degeneration and to have lost their original outlines, but not uniformly so, for here and there the cellular structure was very evident. The cells were of a somewhat varying character, the more numerous having the appearance of free nuclei of about 1-5000th of an inch in diameter, whilst the larger ones were distinctly nucleated, and measured about 1-2500th of an inch. The edge of the tumour was visibly distinct from the nerve-tissue, the tumour being surrounded by a membrane of a finely fibrous texture, containing a very large number of blood-vessels. In section, a dark coloured ring, consisting of a number of vessels lying almost side by side, separated the tumour from the brain-tissue, and from this ring a few vessels could be traced running into the texture of the tumours itself. The vessels outside the tumour were all surrounded by a cellular infiltration of the intervening tissues, and the perivascular lymphatic sheaths were much distended by epithelial proliferation from their walls; the calibre of the vessels was much diminished by the surrounding cell-growth. Small masses of red corpuscles were seen, surrounded by a cell-growth extending to as much as twelve times the diameter of the calibre of the vessels, the growth being of a fibro-nuclear structure, arranged in a concentric manner around the calibre of the vessel, and limited externally by a finely fibrous investing membrane, no muscular coat being visible. In some cases, the vessel seemed to be altogether obliterated by this investing growth. Between the vessels was a fibrous cellular structure resembling that within the vascular sheaths. Outside the investing membrane of the tumour was the degenerated and infiltrated *brain-tissue*. This was much more vascular than the tumour itself, but the vessels did not present anything abnormal, there was no infiltration of their sheaths, nor was there of the vessels within the tumour, the perivascular proliferation being limited to those vessels found in the membrane surrounding the tumour and separating it from the brain-tissue around. Wasted nerve-cells, broken up nerve-fibres, and leucocytes (of inflammatory origin) infiltrating the tissue were visible in the cerebral tissue immediately surrounding the growths. The tumours then had a sarcomatous structure, of the variety described by Virchow as *glioma*. The changes in the blood-vessels around the tumours, and in the brain-tissue in the neighbourhood of the morbid growths, must presumably be the result of slow changes of a subinflammatory character.

REMARKS.—This case presents several points of interest on which a little comment is justifiable. First of all, we have to consider the question—

What was the cause of his disease? He himself attributed it to a blow which he received six years before his death. Was he justified in forming this inference? It is not unusual to have a history of this kind in cases of morbid growths, as, for instance, scirrhus of the mamma. In many cases, doubtless, the association of an accident with a morbid growth is quite an afterthought, a mental condition only resulting from an inherent desire to find out a cause for any given effect. But, putting aside such cases where the association of tumours with previous accidents is purely imaginary, there remain a large number of instances where the two are connected together in the relation of cause to effect. When we consider what takes place in all inflammatory processes, especially bearing in mind the results of recent researches by Cohnheim and others, is it surprising that injury done to certain tissues should result in an abnormal kind of cell-growth at sometimes protracted periods after the original accident which set up a local and, perhaps, a rapidly subsiding inflammation? The leucocytes which escape from the vessels may, perhaps, remain in a condition of dormant vitality, and afterwards gradually set up a process of cell-proliferation resulting in some of the varieties of sarcomatous tumours, or of the more highly organised carcinomatous growths. This patient, Parsons, did not have a fit till two and half years after the original accident, but he had occasional headaches during the interval, and had never experienced any similar symptoms previous to the time of the blow.

The *diagnosis* of his condition presents some points of interest. When he first came under observation, he complained of occasional fits, the first of which came on two and half years after the time when he received the injury. His age (38) was opposed to the idea that it was an ordinary case of epilepsy, a disease which rarely manifests itself for the first time between the ages of twenty and forty. Then, again, he complained at that time of deep seated pain always localised at the same spot, on the right side of the head. An ophthalmoscopic examination of the fundus oculorum was not then made, but, doubtless, it would have been of material assistance in enabling one to arrive at a diagnosis. The conclusion formed of his condition was that he had some thickening of dura mater, perhaps a spicule of bone projecting into the brain-substance on the right side of the head, which was setting up the irritation resulting in the epileptiform convulsions. Eighteen months afterwards, when he again came under observation, it was easier to come to a definite decision as to the cause of his symptoms. He then had decided mental deficiency, showing that the grey matter on the surface was considerably involved, the convulsions persisted, but were more frequent than before, and he then had an advanced condition of optic neuritis such as is usually found in cases of cerebral tumour. It was clear that an abnormal growth of some kind existed within the cranium, that it involved the surface of the brain in the right temporo-parietal region, and that the base of the brain was not involved. There was never any affection of individual nerves to be noted, and vomiting was never at any time a marked symptom.

The next point to be ascertained was—"What was the nature of the tumour?" The situation was not that occurring with *syphilitic* growths, which usually involve some of the nerves at the base; besides, there was an absence of history and of all the usual evidences of syphilis.

The presence of pain and tenderness, and the existence of frequent attacks of convulsions, combined with the traumatic history of the mischief, were points in favour of some chronic *inflammatory changes in the meninges*, but this alone did not seem sufficient to account for all his symptoms. The morbid process seemed too slow and too prolonged for any form of *malignant growth*, and there was an absence of any *scrofulous* changes elsewhere in the organism to justify the supposition of a scrofulous or tubercular growth. A fibro-plastic tumour, *i.e.* one of the forms of sarcoma, of which the most probable in nerve-tissue is *glioma*, would account for all the symptoms, and we were bound to arrive at a decision in favour of this form of morbid growth by a process of exclusion of all other frequently occurring abnormalities.

When he came into the house for the last time, the day before his death, he had paralytic and other symptoms superadded to those previously noticed. His condition of stupor, the inequality of the pupils, and especially the extreme dilatation of one, indicated that the central ganglia were becoming involved, but still there was no implication of any of the ocular muscles or of the parts to which the cranial nerves at the base are distributed (the optic nerves alone excepted). There was some pyrexia at this time, indicating the existence of inflammatory change within the cranium, and it seems probable that the aggravation of his symptoms and the acceleration of his death were due again to a traumatic cause: another blow which he had received eight weeks before his death.

As regards *prognosis* in a case of this kind, one cannot be too guarded. Having made the diagnosis of the existence of a cerebral tumour, and having surmised that it is of a non-malignant character, we should be justified in stating that the patient may live for years, but that he holds his life on a very uncertain tenure. Some vital part may be attacked, some inflammatory mischief may be set up, or, perhaps, hæmorrhage may take place at any moment, possibly during a convulsive fit. The uncertainty of diagnosis in all cases of cerebral tumour should render an usually guarded prognosis necessary in these cases.

The *treatment* is, unfortunately, the most unsatisfactory part of such a case as the one we are considering. After having included the supposition of a syphilitic origin to the growth, we are helpless to treat the disease itself. But, inasmuch as there is always scope for doubt as to the nature of cerebral growths, and as the beneficial effects of iodide of potassium in syphilitic growths is indisputable, it is always desirable to give the patient the benefit of the doubt, and ascertain if any good can be obtained from this drug. After having administered the iodide in gradually increasing doses, commencing at four or five grains and continuing up to twenty or thirty grains, during a period of three or four weeks, we may conclude that no good will result from further continuance unless some good results have already begun to be manifested.

Presuming that this treatment is of benefit, we have very strong ground for the assumption that the disease is of syphilitic origin; but the facts do not warrant a positive decision in favour of syphilis, for the drug tends to cause absorption of inflammatory exudations as well as of those of a more specific character.

Should our efforts to treat the disease itself be unavailing, we are compelled to do what we can to relieve any symptoms which arise during the course of the disease; our efforts must, therefore, be directed towards the relief of pain, the prevention of convulsive seizures, and the checking of any inflammatory and congestive symptoms which may arise.

ON MORPHIA IN SOME CASES OF INSANITY.

By W. J. MICKLE, M.D., Medical Superintendent,
Grove Hall Asylum, Bow.

I VENTURE to record, in outline, the influence exercised upon certain subjects of chronic melancholia, by the prolonged use of small or medium doses of morphia. Stimulant and tonic effects were sought; narcotism, or any modification of it, was studiously avoided. In this attempt, the views of Dr. Anstie, as to true stimulation by opium, and the treatment of lowered function and devitalisation as exemplified in pain or spasm, are, in some sort, applied to the management of the functional depression, or organic deterioration, inducing varieties of melancholia. By giving it in moderate and stimulating doses only, it was hoped that morphia would tend to rouse defective cerebral function, and restore healthy nutrition; that the benefits derivable from the stimulant action of the alkaloid on the cerebrum and circulation would be secured without any of the drawbacks attending narcosis, or flowing from derangement of nutrition, or of the vagus. There is nothing new in this plan which, however, seems to present several obvious advantages, when compared with others frequently advocated.

By adopting it, as is done by some practitioners, we escape the necessity of progressively increasing the doses, and pushing the use of the opiate, until enormous amounts are taken each day; and we avoid inducing an artificial toleration of the system for toxic quantities. Its tonic and stimulating influences flow most readily from moderate doses of the powerful neurotic in question, and continue so to do, when happily adjusted to the wants of disease. The amounts of it, which exert such influences, are not constant and definable by rule; they must be ascertained for each by experiment, and vary according to the quality and condition of the nervous system in different individuals.

A number of patients at Grove Hall, under care for melancholia during the last sixteen months, have taken moderate doses of morphia for lengthened periods. Excluding a few instances of acute melancholia, and melancholia with stupor, the persons thus treated were examples of one or other of two symptomatological forms. In one form, the patients were sorrowful and cast down, having chronic melancholia of a quiet character, with known suicidal tendencies, or overt suicidal attempts in eighty per cent., with melancholic delusions of the usual varied character, often with hallucinations, especially auditory hallucinations, and not unfrequently with refusal of food. The subjects of the second form had chronic melancholia, with some excitement, and many were more or less sullen, peevish, morose, and irritable, or, in occasional outbursts, became quarrelsome, threatening, or impulsively violent, under the influence of hallucinations or delusions. Such symptoms, though prominent on occasion, did not much affect the general character of the cases in question. The background of feeling, the mass of ideas, still presented the features of decided melancholia, though thus tinged with maniacal characters. Compared with the former class of quiet patients, the manifestations in the latter were those of greater objective hostility, of readier attempts to set themselves in opposition to their imaginary world of troubles, and to resent their fancied injuries. Four-fifths, however, were suicidal at one time or other during their malady; but the self-destructive impulse of several arose only at the acme of some melancholic paroxysm. To compare the influence of morphia on these two chronic forms of melancholia, it is convenient to make use of the results obtained in the last ten instances of each thus treated, or in twenty altogether. These twenty patients were males, and nearly all of them young or middle-aged soldiers. They were unpromising cases for any treatment. Their ages ranged from twenty-one to thirty-six years, with the exception of two, who were elderly men. The morphia treatment was pursued during periods varying from two to eleven months, or five months on an average. The stated duration of insanity, prior to this treatment being commenced, was from three to thirty-six months, or nine months on an average; but there is reason to believe that some had been insane much longer than was certified. The usual dose was a fourth or third of a grain of hydrochlorate of morphia, three times a day, and it was almost invariably prescribed in mixture with quassia or quinine, and dilute nitro-hydrochloric acid.

Morphia seemed to influence the mental condition of the ten patients of the quiet class as follows. In general terms, one was decisively relieved, and recovered; five derived indisputable benefit, the mental symptoms being much ameliorated, though recovery is still incomplete; two were slightly improved, their depression and distress growing less obvious; and two experienced no mental change. To avoid tedious statistics, we merely mention that, in the same ten cases, the aggregate effect on the bodily health was similar to that exercised on the mental condition. In many, it was noticed that when nutrition was improved, and the frame grew more robust, the cerebral powers also were resuscitated, and these changes progressed with equal pace as a rule—a rule, however, to which there were many, and even striking, exceptions. The tendency for nutrition and mental power to be similarly affected by this special treatment was less noticeable in the second class of men above-mentioned, whose corporeal ill-health was more improved, on the whole, than was their mental derangement. Indeed, the *physique* of the second class, the more morose, irritable, and excitable persons, was affected quite as beneficially as that of the first, or passive class; while their mental aberration was less favourably influenced, on the whole, than was that of the quiet patients. This statement is very greatly strengthened by the fact, that the class now under consideration took morphia, in much the same doses as the others, during a period of more than six months, on an average, for the ten individuals; while the average length of the opiate treatment of the more passive patients was three months and a half. The more prolonged and thorough testing of morphia, therefore, in the persons of the irritable, surly, impulsive melancholics, was less successful, in reference to the mental symptoms, than was its administration for a shorter period to those suffering from quiet depression.

Leaving now the comparison of the effects on the two varieties of patients, we may conveniently notice, under several heads, any improvement or change which occurred in the mental symptoms of the twenty men.

1. The effect of morphia on the delusions of melancholia may be thus described briefly. One had no delusion; thirteen of the remaining nineteen derived no marked or permanent relief from their delusions; while in six there was very great improvement or recovery in this respect. When delusions disappeared during treatment, the accompanying, though perhaps independent, hallucinations or illusions usually faded away also. Depression and emotional distress, though almost universally much lessened, did not undergo such decided or so early amelioration as the hallucinations or delusions of these patients.

2. With reference to the changes in the hallucinations of melancholia; hallucinations existed in fifteen cases, in six of which they disappeared during treatment, and in others were improved. As might be expected, the cessation of hallucinations was usually associated with decided, though sometimes only temporary, relief from delusion.

3. With regard to the alterations in the emotional characteristics of melancholia; three emerged from their cloud of depression while taking morphia, and ten became less depressed or anguished. On the other hand, while two became less excitable, irritable, and morose, these symptoms were aggravated, or the tendency to them developed, in three. The progressive increase of such a tendency is a connecting link between these and maniacal patients, and characterises a form of melancholia verging towards mania.

4. This leads to a consideration of the relation of morphia treatment to impulsiveness, or a threatening hostile disposition, on the part of these patients. Such symptoms were uninfluenced by morphia in three of the ten in whom they existed at one time or other; in three, they became less evident under morphia, or did not exist until after it was omitted; while in four they became more prominent, or arose whilst the patients were under the constant influence of the opiate; but one of the last became so extremely irritable, when the drug was experimentally stopped, that he was allowed to resume its use. Does a study of the physiological effects of morphia give any clue to this apparent variation in its effects on mental aberration? Dr. John Harley, in his work on *The Old Vegetable Neurotics*, has fully illustrated the position, that, on the brain, morphia in full doses has what he calls "two opposite effects—a hypnotic and an excitant"; the specific and individual effects being determined by peculiarity of nervous constitution, so that, while in some the two effects are nearly balanced, in others one or other of them preponderates. Thus, insomnia, restlessness, and delirium may ensue instead of sleep. He also theorises as to the production of delirium, cramp, or convulsion in one individual, by a dose which induces tranquil sleep in another, and an increase in the rate and force of the pulse. Assuming a similar variability in the influences of smaller doses, this view would suffice to explain why, in some instances, the calming tonic effect of morphia on the nervous-centres should be replaced by a disturbing operation, leading to hallucinations, irritability, or impulsiveness. Happily, these obnoxious results are rare, and may be avoided by the substitution of smaller doses, and perhaps without any sacrifice of the utility of the drug; for the effects in question may mean, not that the alkaloid, but the amount of it employed, was ill-adapted for the restoration of power in the particular case. We may briefly notice the influence, or apparent influence, of morphia on the general bodily health of the patients treated therewith.

In contrasting the two classes of cases discussed in the earlier part of this paper, it was mentioned that the aggregate beneficial influence exercised by morphia on the mental state of the subjects of quiet melancholia, was almost the same in degree as that exerted on their physical powers, nutrition, etc.; while, on the other hand, most of the somewhat irritable or impulsive patients—those whose melancholia verged towards mania—derived greater benefit to the bodily than to the mental health. Combining the two classes for examination, with reference to this point, we find that out of twenty, nutrition was immensely improved in two, decidedly improved in eight others, and slightly in four. A share of this physical improvement may fairly be placed to the credit of the ordinary tonics given with the morphia.

The behaviour of the digestive system under morphia may be noticed in this relation. In nearly all the tongue remained unchanged throughout, or the glossal changes were slight. In several, the tongue showed a tendency to become slightly larger, paler, and more flabby or tremulous. Two persons refused food while they were under the course of morphia; but, on the other hand, one or two who had declined their dict, before the beginning of morphia treatment, did not do so during its continuance. Again, the appetite of one patient had not been disturbed by ten months of morphia, but shortly after the omission of the latter he refused to eat, and the mental condition retrograded. Another, who had partaken well of ordinary sustenance, while taking a grain of morphia daily for four months and a half, refused his diet, and became more vexed and tormented by hallucinations and morbid fancies, shortly after he ceased taking the opiate; and there is almost precisely the same story to tell of a third. The appetite of some grew better while they were taking the morphia mixture; many experienced no change in appetite or digestion; while four suffered from temporary gastro-intestinal derangement, as evidenced by constipation, abdominal pain, or anorexia, retching, etc. It may be mentioned here that the gastric disturbance, not infrequently caused by opiates, is often prevented or relieved by bromide of potassium. Dr. Da Costa of Philadelphia was the first, I believe, to announce or insist upon this. In some female subjects of melancholia, under notice some time ago, morphia and other opiates produced such effects as headache, giddiness, faintness, nausea, and vomiting. About thirty grains of bromide of potassium were directed to be taken in flavoured solution three hours before each dose of morphia, and a grateful relief was usually thus obtained from the unpleasant and disturbing effects of the latter. Several examples might be given in illustration, but one will suffice. Half a grain of acetate of morphia, twice a day, was prescribed for a female, aged 60, suffering from melancholia of some duration. Nausea, retching, and giddiness followed, but were always entirely dissipated by half a drachm of bromide of potassium, taken three hours before each dose of morphia. To prevent such disturbing and undesirable effects, various other modifications of the morphia treatment have been suggested. The hypodermic injection has been advocated, but on several of the occasions when it was employed, I have found the very derangement of the vagus ensue that we were attempting to avoid. Nor does there seem to be any advantage from the proposed substitution of meconine, or narceine, for morphia, under these circumstances. Dr. Blandford recommends the bimeconate, as the salt of morphia least apt to derange the stomach. Dr. J. Harley suggests, when hypodermic morphia causes distress, that one-ninety-sixth of a grain of sulphate of atropia should be injected in combination with it; the action of atropia being first induced, if necessary, by the injection of a similar quantity a quarter of an hour before the introduction of the combined dose. Hyoscyamus is said to prevent, to some extent, the deranging action of opium on the vagus; and Harley also states that conium will be an useful adjunct when "the hypnotic influence of opium is foiled by its excitant action on the motor centres".

Space only permits the insertion of a few of the leading results obtained from an investigation into the precise effects of the above doses of morphia on the temperature of the body.* Eight of the patients already mentioned were carefully examined in reference to temperature every morning and evening throughout three distinct periods. During the first, they had no medicine; during the second, they took a third of a grain of morphia three times a day; and during the third, no medicine again. In the first period, the average morning temperature ranged from 96.62 deg. to 98.16 deg. Fahr. in different individuals, and the total mean of the eight was 97.68 deg. Fahr.; while the total mean of the eight average evening temperatures, for the same period, was 97.6 deg. Fahr. In the period that morphia was taken, the average morning temperature rose slightly in seven of the eight persons, the increase varying from .03 deg. to .45 deg. Fahr., and averaging nearly a fourth of a degree in the eight cases. The average evening temperature was slightly elevated in all, while morphia was taken. The evening increase ranged from .08 deg. to .79 deg. Fahr., and was about two-fifths of a degree on an average. The mean temperature of the air, however, was about 3 deg. Fahr. higher, when morphia was being administered to the patients, than it had been during the preceding period. In the third period, the mean of the average morning temperatures was a minute fraction of a degree lower than in the first period, and the mean of the average evening temperatures was infinitesimally higher, showing that the effect of morphia in augmenting temperature was only temporary.

The mean of the average pulse of the same eight persons, during opiate treatment, was 68, both in the morning and evening. The usual effect was to reduce slightly the frequency of the morning pulse, while that of the evening was as often and as much accelerated as retarded. When morphia was curative in several other cases, presenting symptoms of active anguish and agitation, I found the pulse-rate fall when the drug was given, and rise as soon as it was omitted. On the other hand, morphia tends to increase not only the force, but also the frequency, of the slow and feeble pulse of many a dejected and, perhaps, intensely suicidal patient.

It will be suggested, that the results effected by small or medium doses of morphia, in the twenty cases dealt with in this paper, are not highly encouraging. Several, who seemed to be improving under the alkaloid, failed in the onward advance towards full recovery after a certain point was reached. Their general health did not deteriorate, but morphia was unsuccessful in making any further decided impression on the mental state, although its use was prolonged, and the quantity was sometimes augmented to one grain and a half daily. It was with some disappointment that I compared the effects produced by morphia, in the men whose cases are discussed here, with the results derived from its thorough and prolonged use in certain females suffering from melancholia of some duration, and previously under notice. Of a series of twelve such, five apparently obtained great and curative benefit from morphia; while in three, the benefit was decided, though not so extreme. It is only fair, however, to restate the fact, that the males now under consideration were highly unpromising subjects for treatment, as regarded complete recovery. There is some difficulty in deciding how much of the benefit, apparently derived, was due to the bitters and acids combined with the opiate, and to such juvantia as the extra diet and wine allowed to some. The physical condition usually indicated the use of ordinary tonics; their local, as well as their constitutional effects, were presumably advantageous, in view of the gastro-intestinal derangement not unfrequently following the use of all opiates; and it was preferred to give the patients the advantage of every means likely to aid in securing a favourable issue.

A CASE OF MANIA, WITH ATROPHY OF THE BRAIN, ETC.

By J. LOCKHART CLARKE, M.D., F.R.S., etc.
Physician to the Hospital for Diseases of the Nervous System.

MRS. G., aged 76, was exceedingly emaciated, and had for many years suffered severely from asthma, for which a seton had been inserted, fifteen years back, in the left arm. The paroxysms of asthma gradually diminished in strength and frequency, and for the last two or three years had almost disappeared, so that the seton was removed. Some months after the removal of the seton, she fell down without losing consciousness, but was unable to get up, or to speak, during the space of half an hour. After this attack, she frequently complained of giddiness and loss of memory. Some months later, the giddiness increased; she became weak and thin, and was somewhat excited, but suffered no headache whatever. One morning she fell down immediately after getting out of bed, and was quite unable to raise herself, but she retained consciousness. She soon got better, and continued to improve for a few months, when she suddenly became extremely excited, sitting up in bed and throwing about her arms or wringing her hands in apparent mental distress or despair, although, as I ascertained from her family, she had no actual grounds for any feelings of the kind. When I asked her what she wanted, she replied that she wished to die, that she had been wicked, and frequently she concluded by saying that she did not know what she wanted. On every other subject she was perfectly rational. She scarcely ever slept for long together without opium. This state of excitement lasted about two months, and was succeeded by greater weakness, by further loss of memory, and by giddiness. About six months later, another period of mental excitement commenced. During the whole day and night, except when she happened to fall asleep for a short time, she would try to get out of bed and wander about the house, or would sit up in bed throwing about her arms and turning up her eyes as if in despair, and crying frequently aloud—"Oh dear, what shall I do?" She was wholly unable, however, to give any definite or intelligible account of her mental suffering. Morphia and chloroform procured her some sleep at night. At the end of about three weeks, she became impressed with the notion that the house was on fire, and would frequently get out of bed and attempt to go downstairs for the purpose of escaping from the supposed danger; but, when prevented from so doing, she would sit on the side of her bed and repeat, almost uninterruptedly, from morning till night, the following statement: "It is as I tell you; it 's fire; it is as I say". On all other points she was quite rational, and knew every one that approached her. This state of excitement was subdued for a time by the inhalation of chloroform, which was used every night, but without inducing complete unconsciousness. About half an hour or an hour after the inhalation, she would fall soundly asleep until about five in the morning, when the same excitement returned, and she would then pass the day in repeating the same expressions. This state continued for about a month, during which time she frequently refused to take food, declaring that she was unable to swallow; so that she was reduced to a state of great emaciation. Then she became quiet and comparatively calm, but still very uneasy and distressed in mind. For the first time, she complained of pain, all over her body. Her tongue was parched and dark brown; her pulse rapid and extremely feeble. After remaining for about a week in this condition, she gradually and quietly sank.

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* In some respects, these results are similar to those obtained by Dr. Clouston in his admirable investigation into the effects of tincture of opium on the temperature of the body in cases of chronic mania.

Post Mortem Examination Forty Hours after Death.—April 15th, Weather not warm. Along each side of the falx cerebri, the membranes were closely adherent to each other, and firmly attached to the side of the falx and to the skull a little beyond it. The entire brain was very small and particularly globular in shape. The veins on its surface were full of dark-coloured blood, and several large clots were found in the longitudinal sinus. Beneath the arachnoid, a quantity of fluid was found in the sulci between the convolutions, which in some places were extremely atrophied. At the vertex, over a somewhat circular area of about an inch and a half in diameter, on each side of the longitudinal fissure, the convolutions were so atrophied, that the spaces between them were in some instances three quarters of an inch in breadth. It was over this space that the membranes were adherent to each other, as well as to the falx and skull. The quantity of fluid which ran out from beneath the arachnoid was about two ounces and a half. The substance of the hemispheres was not at all soft. When sliced, the grey portion presented its normal colour and consistence, and was not unusually vascular. The lateral ventricle contained a small quantity of fluid. The right optic thalamus was decidedly smaller than the left, and somewhat soft. The corpus striatum on the left side was decidedly small, soft, and altered in shape, being bent, as it were, upon itself. The pons and medulla oblongata were very small.

REPORT ON THE SUPPOSED PRESENCE OF LEAD IN AERATED WATER FROM SYPHON-BOTTLES.

By JOHN ATTFIELD, F.C.S.,
Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, etc.

IN a recent number of the BRITISH MEDICAL JOURNAL there appeared a letter, dated February 9th, 1874, and signed "M.D., F.R.S.", drawing attention to an examination of eight bottles of aerated water, each of which was stated to contain lead. The writer thought that the results of the examination should be made known to the medical profession and the public, he regarding such aerated water as a source of poisoning by lead. The Editor of the JOURNAL, commenting on the letter, suggested that, although the evidence as regards the presence of lead was strong, the metal was probably not present in all syphon-bottles of aerated water; thereupon the manufacturers of the metal fittings of such syphon-bottles (Messrs. Hayward, Tyler, and Co.) desired me to make an extended investigation of the subject, the results of which investigation I now describe.

Several specimens of aerated water taken out of syphon-bottles, of which some had been filled in London and others in the country, were first tested for metals generally—that is, not only for poisonous metals such as lead, but for iron and tin, metals of which cooking utensils and other vessels are made or lined, and minute amounts of which find their way occasionally into articles of food or drink, without, as is well known, doing the slightest harm to persons partaking of such food or drink. This preliminary testing showed, when the experiments were very carefully performed, that most of the specimens did contain a trace of a metal of some kind, but in such extremely minute quantity, that, whether harmful or harmless, could not be ascertained without further operations on large quantities of the water. About half a gallon of aerated soda-water was therefore made the subject of a single experiment. The still extremely slight amount of metal thus obtained was *not lead*; and further tedious experiments had to be conducted before its real nature could be definitively decided: *it was tin.*

While the experiments just mentioned were progressing, the water with which some of the specimens of aerated liquid were made was tested for lead or tin. Not a trace of either was present. The small metal ferrule in the syphon-bottles, with which ferrule alone is the aerated water in contact while in the bottles, was also analysed. It proved to be pure tin. The metal tap or valve forming the head of syphon-bottles was next subjected to examination. The aerated water is only in contact with this tap when the liquid is allowed to flow out into a drinking-glass, and therefore would not be likely to impart metallic impurity to the water; still, it is conceivable that by a culpable act of carelessness a tap might be so placed as to become corroded, and afterwards, without being cleaned, be screwed on to a syphon-bottle. Neither of the taps that came under my notice gave any indication of ever having been so corroded. One tap, which had evidently been much used, was next carefully divided by a fine saw, and the whole interior thus exposed. Thorough scrutiny, by aid of a microscope, detected minute portions of a white powder adhering to the inner walls of the tap. Analysis of this incrustation showed it to be ordinary calcareous matter, such as commonly occurs in kettles and kitchen-boilers, and which is a common constituent of water used for drinking purposes. The tap itself proved to be pewter, the material of which metal drinking-vessels, such as publicans' pots, are made.

1. Some tin ferrules were placed in pure distilled water, in water containing the aerating gas, and in aerated water containing the carbonated alkali, generally present in aerated alkaline waters. Each of these liquids dissolved a trace of tin from the ferrules.

2. Into each of the three liquids named a tap was placed. Only in the distilled water was any metal from the pewter detected, showing that the aerated water of syphon-bottles cannot dissolve any of the pewter of the tap through which it flows when the vessel is in use.

3. A pewter tap, coated with silver inside and out, did not yield a trace of metal to either of the three liquids.

4. The three metals mentioned were exposed in the three liquids mentioned for one day and then tested, for two days and then tested, and for three days and finally tested. The results were as already indicated; namely, that only the harmless metal, tin, is slightly, very slightly, attacked by aerated waters—a trace, an insignificant trace, of the tin going into solution. A man would have to drink many glasses of such aerated water before he would have taken even a medicinal dose of a soluble compound of tin.

Conclusions.—1. The aerated waters of either corked bottles or syphon-bottles cannot, except by accident, contain lead. 2. Aerated waters in corked bottles may possibly contain in solution a trace of tin, derived from the manufacturer's mixing vessels—an amount smaller than that frequently found in food cooked in tinned saucepans. 3. Aerated water kept in syphon-bottles is likely to contain a trace of tin. 4. Makers of aerated waters may exclude even a trace of tin from the waters, not only by using manufacturing vessels silvered inside—a plan already extensively adopted—but also by silvering the tin ferrules of their syphon-bottles.

TEMPERATURE AS AN ASSISTANCE TO DIAGNOSIS IN SOME CASES OF ENCEPHALITIS.

By E. CHARLTON FOX, M.D., Redditch.

ON account of the difficulty of always accurately distinguishing between inflammation of the substance of the brain and inflammation of its membranes, and also because I believe that few cases of meningitis occur in which the brain itself is not, to some extent, implicated, I have, in these notes, used the term "encephalitis" in preference to "meningitis". Two years ago, while attending, in a large manufacturing town, a case of encephalitis (Mrs. B., aged 28), in which I took carefully the morning and evening temperature, I observed that the morning temperature was always higher than that in the evening. The following is the record of the case.

	Morning.	*Evening.*
1st day	—	99.4 Fahr.
2nd ,,	99.8 Fahr.	99.0 ,,
3rd ,,	99.4 ,,	99.0 ,,
4th ,,	100 ,,	99.4 ,,
5th ,,	100.4 ,,	99.5 ,,
6th ,,	99.9 ,,	99.1 ,,
7th ,,	99.9 ,,	99.2 ,,
8th ,,	100.2 ,,	99.5 ,,
9th ,,	99.5 ,,	99.8 ,,
10th ,,	99.7 ,,	— ,,
11th ,,	— ,,	99.0 ,,
12th ,,	99.4 ,,	— ,,
13th ,,	98.5 ,,	— ,,

Convalescence was now established.

It struck me that if this rule were constant, it would afford a valuable assistance in the diagnosis of the early stages of encephalitis, in which, as the following case shows, a combination of circumstances and symptoms may lead to erroneous conclusions.

Shortly after the occurrence of the case of Mrs. B., I was called to see a little girl, aged 13, "in a fit". Her mother said that a few weeks before she had had a slight one. From her age and appearance I imagined that the fits were hysterical, and caused by uterine disturbance; but the appropriate remedies for such a case did no good, and the cerebral disturbance grew worse. One morning, calling to see her, I found her in bed, complaining of headache. I took her temperature, and found it 100 deg. Fahr.; in the evening it was 99 deg.; the next morning it was again 100 deg., and in the evening had again fallen. I now felt sure that some amount of encephalitis was present, and told the mother so, giving her careful directions as to her attendance on the child. On visiting the child the next day, the mother informed me that "as her daughter got no better, she had called in Mr. ——, who said that there was nothing the matter with the brain, and that the symptoms were only hysterical". The child belonged to a sick society, and it was necessary for me to sign her weekly certificates. The first was brought to me for my signature, and had been filled up by the surgeon attending, and the disease was marked "hysteria". Before the end of the second week her death-certificate was brought to me, and the cause of death was given as "meningitis". I believe that in this case I should not have had so early a conviction that meningitis was commencing, had it not been for the high morning temperature; and since then, in similar cases, I make it a rule to observe both the morning and evening temperature before eliminating from my mind the possibility of the advent of encephalitis.

The following is the record of the morning and evening temperatures in a case of encephalitis in a boy aged 15.

	Morning.	*Evening.*
1st day	102.6 Fahr.	...... 101.8 Fahr.
2nd ,, ...	102.9 ,,	...... 100 ,,
3rd ,, ...	98.8 ,,	...... 98.4 ,,
4th ,, ...	99.2 ,,	...... 99 ,,
5th ,, ...	99.7 ,,	...... 99 ,,
6th ,, ...	99.8 ,,	...... 99.4 ,,
7th ,, ...	100.6 ,,	...... 99.1 ,,
8th ,, ...	100.4 ,,	...... 99.5 ,,
9th ,, ...	100.1 ,,	...... 99.2 ,,
10th ,, ...	99.8 ,,	...... 99.8 ,,
11th ,, ...	99.5 ,,	...... 99 ,,

From this period convalescence established.

I lay these slight notes before the profession, hoping that they may be confirmed by more numerous observations, and believing that the rule of temperature which I have so far found to exist in these cases will prove a valuable aid to diagnosis.

THE RELATION BETWEEN ARTERIAL TENSION AND ALBUMINURIA.

By F. A. MAHOMED, Esq.,
Resident Medical Officer to the London Fever Hospital.

I do not desire to enter into a controversy with Dr. Johnson on the much vexed question of "capillary power"; for, although he naturally adheres to his theory of the stopcock action of the arterioles, still I am not singular in believing in the existence of such a power; and Dr. Johnson must surely allow that the transudation of hæmoglobine, which is associated with high arterial tension, but absent in venous congestion, together with other facts brought forward in my paper and previous article, are strong proofs of its presence. They at least prove the occurrence of high pressure in the arterial capillaries; and he does not attempt to explain them otherwise, or to contradict them.

Dr. Johnson, however, not only mistakes my theory of the pathology of Bright's disease, but he lays down a rule and a challenge, to which I gladly respond. He says that "a true theory must be consistent with all ascertained facts"; and he then instances the high arterial pressure existing in cases of contracted kidney, and the small amount of albumen discoverable in the urine, as a condition that cannot be explained by my theory. Not only have I found my views to be "consistent with all ascertained facts", but I have solved by their assistance many problems which, when regarded from Dr. Johnson's point of view, are difficult of comprehension; such, for instance, as intermittent albuminuria, rupture of capillaries and appearance of blood in the urine, the immediate relief afforded by purgatives, the production of dropsy, and the transudation of hæmoglobine.

With regard to the slight degree of albuminuria accompanying contracted kidney, it may be explained as follows. The changes which precede and accompany cirrhosis of the kidney are peculiarly insidious in their commencement, gradual in their development, and prolonged in their existence. There is, therefore, at first a slight but gradually increasing want of relation between blood and tissue; this produces a correspondingly slight, but also gradually increasing, condition of high tension in the arterial system. This increase of tension is too slight and too gradual to produce an albuminuria; but it nevertheless, if allowed

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to continue and to increase, produces a thickening of the arterial walls, a hypertrophy of their muscular coats, and a hypertrophy of the heart. I believe it is this condition (when accompanied by a particularly active excretion by the skin or bowels, affording relief to the kidneys) that gives rise to those changes described by Sir William Gull and Dr. Sutton as "arterio-capillary fibrosis", and stated by them occasionally to exist without marked change in the structure of the kidney. When at last this very gradual increase of pressure, which may require years for its development, reaches that degree which, in an acute case with healthy vessels, would give rise to a copious transudation of albumen, the walls of the capillaries and arterioles are so thickened that it is far more difficult to force through the albumen. For the same reason, the hæmoglobine is absent from the urine of these patients, in whom the high arterial tension is invariably well marked, but whose urine may be free from albumen. In such cases, slight constipation or chill (by arrested excretion) will produce that temporary existence or increase of albuminuria which is so characteristic of cirrhosis; or a more severe constipation or chill will immediately give rise to the symptoms of the acute form of Bright's disease.

Again, Dr. Johnson states that he has been unable to discover any hypertrophy in the muscular walls of the arterioles of the lung, produced by the existence of high pressure from the passive engorgement of these organs; but, on the other hand, I have constantly seen thickening and endarteritis of the pulmonary vessels, demonstrated by Dr. Moxon as the result of "strain" from high pressure in these vessels, due to this cause.

Dr. Johnson considers a similar "unity of action" to exist between the heart and muscular arterioles, as between the detrusor urinæ and the sphincter vesicæ, or between the muscular walls of the rectum and the sphincter ani. I, however, am unable to perceive the resemblance; for while, in the former case, according to Dr. Johnson, the heart and arteries are simultaneously contracting and acting in opposition, in the two latter instances, while the expulsors contract, the sphincters are relaxed, and *vice versâ*.

Finally, Dr. Johnson has entirely misapprehended my theory of the production of the pathological changes; he has omitted the most important step in the process. Given the predisposing condition of blood-poison and high tension, from capillary obstruction, I do not believe that any acute kidney-change would be produced without the occurrence of another most important condition—namely, arrested action of one of the excretory organs, either bowels or skin. This throws increased work on (and produces, therefore, congestion of) the kidney, and subsequent cell-proliferation—a somewhat different sequence of events from that described by Dr. Johnson as entailed by my theory.

THERAPEUTIC MEMORANDA.

ON VALERIANATE OF AMYL AND ON AMYL ETHER.

A SHORT time ago, I mentioned in this JOURNAL the merits of a new preparation of valerian, viz., a spirit of valerianic ether. Notwithstanding that this preparation is less disagreeable to patients, as testified by those who have taken both, than the ordinary valerianic preparations, it has its drawbacks, the principal one being the diffusion of the smell through the apartment or ward when a dose is being taken, or through a shop when it is being dispensed.

It occurred to me that possibly, the valerianates of amyl or methyl might be more elegant than the ethyl preparation. Messrs. Southall undertook to prepare them for me. The methyl one is not much superior to its predecessor, but the amyl one is incomparably more agreeable. A spirit of the valerianate of amyl, to which a few drops of a spirit of acetate of amyl (known in commerce as essence of Jargonelle pear), have been added, is, without any qualification or exception, not merely the most elegant known preparation of valerianic acid, but intrinsically an agreeable drug. All these spirits improve in odour by a little keeping. I find that, to some stomachs, ethers are repugnant, unless well diluted; and six or eight drops of the compound spirit are, generally speaking, sufficient for an ounce of water, and also an adequate dose. I think that the effects of the amyl valerian are quite as good as those of the ethyl preparation. This latter will be called, in future, valerianate of ethyl, instead of valerianic ether. The new preparation will be called compound spirit of valerianate of amyl (sp. amyl. valer. co.), and will consist of one part of ether to nineteen of spirit. To two ounces of this are added twenty minims of a spirit of acetate of amyl, made in like proportion, viz., one in twenty. The simple spirit will also be procurable.

I take this opportunity of saying that, by my direction, the oxide of amyl or amylic ether has been prepared. This is a more agreeable preparation than the ordinary (ethyl) ether preparation of the *Pharmacopœia.* I have not yet had time to try its therapeutical effects, but should this equal those of the valuable old drug, this will be probably superseded. A spirit of amylic ether, to an ounce of which one drop of oil of gualtheria has been added, is a singularly fragrant and agreeable drug. Spirit of amyl ether, with a little acetate of amyl, is also very elegant.

W. F. Wade, F.R.C.P.,
Physician to the General Hospital, Birmingham.

SURGICAL MEMORANDA.

FISSURE OF THE ANUS IN A CHILD ONE YEAR AND A HALF OLD.

On February 16th, 1874, I saw Nellie D., now one year and three-quarters old, a delicate small child, who had been dry-nursed since she was one month old. She had been inclined to be costive since infancy, but in May last the costiveness became aggravated, at which time I was consulted. The various ordinary means of regulating the bowels were had recourse to—aperients, diet, and enemata—but up to November 1873 no essential relief to the symptoms was afforded, and for some time past she never had a motion without aperients or enemata. She frequently went two or three days without relief to the bowels, and each act of defæcation was attended by violent pain, screaming, and crying. She would do all in her power to prevent the action of the bowels, writhing about and screwing her knees together. She was in great pain for an hour after each motion, and the discharges were costive and sometimes streaked with blood and mucus. In November, I attempted to examine the anus, but, from her restlessness, it was impossible to get a fair view of the part, though I fancied I could see a small crack on the verge. On November 27th, I put her under chloroform and discovered a small fissure, and through this I at once made a superficial incision. The relief was immediate and permanent. From the day of the operation, all the symptoms entirely vanished, and her bowels have acted regularly and easily ever since. It need hardly be added that her health has greatly improved since the operation. I put this case on record, both on account of its rarity, and, as I hope, of its importance. I am not aware of any similar recorded case, and no author that I know of alludes to fissure in children. Bryant describes it as a disease of adult life, and Curling as a disease of middle life; whilst Erichsen, Hilton, and Quain make no allusion to it in childhood. I am induced to hope that the case will prove important in reference to the treatment of constipation in children. Every one who has seen much of the diseases of children, must be aware of the difficulty which exists in the treatment of constipation, and have been baffled in dealing with it. It is not my intention to enter upon that subject; the object of this short communication being simply to draw attention to the existence of one cause hitherto overlooked, in the hope that relief may be afforded to, at least, a few of these troublesome and painful cases.

P.S.—I met my little patient with its mother a few days ago, and was informed that there had not been any difficulty with the bowels since the operation had been performed.

J. Hyde Houghton, Surgeon to the Guest Hospital, Dudley.

PATHOLOGICAL MEMORANDA.

HÆMATOMA AURIS.

As attention has recently been called in the pages of the British Medical Journal to the subject of hæmatoma auris, the following notes of a case which I have recently had under my care may not be inopportune as tending to prove the connection of hæmatoma auris with mischief in the brain or its membranes, in contradistinction to the theory that it is always caused by external violence.

A. B., an imbecile, was brought to me on March 16th, with a slight swelling of the auricle of the right ear, which his attendant had first noticed that morning. There was no redness or sign of bruising, and he complained of no pain (though perfectly able to do so if there had been any). On questioning the attendant, he assured me that there had been no violence (to his knowledge), nor had I any reason to doubt his word, as he is a perfectly trustworthy man, and has been here some time, and was much attached to his patient. On the 17th, the swelling was of the size of a large walnut; and on the 18th, was as big as a small orange. There was no increase in size after this date, but I could feel the false cartilage forming from day to day, and it was gradually subsiding, when, on May 20th, I was called up to him at five o'clock in the morning, and found him suffering from an apoplectiform seizure and in a semicomatose condition, in which state he lingered until the 24th, when he expired at noon. At the necropsy, forty-eight hours after death, I found the following morbid appearances. There was a thin layer of effused blood between the dura mater and arachnoid (chiefly, however, on the right side), which I traced to a spot in the right hemisphere laying over the petrous portion of the temporal bone, where there had been a lesion of one of the smaller cerebral vessels in the centre of a portion of brain which had undergone yellow softening, and the grey matter of the convolution in this spot was as tough as a piece of leather, and resisted the passage of the knife through it. The membranes were inflamed, and the dura mater was more than twice the proper thickness; and the superior longitudinal sinus was entirely obliterated, owing, I suppose, to some former inflammation of a chronic character, as there was history to account for it. There was an excessive amount of fluid in the dura mater. Leighton Kesteven,
Assistant Medical Officer, Earlswood Asylum.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

BIRMINGHAM GENERAL HOSPITAL.

A CASE ILLUSTRATING THE STATE OF MENTAL AUTOMATISM WHICH OCCURS IN EPILEPSY.

(Under the care of Dr. James Russell.)

The following case affords a rather curious example of the state of automatism referred to in the valuable article on the Comparative Anatomy of Drunkenness in the Journal of May 16th. I would also notice, in passing, the significance in relation to the hereditary transmission of tendency to drink afforded by that sentence in the article which notes the fact that the peculiar phase assumed by the "undisguising" of character which takes place in drunkenness will vary according as the character of the person reduced varies.

It is doubtless the case that, in that class of drinkers in which the habit has most of the nature of disease, the history of the family affords evidence of a proclivity to various forms of nervous disease, particularly to such as are of a hysterical or hypochondrial type; and that it is often the disease which induces the patient to drink. Yet in other families the same morbid history exists to as great an extent, but entirely uncombined with any cases of alcoholism. The difference doubtless consists in the underlying form of mental or moral constitution which is transmitted along with the unhealthy tendency, or is acquired through the influence of education.

The automatic phenomena of epilepsy are allied with the involuntary exclamations occasionally met with in chorea; still more with the utterance of habitual phrases by patients who have lost the faculty of intellectual language through disease in the left hemisphere of the brain. This subject has gained most interesting prominence in the hands of Dr. Hughlings Jackson. The epileptic phenomena, like the phrases just referred to, have sometimes the appearance of possessing a purposive character; such was strikingly the case in my patient. Several interesting examples are also given by Trousseau. But in reality these acts, like the phrases, have become habitual through frequent repetition, and have thus acquired almost a reflex character. It is worth while to notice the change which twice took place in my patient's symptoms under the influence of a mental impression, because it shows that the act of an epileptic during the paroxysm may not involve moral responsibility, but yet may be the direct result of an impression made upon the mind, or of an idea conceived during the period of sanity.

The patient is a boy thirteen years of age. His early fits were called hysterical by his mother. Those from which he suffers at present vary in character. When he was admitted, they generally consisted of very rapid dancing, in a fashion called "footing and heeling", the performer keeping on the same spot—a kind of step exceedingly common in our streets, and practised continually by our working boys. The steps were made with great rapidity, much more rapidly than he could accomplish when performing voluntarily under our direction. At the close of about three-quarters of a minute, he fell back in a state of general tonic spasm, lasting for about a minute; he then rose up, but generally fell to dancing again, again falling back in a state of spasm; the second fit being ended permanently by a sharp clap of the hands. Soon after he entered the hospital, an entertainment was given to the patients, among which some "nigger" dances were performed; forthwith the boy imitated the bones and the tambourine playing in the fits. Some severe reprimands and threats have been employed with success as regards the adventitious part of the fits; he has now ceased to dance, but falls at once into the condition of tonic spasm. He has not, however, lost all tendency to automatic movements; for between the fits, when they occur in couples, he rushes to the door, and, being caught, resists for a moment, then falls into the second fit, from which he rises perfectly sane. He is now taking bromide of potassium with very partial benefit.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 12TH, 1874.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

NOTES OF TWO CASES OF HÆMORRHAGIC DIATHESIS. BY CHARLES HIGGENS, F.R.C.S.

THE cases of two brothers, the subjects of hæmophilia, were reported. The family history furnished a good illustration of the mode of transmission of the disease from the maternal grandfather through his daughter, who was not a bleeder, to five males of a family consisting of seven boys and one girl—the girl, as was the rule, being one of the exceptions. The grandfather above mentioned lived to the age of 86, and died of old age. Another point of interest was the firmness with which the blood coagulated; in each of the cases reported, well formed clots were produced, showing that the hæmorrhage was not due to want of coagulability.

ON SEPTIC DISEASE, IN AND OUT OF HOSPITAL.

BY RICHARD BARWELL, F.R.C.S.

The subject of the death-rate in hospitals having of late years, and especially during the commencement of the present year, attracted much attention, the author was induced to re-examine hospital reports, comparing them especially with Sir James Simpson's statistics in his celebrated papers on Hospitalism. Sir James ranged together hospitals of similar sizes, added their death-rates, and drew the conclusion that the mortality increased with the number of beds. By taking each hospital separately (adhering to Simpson's numbers) and arranging them according to their mortality, Mr. Barwell formed a table of those with 50, 40, and 30 per cent. of deaths, and so on; and by this table it appeared that in each class there were hospitals of every dimension—in the highest class, some of the smaller; in the lower classes, some of the larger; hence he concluded "that the size of a hospital has no influence on its mortality". In studying the Registrar-General's returns in different towns and districts, the author found that the death-rate from erysipelas (the only septic disease in this table) varied with the density of the population in a ratio sufficiently close to warrant the conclusion that the one had an intimate relation to the other. The mortality after amputations (as given by Simpson) was then compared with the erysipelas death-rate of the district in which the hospital was situated. With certain palpable exceptions, accounted for by the condition of the institutions, the comparison showed a striking proportion between the two sets of numbers; hence it was concluded that "the mortality of a hospital varies remarkably with the erysipelas death-rate of its neighbourhood". The general outcome of these comparisons appeared to be, that overcrowding, ill-ventilation, and other defects, would produce a high death-rate from septic disease out of hospital; and, since hospitals in towns were filled by the class thus rendered receptive of septic influence, there would, in hospitals of large towns, be a higher death-rate than in villages. But, if the hospital itself were not overcrowded, ill-ventilated, etc., this death-rate would be proportional to that outside, or below that proportion; therefore, "hospitalism does not exist", if the term be taken to mean an evil influence necessary to hospitals and inherent in their very nature, whether ill or well arranged. The author then gave the statistics of the Charing Cross Hospital for some few years past. During this period, a considerable number of grave operations were performed, including herniotomy, lithotomy, amputation of the hip, excision of large joints, etc. The low rate of mortality—viz., 29 per cent.—he attributed to certain hospital arrangements, as well as to excellent and cleanly nursing; but he also strongly insisted on the necessity of careful watchfulness, especially on the value of thermometric observations, on the desirability of changing the bed when a rise in temperature sufficient to forewarn occurred, and also on the value of large doses of quinine under like circumstances. In conclusion, he deprecated the word "hospitalism" and the idea it conveyed, as causing surgeons to acquiesce in a large death-rate as inseparable from hospital practice.

Mr. HOLMES said that one of the great difficulties in discussing the subject was, that no particulars were attached to Sir J. Simpson's figures. In contrasting the great mortality (72 per cent.) given for the Middlesex Hospital with that of the Canterbury Hospital (5 per cent.), one would at first sight conclude that a patient in the former had fifteen times as great a chance of death as in the latter. But this great difference in the death-rate might result from differences in the severity of the cases operated on. So low a mortality as 5 per cent. could scarcely be expected in a metropolitan hospital, not because of the greater prevalence of septic disease, but because of the nature of the operations performed. Cases occurred, as Mr. Erichsen had pointed out, where the surgeon might abstain from operating, and the mortality from amputation might be reduced; the statistics of the hospital would thus be improved, but not the fate of the patient. *Ex nihilo nihil fit:* nothing whatever was to be got out of Simpson's figures but an arithmetical discussion. As to the general conclusion, that operations were as safe in a dirty, ill-ventilated cottage as in a hospital, experience showed that, when pyæmia and erysipelas were to be dreaded, cases were better treated in hospitals. Another test was, that large plastic operations were repeatedly performed in hospitals with good success, which could not be the case if erysipelas and pyæmia were prevalent in these institutions, as a rule. He agreed with Mr. Barwell, that septic diseases were not inevitable in hospitals, and believed that, by a more careful treatment of wounds and a better arrangement of the hospitals, they might be reduced and, perhaps, removed.—Mr. SPENCER WELLS remarked that amputations in large hospitals were in certain seasons attended with a greater mortality than in smaller hospitals at the same time. He thought that the publication of Sir James Simpson's paper had had a good effect in leading to greater attention being paid to after-treatment than was the case some years ago. What might be called "urbism" must be considered with regard to the different conditions of the same hospital in the same city; as in Glasgow, before and after the adoption of Lister's plan of treatment. It had been said that ovariotomy should not be done in large hospitals where erysipelas and pyæmia were present; he would apply the same remark to great operations in general.—Mr. HOLMES did not say that the discussion was fruitless, but that figures without facts could not lead to perfect conclusions.—Dr. DRYSDALE thought it clear that injury must be done by collecting large numbers of persons in hospitals; and alluded to the Paris hospitals in proof of this.—Mr. JONATHAN HUTCHINSON agreed with Mr. Holmes as to the mischief arising from a rash use of statistics; but he believed, with Mr. Wells, that much gratitude was due to Sir James Simpson. Simpson, however, made a mistake in supposing that "hospitalism" (the term being applied to conditions peculiar to a hospital) was inseparable from hospitals, or that it was at all dependent on the size of a hospital. He had lately seen a small hospital of twelve beds in a country town, where erysipelas was prevalent. The question here was not one of size, but of exposure to contagion. With regard to the prevention of mortality after ovariotomy by attention to certain rules, he would ask why the same rules should not be applied to other operations, so as to prevent the mortality from them.—Dr. FAYRER said that, up to 1859, there were no recorded cases of recovery after amputation of the thigh in the Calcutta hospital, the principal cause of death being pyæmia. In ten years, in 37 cases of amputation of the thigh, there were 18 deaths from pyæmia; in 61 of amputation of the leg, 18; in 26 of the foot, 5; in 11 of the shoulder, 3; in 14 of the arm, 3; in 15 of the forearm, 3; in 62 of the hand, 3; giving a total of 226 amputations with 53 deaths from pyæmia. The ventilation of the hospital had been improved, and the number of beds in a ward reduced from twenty-five to sixteen; and the result had been a diminution of the mortality. Osteomyelitis was at one time very prevalent in the hospital, but had now almost disappeared; and other forms of pyæmia were reduced. The hospital was the same, but its condition was improved. He was glad also to learn that, since his departure from Calcutta, steps were being taken to further improve the hospital.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IRELAND.

WEDNESDAY, MARCH 11TH, 1874.

JAMES F. DUNCAN, M.D., President, in the Chair.

Œsophagismus (Spasmodic Stricture of the Œsophagus).—Dr. A. W. FOOT reported four cases of this affection, three in males, and one in a female, in none of which there was any evidence of organic disease, or of hysteria. CASE I.—A pale, timid lad, aged 16, was admitted to the Meath Hospital, on account of difficulty in swallowing food. He had no symptoms of gastric disturbance. He was subject to hiccough. The dysphagia was intermitting, and worse when he was hungry. He derived great benefit from thirty-grain doses of bromide of potassium, given thrice daily. CASE II.—A man, aged 24, felt a "lump rising" after eating food, especially solid; or, sometimes, when no food had been swallowed. A mass was generally returned and ejected with much mucus. The dysphagia was, to some extent, intermittent. This patient had various dyspeptic symptoms, and stated that his malady commenced three years before with obstinate hiccough. While in hospital, he caught enteric fever, during the course of which the condition of the œsophagus became completely modified. On convalescence, the dysphagia returned, and he left hospital in much the same state as when admitted. CASE III.—A stout, healthy-looking, but intemperate man, aged 32, had suffered for three years from difficulty of swallowing solid food, or sometimes even liquids. He attributed his illness to a "squeeze of the throat", given him by another man in a drunken embrace. He went home unimproved. CASE IV.—A married woman, aged 43, was admitted, with total inability to swallow. Thirst was relieved by holding water in her mouth. She had been fed by the rectum for some time. Six months previously, while in intense grief, she had a vomiting of blood, after which she could swallow nothing for twelve days. She said the sense of constriction came and went. Her voice was not affected. She rapidly improved, as she said, from taking a mixture of hydrochloric acid and quassia. At all events, within fifteen days she left the hospital quite well, and there was no return of the spasm. The diagnosis of this affection (œsophagismus), was based upon the suddenness of its occurrence, the variability of its intensity with various kinds of food, its intermittence, the co-existence of other symptoms, especially hiccough; the absence of other causes of dysphagia—mechanical, inflammatory, or paralytic. The œsophageal vomiting in these cases was manifestly different from gastric vomiting, in the absence of nausea, and of contraction of the muscles of the stomach or abdomen, nor had the returned food any sour or acid taste.—The PRESIDENT remembered the occurrence of an attack of spasm of the pharynx in his own father, thirty-six years ago. For a week he could swallow neither food nor drink. At the end of the time mentioned, the power of deglutition returned, without much treatment.—Dr. ATTHILL detailed a case of œsophagismus in a lad, aged 12, who was unable to eat meat. The treatment was nourishing bland food, air, exercise, and iodide of iron.—Dr. MACSWINEY had observed three cases of œsophagismus in men, whose ages ranged from 18 to 30 years. In one patient, there was an enormous secretion of thick glairy mucus. In a second, an intermittent stricture existed low down in the tube, which was largely dilated superiorly. Cold liquids produced spasm, and the passing of a probang into the stomach, as recommended by Sir Philip Crampton, gave great relief.—Dr. H. KENNEDY had seen five or six cases. All recovered. In some, there was absolute stoppage; in others, merely simple dysphagia. He considered the temporary obstruction was due to muscular spasm. In one case, marked benefit followed the use of a solution of nitrate of silver. Warm baths might be of great use.—Dr. W. G. SMITH mentioned a case, which had been under his observation since November 1866. A gentleman, aged 29, then suffered from cholera, and recovered. Œsophagismus set in, attended by a copious secretion of saliva, and pain on swallowing. The spasm was, on one occasion, relieved by the application of a large blister to the epigastrium. The attack recurred, lasting sometimes from sixty to even a hundred hours. In one of them, after swallowing milk, a curdy cast, of the shape of the œsophagus, was ejected. The continuous current was tried, and apomorphia (one-twentieth of a grain, injected hypodermically), caused vomiting, after which the spasm returned.

Dislocation of the Kidney by Violence: Renal Abscess: Recovery.—Dr. W. B. PEEBLES brought forward the following cases. On February 29th, 1872, a young married lady had a phaeton turned over upon her by a runaway horse. She was found lying under the vehicle on her right side, insensible. There was great collapse, from which she rallied. At first, a tendency to retention of urine existed, and there was incessant and continued vomiting. In a month's time, she one day dined heartily; two days afterwards, symptoms of acute nephritis on the left side appeared. When the violence of the attack had abated, she felt a loose substance in the abdomen, which changed its place according to the movements of the body, great agony being suffered. Two months after the accident, convulsive rigors, followed by excessive perspirations, vomiting, and retching, occurred. Soon afterwards, pus appeared in the urine, and persisted for many weeks. Since February 1873, the kidney had remained motionless, and, by the present time, had probably been almost quite absorbed. The slightest indiscretion in diet caused evidences of renal derangement.—Dr. A. W. FOOT regarded the traumatic origin of a movable or floating kidney, as less unlikely than its congenital existence.—Dr. MACSWINEY asked whether hæmaturia had been observed after the accident.—Dr. H. KENNEDY alluded to those examples of floating kidney which had been brought before the Pathological Society of London, and to those placed on record by Rayer. He himself believed that, in Dr. Peebles' case, the kidney had been movable before the accident. His prognosis would be unfavourable.—Dr. FINNEY detailed the signs of floating kidney in an instance which had come under his notice. There was absence of dulness, on percussion over the seat of the kidney, during the presence of a tumour in the epigastrium. The dulness returned when this tumour fell back into its place. He agreed with Dr. Kennedy as to the non-traumatic origin of the movable kidney in Dr. Peebles' patient.—Dr. YEO endorsed Dr. Foot's view as to the traumatic origin of the displacement of the kidney. He had seen an example in a labouring man, aged 45, over whose loins a cart passed.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, FEBRUARY 27TH, 1874.

JOLIFFE TUFNELL, Esq., Vice-President, in the Chair.

Tumours Engaging the Cæcum.—Dr. HENRY KENNEDY divided fæcal accumulations in the right iliac region into two classes, acute and chronic tumours. Examples of the former class were accompanied by marked symptoms, such as pain, nausea, and pyrexia. Two illustrative cases were given. In one, the swelling was due to a mass of apple-skins and fæces. Chronic tumours were not so much accompanied by urgent symptoms. In a middle-aged lady, however, a tumour of this class gave rise to severe pain in the cæcal region, without constipation, and the symptoms simulated intussusception. These accumulations in the cæcum were of especial interest, from the fact that they were sometimes followed by melæna, of which Dr. Kennedy adduced several examples. Where fæcal accumulation was suspected to be the cause of the cæcal swelling, a cure should be "coaxed", not forced, small doses of mildly aperient medicine being frequently administered, and stimulating liniments, and perhaps electricity, being applied locally. If the intestine, on the other hand, were in a spastic state, a full opiate should be given. Dr. Kennedy concluded by referring to the accident of perforation, from the presence of a foreign body in the vermiform appendix.—A discussion followed, in which Mr. Richardson, Mr. Stapleton, Dr. McClintock, and Dr. Darby took part.

Bloodless Surgery.—Mr. W. STOKES, having sketched the history of Esmarch's method, from its first recommendation by Sir Charles Bell, detailed the several cases in which he had recently adopted it. A boy, aged 14, while employed as a printer's apprentice, had the three lesser fingers and the corresponding metacarpal bones of one hand crushed in a printing-machine. Amputation was performed, without any loss of blood. In a second case, amputation was performed at the wrist-joint, in consequence of a terrible injury inflicted by a hay-chopping machine. A good recovery followed. An aneurism, of the size of a walnut, was excised; the steps of the operation were greatly facilitated by the bloodless condition of the parts. An epithelial cancer was removed from the back of the hand of a patient, aged 50; a remarkable degree of local anæsthesia was caused by the application of the ligature. Having quoted many other cases where Esmarch's method had been followed of late by Dublin surgeons, Mr. Stokes enumerated the advantages of the procedure as follows. 1. The saving of blood secured by it could not fail to be of use in the absence of preceding inflammation. 2. The bloodless condition of the part to be operated on relieved the surgeon from embarrassment. 3. Assistants might often be dispensed with. 4. Healing often appeared to take place more rapidly. 5. There was less reactive irritation. 6. The liability to suppuration, phlebitis, etc., was lessened. The "bloodless method" was certainly contraindicated in the presence of gangrene, and should be very cautiously employed where deposits of pus existed.—Mr. STAPLETON claimed for Irish surgery some credit for carrying into practice, at all events, the principle of the bloodless method long ago.—Dr. CORLEY had used the method in a case of necrosis of the femur. The patient was one hour and thirty-five minutes under chloroform. The recovery was a good one. He considered that the risk of pus being driven into the circulation by the compression of the bandage was rather chimerical.—Dr. McDONNELL defended Mr. Stokes from the imputation that he had intended to applaud German surgery to the detriment of the Irish school. He had applied to his own finger a bandage and ligature, to ascertain how soon anæsthesia from anæmia was produced. In ten minutes, the finger lost sensation.—Mr. RICHARDSON alluded to the use of pressure in inducing insensibility to pain, as practised in the olden time.—Mr. KELLY had noticed that a sensation of coldness was felt in the ligatured limb.—Mr. ORMSBY said that, in one case of amputation of the thigh at the Meath Hospital, suppuration quickly followed the operation.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JUNE 6TH, 1874.

THE MEMBERSHIP OF BRANCHES.

THE Honorary Secretary of one of the Branches of the Association writes to us: "I find the idea is prevalent, that all members of the Association living in a given district are of necessity members of the Branch of that district, without any intimation having been given to the Branch Secretary. I am surprised to find how great an amount of ignorance respecting its constitution prevails among members of the Association. I think a few words on this subject will be useful."

It is certainly desirable that such an error should be corrected wherever it exists. Perhaps the best means for the purpose are taken by those Secretaries who annually canvass the whole profession in the districts which lie within the limits of the Branch, with a view to inform them of the conditions of the membership of the Branch, and of the objects of those admirable local medical societies. These circulars are addressed to all members of the profession; and we are always happy to render assistance by forwarding concurrently to all who are not already members of the Association, copies of the JOURNAL and other documents relating to the Association generally. The extent to which the conditions of membership of a Branch are known depends also to some degree, we imagine, upon the scientific and social activity of the Branch, the frequency of its meetings, the judgment with which these are distributed during the year over the principal centres of population in the seat of the Branch, and the extent of the ramifications of the district sections. In all these respects, the Branch from which this complaint (the Yorkshire Branch) comes is singularly deficient: hence, perhaps, one of the causes for the error.

We may mention that the General Secretary, Mr. Fowke, has been recently employed in collecting the separate codes of rules of each Branch, together with particulars of its numbers, action, and constitution. These, when collated, will afford a valuable means of comparing the existing facts, and will afford information which will no doubt be interesting to officers of Branches, as well as to the Council of the Association. We published, a few years since, a comparative table, showing the annual growth of the numbers of the Association and of each Branch of it, and the proportion of the total number of members of the profession in each county who were members of the Association. This table has not been annually kept up; but the Committee of Council have directed that it should be resumed by the present General Secretary, and from this also valuable information will be available. It must be remembered that deaths, changes of position, and advancing years, annually make gaps in the numbers of every great body. It is not every year that the impulse of great meetings, which become powerful centres of attraction, can be trusted to recruit our numbers. The London meeting afforded a powerful impulse, which has still continued to be felt in the progress of the Association. Nearly all the members who then joined remain with us, to take part in the great work which the Association is accomplishing. They have observed and approved the great work which the Association is doing in promoting the weekly publication of scientific communications, in providing means of union and intercommunication throughout the kingdom, and in advancing great professional interests, as well by local as by imperial agencies. The active propaganda of professional unity and progress, which is the aim of the Association, cannot, however, be properly left entirely, or even mainly, to the General Meeting and the JOURNAL; it is in the Branches that the true life of the Association must be looked for. The monthly or quarterly meetings, which bring men together face to face and hand in hand; the union of the whole professional energy of each district in free unfettered discussion of medical, sanitary, social, and ethical questions; the consolidation of friendships, the pacification of strife, the exchange of experience, the diffusion of new scientific principles and facts: these are the objects attained in an active well distributed Branch; and it is by the multiplication of district centres, and by a machinery to draw forth the real capacities of each locality, that the Branches best fulfil their duties to the profession and to the Association. We are glad to see that the new Hampshire Branch is being successfully organised upon this principle, which has been admirably exemplified in the working of the South-Eastern among rural Branches, and of the Birmingham among urban Branches. With a Branch so organised and subdivided, in which each town has its own subcentre of action, and each district its own gatherings, in addition to the quarterly and annual meetings of the parent Branch, there is little fear but that the propaganda will be too active to admit of complaint that many members of the Association within the district do not know the conditions of membership of the Branch. The Branches are the ramifications through which the parent Association receives sun, and light, and air. They should spread everywhere, and be everywhere open to the influence of the freshest breezes of opinion. At the annual meetings, there is a great crush of business to be transacted in a small space of time; and there is much important routine business in the way of reading reports which must be presented, and there are stated orators who must be listened to. It is in the Branches that the questions of the day are elaborated, and that the great work of the Association is initiated and in part carried on. They are now holding, or about to hold, their annual meetings; and we shall all look to see how they have prospered, what account they can give of their year's work, what is their retrospect, and what their prospect. In these reports we shall find the surest index of the real progress of the Association. This society is a federal republic, in which each federation has its own powers, capacities, and laws of action, in addition to those which it delegates to its representatives in the central Council. We are about to see the annual blue-book of each. It is the forerunner of the general assembly in August, and by no means of less interest.

THE PUBLIC HEALTH (IRELAND) BILL.

THE following remarks and analyses embody the principal objections to this Bill as it stands. Beginning with Clauses 2 and 3, no objection is made to the constitution of rural sanitary districts. One hundred and thirteen urban sanitary districts, however, will be created by the Bill. Of these, only seventeen towns have populations over 11,000. Most of the smaller towns have insignificant incomes—seventy-seven of them not more than £1,000 a year, and nine of them less than £100 a year. How is a sanitary organisation to be paid for out of such an income? Again, Clause 8 provides that, under the Diseases Prevention Act, the sanitary authority shall be the Poor-law Guardians; so that there will be one authority acting in towns until the Diseases Prevention Act may happen to be put in force, when that authority must be superseded by another possessed of no machinery for carrying out sanitary measures. Two amendments, or suggestions, have been proposed to meet this difficulty of urban districts.

1. Let no urban districts at all be constituted in the first instance; but let Clause 5 be altered, so as to enable the Local Government Board, by provisional order, after petition, and, if deemed advisable, to constitute any urban district. Thus Dublin, Belfast, Cork, etc., could be made urban districts, while the petty towns would form part of the rural district in which they happen to be.

2. Let the names of a few selected towns be mentioned in the Bill as

urban districts, all the others to remain as part of the adjacent rural district.

In our opinion, the better plan would be to abolish the distinction between urban and rural districts both in England and in Ireland. This would be most easily effected by establishing uniform local sanitary authorities in all unions under the name of sanitary committees. In Ireland, there might be also dispensary committees. The appointment of such sanitary committees is permitted by the English Act. It ought to be made compulsory in both countries.

In every union which contains a town having not fewer than 10,000 (? 5,000 in Ireland) inhabitants, and a town council, or improvement commissioners, or local board, such council, board, or commissioners, should be required to appoint a certain number* of their members to unite with the sanitary committee of the Board of Guardians, and to constitute a joint committee, which shall be the local sanitary authority, and by which all provisions of the Public Health Act, Diseases Prevention Act, Dispensary and Vaccination Acts, and other sanitary Acts mentioned in the Bill, relating to the cure or prevention of disease or removal of nuisances, shall be carried into effect.

The only differences, then, between what are called "urban" and "rural" authorities would be, that the former would contain an important element nominated by the town governing body. This would get rid of all useless and mischievous enactments concerning the separation or alteration of sanitary districts.

To prevent the urban portion of such joint committee from interfering with the management of parts of the union lying outside of the town, it would be advisable to limit their joint action to the town or borough, leaving matters which affect merely the rural districts to that portion of the sanitary committee which is appointed by the Guardians. At the same time, many important sanitary provisions, limited at present to towns, should be extended to all local authorities, subject, in disputed cases, to the approval of the Local Government Board. The Diseases Prevention Act should be applied to all sanitary authorities, including the joint committees proposed for towns. Clause 8 should, therefore, be struck out.

We quite approve of the proposed amendment in Clause 10 (page 4, line 42), also of those in page 5 (lines 4, 5, and 10). Inspectors of nuisances should be required to attend to the directions of the medical officer of health, and to show cause for default in this respect.

The Dublin Sanitary Association suggest that Clause 5 be altered, so as to coincide with section 22 of the English Act of 1872.

The College of Physicians suggest the addition of the Diseases Prevention Act to the Acts mentioned in Clause 7. The Dublin Sanitary Association, again, maintain that the corresponding provisions of the English Act are better.

If a large number of urban districts be created, Clause 8 will lead to endless confusion.

In Clause 10 (page 4, line 42), all the bodies are unanimous in substituting for "a sanitary officer" the words the "medical officer of health". The Irish Medical Association maintains that the "inspector of nuisances" should be under the control of the medical officer. All the bodies agree that the word "medical" is required after "superintendent" in line 5 and line 10. Special qualifications should be required for this office of superintendence.

Clause 11 is quite defective. The bodies are unanimous in advocating that provision should be made for skilled medical and engineering supervision or inspection. To the Irish Local Government Board no medical or engineering or legal department is attached. There is no Simon, no Buchanans, Radcliffe, Thorne, etc. This is most important. The medical member of the Local Government Board (Dr. M'Donnell) does no more medical work than his colleagues; and the four inspectors, who are medical men, differ in no way from the other inspectors as regards their duties.

As to Clause 11, it may be a question whether the superior medical or engineering officers should not be appointed by the Local Government Board, and be fully empowered to act everywhere as scientific assessors to the inspectors of the Local Government Board. This, in Ireland, would be better than, on the one hand, leaving the appointment of such superior officers to combinations of local authorities; or, on the other hand, following the example set in England, where the Local Government Board has virtually excluded Mr. Simon and his inspectors from local superintendence, except when they are "called in" to act, by authority of the President.

As to Clause 18, the Irish College of Physicians considers that the Local Government Board should have power to make provisional orders for the union of districts of their own motion; and the Dublin Sanitary Association holds that the ratepayers representing one-tenth of the rateable property of the district should have the right of applying for such union of their district with those surrounding it. (See recommendations of the Royal Sanitary Commission on this latter suggestion.) On this point we agree with the College of Physicians.

The Dublin Sanitary Association objects to the transfer provided for in Clause 27, as the Local Government Board possess no staff for the carrying out of the Alkali Act. The few chemical works in Ireland would scarcely justify the formation of such a staff in connection with the Local Government Board. The objection of the Dublin Sanitary Association would, however, be removed by the power proposed to be conferred on the Local Government Board for the appointment of superior scientific officers as assessors. The scientific staff might, of course, contain at least one member fully qualified to carry out the Alkali Act, and other such Acts.

The time mentioned in Clause 34 (two weeks) is unanimously deemed insufficient. We recommend an extension.

In Clause 37, the Dublin Sanitary Association maintains that all towns should be subject to it, and that the few exemptions (Cork, Kilkenny, Waterford, Blackrock, and Rathmines) at present existing should be dispensed with.

Regarding Clause 40, the Dublin Sanitary Association suggests that the principle of the English Borough Fund Act should be extended to Ireland, so as to prevent members of municipal bodies from conducting legal business on behalf of those bodies.

We quite agree with the recommendations as to Clauses 34, 37, and 40.

AT a public meeting held last week at the Town Hall, Droitwich, convened by Dr. Roden, the Mayor, and at which he presided, it was unanimously resolved to establish a self-supporting dispensary.

MR. SCLATER-BOOTH, the President of the Local Government Board, obtained leave on Tuesday to bring in a Bill to amend and extend the Sanitary Acts. The Bill has not yet been printed.

IN consequence of preparations for the *conversazione* to be held on Tuesday, June 9th, the library of the Royal Medical and Chirurgical Society will be closed on Monday and Tuesday.

DR. J. B. POTTER (late Assistant Obstetric Physician) has been elected Obstetric Physician, and Dr. W. Chapman Grigg Assistant Obstetric Physician, to the Westminster Hospital.

MR. CALLENDER will bring his course of lectures on the Formation and Early Growth of the Brain of Man to a close this day (Friday); and on Monday Professor Holmes will commence his course of six lectures on the Surgical Treatment of Aneurism, in continuation of his course of last year.

A PARLIAMENTARY return recently published states that the total number of pauper lunatics in the United Kingdom is 69,982, of whom 43,367 are in county, borough, royal, district, parochial (Scotland), and private licensed asylums, and 26,615 in workhouses and elsewhere. The estimated annual amount of the proposed grant of 4s. per head per week towards the maintenance of the former class is £451,017.

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* This number might be fixed by the Local Government Board.

According to the advices brought by the Brazil and River Plate mail, yellow fever causes a daily average of nine deaths at Rio Janeiro.

MEDICAL PROMOTION IN THE BRIGADE OF GUARDS.

Attention has been once more called to the block of medical promotion in the Brigade of Guards. It is pointed out that this is due to the prolonged retention of office by the senior surgeon-major, who has already overstayed the limit of age by three years, and is thus depriving his juniors of the professional advancement which they have a right to expect after unusually long service in subordinate rank. This condition of matters is rendered more difficult to explain by the rigid way in which the clause of the Royal Warrant enforcing retirement at fifty-five has recently been enforced both in the Indian and home services.

SCIENTIFIC EXPEDITIONS.

The Government having decided to send out expeditions to various points in the Indian Ocean, for the purpose of observing the transit of Venus, have, through the instrumentality of the Royal Society, agreed to the appointment of three naturalists to accompany the expeditions, representing geology, botany, and zoology. The selection has been made in favour of Mr. Henry Sclater, B.A., nominated by the University of Cambridge, as geologist; Mr. Balfour, a son of the celebrated Professor of Botany in the University of Edinburgh, will take that department; and Mr. George Gulliver, B.A., son of the late Hunterian Professor of Comparative Anatomy and Physiology at the Royal College of Surgeons, England (1861), has been nominated in the interests of zoology and zootomy by the University of Oxford. Liberal grants, it is to be hoped, will accompany these several appointments for the elucidation of science.

WORKHOUSE BUTTER.

We learn from the *Poor-Law Chronicle* that, at the last meeting of the Guardians of the Hackney Union, the stores committee reported the receipt of a certificate from Dr. Tripe, the public analyst, giving the result of an analysis of a sample of the butter supplied for the use of the workhouse. He stated that it contained 84 per cent. of butter and foreign fat, 12.2 of water, and the remainder salt. He was not prepared to state the precise proportion of foreign fat, but in his opinion it was not less than 40 per cent., and the quantity of water 6 per cent. more than was found in good butter. The committee, under these circumstances, advised that notice be given to the contractor of the termination of his contract, and that he be informed that the guardians would not accept any tender from him in future. The Chairman said it was open to the board to direct legal proceedings if they thought proper to do so, but the committee did not think that it was for them to advise such a course. Mr. Prince thought they ought to call upon the contractor to pay a contribution of £20 to the Hackney Benevolent Pension Society, or some other local charity. Mr. Rumney suggested that he should be summoned to attend before the guardians. Eventually, the motion for the adoption of the report was agreed to unanimously.

WEEKLY WAGES AND PROVIDENT DISPENSARIES.

A few weeks ago, we noticed the conference which was lately held at the East End of London, with a view to placing some of the existing free dispensaries upon the provident footing. The proceedings of the conference have now been published in the form of a pamphlet. The most important statement, and to the readers of this Journal the most novel, is contained in an addendum, supplied by Dr. Ford Anderson. Indeed, the facts and figures mentioned by Dr. Anderson are so interesting, and it is of so much importance that they should be generally known, that we reproduce them entire.

Addendum.—The statistics quoted by Dr. Ford Anderson may be thus summarised. He took 100 cases of provident dispensary patients, as they happened to come, and found the total wages, in the 100 families which they represented, £120:2:8 per week, giving an average per family of £1:4:0¼. Of these 100 heads of families, 50 were small tradesmen, mechanics, or skilled workmen, earning, on the average, £1:9 a week; 27 were labourers, earning £1:1:10 a week; and the remaining 23 were widows, laundresses, or domestic servants, earning, on an average, 15s. 6d. a week.

Again, he took 100 instances of free dispensary cases, furnished from the books of the Holloway and North Islington Free Dispensary, as they came, and found that the total earnings of the 100 amounted to £111:12, giving a weekly average of £1:2:8. Of these 100, 49 were small tradesmen or mechanics, earning £1:16:3 a week; 23 were labourers, earning £1:0:6; and 28 were labourers, earning 17s. 4d. a week.

From a comparison of these two sets of cases, it would appear: (1) that the better class of workmen and artisans avoid the free dispensaries; and (2) that it is possible for persons earning so moderate a wage as 15s. a week to belong to provident dispensaries. The penny a week paid by adults, and the halfpenny a week (or less) for children, are cheerfully contributed to render the family independent of gratuitous medical attendance, and are much less than the value of the time spent in seeking governors' letters, and in waiting till their cases are called at the free dispensaries.

It is often said, by those who are but little acquainted with the facts of the case, that those who attend the free dispensaries, and the outpatient departments of hospitals, are too poor to join provident dispensaries. It is said that their earnings are so small, and so precarious, that they could not be expected to pay even three halfpence a week for themselves; and hitherto, however strong our conviction was that they could well afford to contribute towards their own medical relief, we have had no statistics to adduce in support of our opinion. Now, however, Dr. Ford Anderson has enabled us to point out, that even persons earning so moderate a wage as 15s. a week, find it for their advantage to belong to provident dispensaries. With such facts as these before us, it is difficult to resist the conclusion that the provident system ought to be the rule, and the eleemosynary system the exception, in the administration of out-door medical relief.

ROYAL MEDICAL BENEVOLENT COLLEGE.

At the annual election of Foundation Scholars, on the 28th ultimo, the following candidates were successful, viz.: Morris, Bowe, Lambden, Godley, Webb, Allinson, Savery, and Hoskins. The successful pensioners were: Mrs. Mathias, Mrs. Barnes, Mrs. Howell, Mrs. Meredith, Mrs. Phillips, Mrs. Jenkins, and Mr. King.

A "BLACK HOLE" IN LANCASHIRE.

Some astounding statements, the *Manchester Examiner* says, have been made at a meeting of the Oldham magistrates, respecting the condition of the cells for the confinement of prisoners at the Town Hall. It appears that the cells, both in number and construction, are quite inadequate for the purpose they were designed to serve. There are only four cells, and in them, on Friday night, sixteen prisoners were stowed away. In the morning, the air was so bad that the police officials, who had to bring out the prisoners, were almost overpowered by the impure air, while some of the prisoners were in a state described as "heaving at the heart". Though the state of the cells has been frequently mentioned before the magistrates, nothing has been done to improve them, but there is now a prospect that action of some sort will be taken without further delay.

BASTARD CHARITY.

We have received from Dr. Campbell Black a pamphlet "On Medical Charities". It is of local rather than of general interest; but it serves to show that in Glasgow, as in many other large towns, the legitimate medical charities are sadly abused, and that some bastard charities have been set on foot, which, in truth, are no charities at all, but merely professional speculations. These faults are too apparent to escape notice, and they have been often pointed out in this Journal. It has now become a serious question how they ought to be met. Possibly, it might be well for the Colleges to express some opinion as to the limits of charitable practice; thus protecting the public against misleading enterprises, and, at the same time, defending the sphere of remunerative practice which is open to their *alumni*. Or, it has been proposed that all charities—medical and non-medical alike—should be obliged to register themselves. The mere publication of such a register would be advantageous to all *bonâ fide* charities, while it would have a deterrent effect upon such as were speculative or fraudulent. Dr. Campbell Black's style is rather wanting in dignity, and calculated to give unnecessary offence; but, in a great battle, even the lightest skirmishing is useful.

PROVIDENT MOVEMENT AT HASTINGS.

A PUBLIC meeting, called by the Mayor, was held at Hastings, on Tuesday, the 26th ult., to take into consideration the propriety of forming a provident dispensary for the borough. Many influential clergy and medical men attended, and took part in the proceedings. The chairman explained that the proposal had arisen from a desire to relieve the demands upon the existing charities, as well as to foster a spirit of independence amongst those who were in a position to make some payments for medical assistance. A resolution in favour of establishing a provident dispensary was moved by the Rev. Dr. Crosse, and seconded by Dr. Greenhill. The latter mentioned that Mr. Brassey, M.P. for the borough, had expressed his willingness to subscribe £100 for the purpose of the new dispensary. Altogether, the utmost unanimity prevailed, and a committee was appointed to carry out the necessary arrangements. In closing the meeting, the mayor expressed his conviction that such a dispensary would not merely be beneficial in itself, but that it would be the means of improving the general state and condition of the other charitable institutions in the town.

THE LEVÉE.

THE following members of the medical profession were presented at the levée held on Monday, by His Royal Highness the Prince of Wales, on behalf of Her Majesty: Surgeon C. A. Atkins, 7th Royal Fusiliers, on return from the Gold Coast; Dr. Bushell, Physician to Her Majesty's Legation, Peking; Deputy Surgeon-General A. Barclay, M.D.; Surgeon-Major R. S. Bateson, Bombay Army; Assistant-Surgeon Owen Coleman, M.D., 3rd Royal Surrey Militia; Surgeon-Major S. C. Courtney, Bengal Staff Corps; Surgeon-Major F. Collins, M.D., Army Medical Department; Dr. William Cormick, Physician to the Persian Legation; Staff-Surgeon A. G. Colquhoun, R.N., on return from the Gold Coast; Surgeon-Major R. C. Chandra, Bengal Army; Dr. Concanon, Hampshire Artillery Militia; Staff-Surgeon Richard Eustace, R.N., on return from the Gold Coast; Surgeon-Major Max Grant, M.D., Army Medical Department; Surgeon-General C. A. Gordon, M.D., C.B., on promotion; Surgeon-General Thomas Hastings; Deputy Surgeon-General Sir A. D. Home, V.C., on being made a K.C.B.; Surgeon A. R. Hall, Army Medical Department; Surgeon-Major R. W. Jackson, C.B., Army Medical Department, on return from the Gold Coast; Surgeon-Major W. R. Kerans, Army Medical Department; D. P. Kavanagh, Assistant-Surgeon, Oxfordshire Militia; Surgeon-Major G. McNalty, Army Medical Service, on promotion; Staff-Surgeon F. H. Moore, R.N., on promotion, and return from the Gold Coast; Deputy Surgeon-General W. A. Mackinnon, C.B., on promotion; Sir W. M. Muir, K.C.B., M.D., on appointment as Director-General of the Army Medical Department; Professor Owen, on being made a C.B.; Surgeon-Major J. O'Nial, Army Medical Department; Surgeon-General W. Rutherford, M.D., C.B., on promotion; Staff-Surgeon Walker Reid, M.D., R.N., on return from the Gold Coast; Deputy Inspector-General John Watt Reid, M.D., R.N., on return from the Gold Coast; Surgeon A. Turner, M.D., Army Medical Department, on return from the Gold Coast.

PRISON CELLS.

TWO inquests (says the *Pall Mall Gazette*), were held on Friday, in last week, on the bodies of two prisoners, who died in the House of Correction, Coldbath Fields, Clerkenwell. In both cases, the cause of death was shown to have been disease of the lungs. There does not appear to be any ground, in either of these cases, for attributing the disease from which the prisoners died to any fault in the arrangements of the prison; but it is a question, well worth the consideration of prison reformers, whether improvements are not urgently required in the system of warming and ventilating the cells in most of the prisons in which prisoners are confined in this country. No one can inspect a prison, without being painfully struck by the damp and gloomy appearance of the cells generally, and the wan, unwholesome looks of their occupants. It should be remembered that life in a prison is carried on under abnormal conditions, and that the change from an existence of fresh air and hard exercise to one of close confinement, aggravated by mental depression, must of itself prove, in nine cases out of ten, a severe trial to the constitution. A prisoner cannot promote or restore the circulation of his blood by hard walking or running. His daily exercise in the prison yard is no substitute for hard bodily labour or a brisk "constitutional"; he is, therefore, far more liable to get "chilly", and to imbibe the seeds of lung-disease, than those outside the prison walls, and probably requires far more warmth than if he were free to pursue the usual occupations of a free man. Nor should it be forgotten that the gloom of his cell is never cheered by the rays of the sun, or enlivened by the glow of a coal fire.

ST. MARYLEBONE GENERAL DISPENSARY.

A MEETING of the Board of Directors of this Dispensary was held on June 3rd, 1874, to consider proposals of a subcommittee, specially appointed for the purpose, for placing the above institution on the provident system. It was resolved to place this dispensary forthwith under a partial provident system for a six months' trial; and, if the result be favourable at the end of that period, to establish the provident system permanently. All patients without letters of recommendation have now to pay a stated sum.

RECENT METEOROLOGICAL RETURNS.

DURING the twenty-three days ending with Thursday, May 21st, the mean temperature at the Royal Observatory, Greenwich, averaged only 46.4 deg., which was 5.1 deg. below the average for the corresponding period in fifty years. During the nine following days, which ended on Saturday last, there was a daily excess of temperature to the extent of 4 deg. above the average. During the former cold period, easterly winds prevailed continuously; during the latter warmer season, the general direction of the wind was from the W.S.W. The rainfall measured at the Royal Observatory amounted to but 0.15 of an inch in the five weeks ending Saturday, May 23rd; and during last week no rain was measured, except on Monday, when, in the thunderstorm, rather more than a quarter of an inch of rain fell. The rainfall in England was very variable: in Bristol, only the hundredth part of an inch was measured during the seven days, whereas the fall in Birmingham was 2.20 inches.

LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.

FROM the fifth Annual Report of these amalgamated charities, it appears that their fusion has not been attended with the satisfactory results which were anticipated, either as regards their financial position or the amount of relief afforded. With respect to the former, we learn from the concluding paragraph that "there is a considerable falling off in the subscription-list, which is much to be regretted, and compels the Committee to fall back on their invested funds, so much as £1,000 having been called in during the last three years". The following table, given in the same report, speaks for itself.

Number of Patients during Five Years.

	In-patients. Labour.	In-patients. Special.	Out-patients.	Dispensary patients.
1869	199	29	1594	5903
1870	235	85	1841	7426
1871	155	113	1777	7496
1872	189	141	1758	8014
1873	150	99	1584	8190

Thus, with the exception of the dispensary, in which there is a slight increase, there is a considerable falling off in all the other departments. The first Annual Report of the amalgamated charities, issued in 1870, gives the balance-sheet of the individual charities separately, and enables us to ascertain the financial position of each prior to their fusion. From it we learn that, in the Ladies' Charity, the total cost of each case of labour attended, including midwives' fees, relief and allowances, matron's salary, house-rent, etc., was only 9s. 10½d. For this small sum, each patient was attended in her confinement at her own home by a trained and experienced midwife, medical attendance being procurable gratuitously when required; an allowance of half-a-crown in money was given, and, in addition, certain comforts, such as tea, sugar, etc. Making all allowances, the cost of patients confined in hospitals is considerably greater than of those delivered at their own homes; for we have an expenditure of £835 for 199 labour and 28 special patients, or £46 more than the whole expenditure of the 1,594 home-deliveries. Now, the object of all charities is to do the greatest amount of good at the smallest expenditure, due regard being had to efficiency; and it appears to be a matter for serious inquiry, as to whether the 199 patients of 1869 and the 720 patients of the four following years could not have been attended equally well at their own homes, and at considerably less cost. Still more is this suggested by what we are told in the fourth Annual Report; viz.: "There appears to be a difficulty in bringing in cases for confinement at the hospital, owing mainly to the disinclination of the patients themselves, the applicants for relief preferring to be treated at their own homes." Such being the case, and the cost of in-patients being (as we have seen it is) at least six times as much as that of out-patients, it is less remarkable that the numbers have decreased now to a lower figure than for many years past, than that they should be so high as they are, or, indeed, that the indoor labour department should be kept up at all. And, when we consider the relative mortality of in- and out-patients, there can be no doubt that in every respect it is better for patients to be confined at their own homes by properly educated midwives; hospital accommodation being reserved for those only where, from distortion of the pelvis, previous flooding, or abnormal presentation, unusual attention is requisite, or operative manipulation demanded.

HOSPITAL SATURDAY AND SUNDAY AT ROCHESTER.

It is gratifying to know that the response made to the appeal of the trustees of St. Bartholomew's Hospital at Rochester has been of a very satisfactory nature. On both days, the sum realised amounted to considerably more than that collected on former occasions. Last year, Hospital Saturday realised £66 : 1 : 7; whereas, on the late occasion, the sum collected amounted to £129 : 7 : 5. So also with Hospital Sunday: last year, the sum collected amounted to £191 : 19 : 1; while on the late occasion it rose to £287 : 1.

THE LONDON TEMPERANCE HOSPITAL.

The anniversary meeting in support of this institution was, a few days ago, held at the London Tavern, Bishopsgate Street, under the presidency of Sir Walter C. Trevelyan, Bart. The first report of the committee of management states that the first in-patient was admitted into the hospital, 112, Gower Street, on October 6th last, and down to the end of April the total number of admissions was, in-patients seventy-three, of whom sixty were perfectly cured; and out-patients 482. Some of the cases were very severe, and the board had every reason to believe that the whole of the patients were well satisfied with the attention and treatment they received. It had been found desirable not only to exclude all intoxicating beverages and alcohol, not prescribed as a drug, except under stringent conditions, but to lay down the rule that the medicines should be compounded, if possible, without any spirituous menstruum or vehicle. This had been found practicable in nearly every case, and without detriment to the efficacy of the medicines. Attached to the report were statements from the medical officers, supplying particulars of the leading cases, with statistical details. Up to March 25th, the receipts were £2,510, and the expenditure £1,960, of which £1,231 was applied to preliminary or permanent outlay. The report earnestly appeals for additional pecuniary help, the board being of opinion that provision should be made for the reception of fifty in-patients. The Rev. Dawson Burns, after announcing that the report would be printed and distributed, read letters from the Dean of Carlisle and Mr. Samuel Morley, M.P., regretting their inability to attend. The chairman congratulated the meeting upon the success already obtained, and expressed his firm conviction that the non-alcoholic treatment of disease would eventually become generally recognised by the medical profession. Resolutions, in furtherance of the movement, were heartily adopted, the speakers to them being Dr. Grindrod (Malvern), Rev. Canon Ellison, Dr. Edmunds (of the Medical Staff), Mr. S. Bowly (Gloucester), Major-General Eardley Wilmot, Mr. J. R. Raper, Mr. T. Cash (chairman of the board), Mr. J. Hughes (the treasurer), Mr. F. Wright, and others. The meeting, which was very much crowded, closed in the usual manner.

THE ADULTERATION OF DRUGS.

At the Worship Street Police Court, recently, Mr. Hannay had before him two summonses, taken out by direction of the authorities of Hackney parish, against two chemists and druggists, Mr. Nicholls, of 99, Wick Road, South Hackney, and Mr. Maizey, of 2, Market Road, Cassland Road, South Hackney, charging them with selling as unadulterated, milk of sulphur, which was adulterated, contrary to the statute.—Mr. Watts, the sanitary inspector, said that, on behalf of the parish, he desired to be allowed to withdraw. Notice of intention to make this application had been given to the defendants.—Mr. Wontner, jun., thought that if the parish, having taken out the summonses, now desired to withdraw, they should at least pay the costs. The question raised in the case had been already decided before Mr. Arnold, at the Westminster police court. His clients were not charged with the adulteration, but, in fact, with not manufacturing in accordance with the *British Pharmacopœia*. The decision of Mr. Arnold, given last November, expressed the great hardship to which, in his opinion, the defendants were put, and the authorities appeared anxious to lay down the law that drugs should be manufactured according to the *British Pharmacopœia*, or not at all. He desired to publicly protest against such hasty proceedings on the part of such public bodies, who desired to hold up the drugs of the *British Pharmacopœia* as the only good drugs.

AMERICAN DIPLOMAS.

At the Wolverhampton Police Court this week, Mr. William Fellows, a chemist and druggist, of North Street, in that town, was charged, on the complaint of Mr. Freeman, with using the title of "Doctor", his name not being upon the *Medical Register*. It appeared that the defendant had an American diploma, and that he had a brass plate on his shop-door bearing the inscription, "Dr. W. Fellows, Member of the Medical College of Philadelphia". The defence was, that he had never claimed to possess an English degree. The stipendiary held that the defendant had falsely and wilfully attempted to obtain credit from the public by his American diploma, and pronounced the fraud to be a gross one, but did not see why the case should not be dismissed on the defendant's undertaking not to practise as a physician, and paying the costs. The case was adjourned for this to be done. The defendant then said he should apply for a summons against Mr. Freeman for using on his brass plate the title of "Doctor", to which he had no more right than the defendant. The stipendiary said, "Let me tell you that you will not have the slightest chance, for his name is on the *Medical Register*."

THE BROMPTON HOSPITAL.

The thirty-third annual meeting of the Governors of the Brompton Hospital for Consumption and Diseases of the Chest was held under the presidency of the Rev. Sir H. Foulis. The report of the committee of management, which was read by the secretary, stated that the number of patients in the hospital during the year ending 31st December, 1873, had been 1,211, of whom 896 had been discharged greatly benefited, 93 had died, and 222 were still in the institution. In the out-patients' department no less than 11,955 new cases had received treatment. Financially the year had been a good one, and legacies to the amount of £4,793 had been received. A suit in the administration of Miss Read's estate was still pending, so that the full amount of her bequest had not been received. Special application, however, had been made to the Court of Chancery, and the sum of £61,938—being part of the legacy—was obtained. This money it was intended to devote to the purchase of freehold premises on the other side of the Fulham Road, for the extension of the hospital. Since this time last year the south wing of the institution had been increased by 36 beds in the purchase of two houses opposite, and this gave a total of 240 beds altogether in use at the hospital. The report was unanimously adopted, and, the report of the chaplain having been read and the auditors elected, the proceedings terminated.

THE AMERICAN MEDICAL ASSOCIATION.

THE twenty-fifth annual session commenced in the city of Detroit, Michigan, on Tuesday last, June 2nd, at 11 A.M. The following are the sections and their officers. *Practice of Medicine, Materia Medica, and Physiology:* Dr. N. S. Davis, Chicago, Chairman; Dr. George E. Frothingham, Ann Arbor, Secretary. *Obstetrics and Diseases of Women and Children:* Dr. Theoph. Parvin, Indianapolis, Chairman; Dr. Montrose A. Pallen, St. Louis, Secretary. *Surgery and Anatomy:* Dr. Samuel D. Gross, Philadelphia, Chairman; Dr. Alonzo Garcelon, Lewiston, Secretary. *Medical Jurisprudence, Chemistry, and Psychology:* Dr. A. N. Talley, Columbia, Chairman; Dr. E. Lloyd Howard, Baltimore, Secretary. *State Medicine and Public Hygiene:* Dr. A. N. Bell, Brooklyn, Chairman; Dr. A. B. Stuart, Winona, Secretary. The bye-laws state that papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section, at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary, to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his section, to determine the time and order of their presentation, and give due notice of the same. The following committees are expected to report. *On Cultivation of the Cinchona-tree:* Dr. L. J. Deal, Pennsylvania, Chairman. *On the Treatment of Fractures:* Dr. Lewis A. Sayre, New York, Chairman. *On Gynæcology:* Dr. M. A. Pallen, Missouri, Chairman. *On some Diseases peculiar to Colorado:* Dr. John Elsner, Colorado, Chairman. *On Rank of Medical Corps of the Army:* Dr. J. M. Keller, Kentucky, Chairman. *On Prize Essays:* Dr. G. K. Johnson, Michigan, Chairman. *On the Progress of Otology:* Dr. D. B. St. John Roosa, New York, Chairman. *On American as compared with Foreign Winter Cures:* Dr. H. R. Storer, Massachusetts, Chairman. *On Railroad Injuries:* Dr. W. F. Peck, Iowa, Chairman. *On the Therapeutics of Ammonia:* Dr. P. J. Farnsworth, Iowa, Chairman. *On the Relation of Physiology to the Practice of Medicine:* Dr. E. W. Gray, Illinois, Chairman. *On Puerperal Fever:* Dr. W. O. Smith, Kentucky, Chairman. *On the Legal Relations of Moral Insanity:* Dr. E. L. Howard, Maryland, Chairman.

UNIVERSITY OF CAMBRIDGE.

THE Museums and Lecture Rooms Syndicate, in their eighth annual report, state that the Regius Professor of Physic has again called their attention to the urgent need of better accommodation for the medical examinations. They think also that steps should be taken to provide a better room for the use of the Regius Professor of Medicine, as the present room is quite unsuited to the purpose to which it is now appropriated. A most interesting collection of human crania, made by the late Dr. Thurnam, of Devizes, has been presented to the Museum of Human Anatomy, through the liberality of Professor Humphry. A series of Devonian fossils, of great beauty, presented by Lady Burdett Coutts, deserves special mention, as also does the contribution of several hundred specimens of palæozoic and other fossils by Professor Hughes, and the gift of five hundred sterna of birds by Professor Newton and Mr. E. Newton, and of a skeleton of the extinct bird "the great Auk" by Professor Newton. The building of the Cavendish Laboratory is now finished, and the Laboratory is open for practical instruction in physics. The reports of Professors Humphry, Newton, and the Superintendent, Mr. J. W. Clark, give details of the past year's work, and the additions made to the various collections. Professor Newton says:—"I have with gratitude to acknowledge the liberality of the Senate, in establishing a Demonstratorship of Comparative Anatomy. To this post I nominated Mr. T. W. Bridge, and the nomination having been confirmed by the Vice-Chancellor, I have the pleasure of informing the Syndicate that his practical class has been well attended, and, as I learn from his pupils, with much profit to them. The want of accommodation, however, for such men as avail themselves of the demonstrator's instruction, is thereby made more apparent than ever, and I must again earnestly request attention to the proposals for new buildings which were submitted to the University in the autumn of 1872."

CLUB CERTIFICATES.

AT the Salford Hundred intermediate sessions last week, the Chairman of the General Finance Committee said (*Pall Mall Gazette*) that it had come to the knowledge of the Committee that there was a practice among certain medical men who were called "club-doctors"—men who were paid a salary for looking after members of sick clubs—of sending medicine frequently to sick persons whom they had never seen, and of whose particular malady and symptoms they had no information except such as could be obtained from the persons who appealed to them to visit the case. Instance after instance had occurred to the knowledge of the coroners where this had been done, and the patient had died. The medicine had been administered, but the doctor had never visited the case. He (the Chairman) thought this was a practice which would be considered derogatory to the medical profession and most dangerous to the public. The coroners had remonstrated on several occasions, but without effect. There were some cases of a very suspicious nature indeed, where a person had died almost immediately after taking the medicine; and surely if the only excuse were that the medicine sent was no medicine at all, but merely an excuse, it looked very like a fraud. But, on the other hand, if it were a drug, and was suited for a particular malady of the sick person, it was a most dangerous practice to send it without investigation and without inquiry. It certainly seems a strong measure to prescribe for patients without knowing their ailments.

THE CONTAGIOUS DISEASES ACTS.

THE agitation for repeal of the Contagious Diseases Acts has, we imagine, largely faded away; and, probably, if left severely unnoticed, it will die the natural death to which it seems foredoomed. But meetings are still held, here and there, at which the old misstatements are violently put forward. From time to time, also, medical men are assailed by persons who repeat them. A sensible little leaflet has been forwarded to us, which epitomises neatly some of the answers to the main propositions. It may be useful, therefore, to quote some of the paragraphs. After referring to the gross misstatements, by which signatures to monster petitions for the repeal of the Acts are obtained, it proceeds:

"Thus much for the manner in which these well-meaning people go about their work, and now for a few of their arguments.

"They tell us that these Acts 'indirectly admit prostitution to be a necessity'. It would be truer to say that they recognise it as a fact, for they no more recognise the necessity of prostitution than does the surgeon who treats the diseases resulting therefrom.

"But we all do know that prostitution is so deep rooted and wide spread, that practically it must be dealt with as if it were a necessity, just as we deal with alcoholic liquors.

"For, just as surely as drunkenness increases or decreases, in the same proportion as public-houses increase or decrease, so prostitution must increase or decrease as prostitutes increase or decrease. What will the hardened frequenters of brothels tell us? 'That they first yielded to the temptation as timid youths in the public streets'; and we cannot but believe that thousands of these would never have deserted the paths of virtue, had legislation but swept away the enticing harlots from our streets and byeways.

"We are next told that the Acts 'legalise an enormous vice'.

"This, again, is exactly the wrong way of putting it, for the effec and result of the enactment is assuredly not to legalise vice, but to put strict restrictions upon it, and thus to bring it into smaller compass.

"None but medical men can see the fearful ravages of disease resulting from illegitimate prostitution; and when we know that this horrible disease is visited equally upon the pure and innocent wife and children, surely it is time that the Legislature should take the question in hand. 'To sacrifice the health and vigour of unborn creatures to the "rights" of harlotry to spread disease without interference, is a doubtful contribution to the progress of the race'.

"And now for the great argument that these Acts are framed 'to protect men while in the pursuance of vice'. There can be no doubt that the Act would protect the sensual man from receiving disease, but would it, therefore, encourage him in his wickedness? We believe not; but it would prevent the further spread of contagious disease, and if retribution does not follow a course of vice in this world, it must be reserved for the world to come.

"That 'virtuous girls are liable to apprehension, and subsequent examination as prostitutes', is a very exaggerated and narrow result of looking into the matter. The style and bearing of a loose prostitute is too apparent to allow of mistake, and woe to the policeman that dares to overstep his authority. We believe such a case could not occur; but granting that it might, is the possibility of it sufficient to form a barrier to a great and noble enactment for the good of thousands of our fellow-creatures? No. It would be as logical to say that that there should be no railway travelling, because accidents sometimes occur.

"Let us then, heart and soul, fight for the right, and try to influence all well-meaning people to go with us and support the Legislature in this great proposed remedy for the social evil. We are aware it does not go far enough, but it is a step in the right direction."

EMIGRANT SHIPS TO NEW ZEALAND.

WE have reported some strong complaints from surgeons of defects in the emigrant ships to New Zealand, and now the *Pall Mall Gazette* makes the following remarks.

According to accounts from New Zealand, there seems to be much room for improvement in the arrangements made for the transport of emigrant families to the colony under the recent Loan Act. Formerly, the passage to the antipodes was regarded as a healthful and beneficial change, it being common for inferior vessels to bring out 300 or 400 emigrants in perfect health. But of late we learn, by the colonial papers, that the arrival of a vessel without quarantine to be performed is rare, and the reasons for this precaution are but too clear. The *Mongol*, a steamer only fifty days out from England, lost sixteen of her passengers, and had ninety-six cases of scarlet fever, measles, and other such disorders on board. A local inquiry showed that "the immigrants put on board this ship were in a sickly condition, and that the doctor shipped in London for her was discharged at Plymouth for misbehaviour". The *Scimitar*, arriving shortly afterwards with a fine passage out, had lost twenty-six of her 450 passengers; a fact not difficult to explain when it is added that, before starting, two families were put on shore who had been brought on board suffering from fever of a virulent type, resulting from half-recovered cases of measles, and that there was fever in the general depôt in which the emigrants had been gathered. A third vessel, the *Inverne*, following these with a slow passage, lost sixteen passengers out of 270. When it is added that, to one province, at least, men and women have been shipping as French vine-growers and domestic servants who, on arrival, hired a theatre and exhibited themselves in the cancan, it is not surprising that some dissatisfaction is expressed with the results obtained under the new system, and that the Agent-General is appealed to in the colonial press "to nip the growing mischief in the bud, so that the whole character of the New Zealand immigration should not be deteriorated".

POISONOUS SODA-WATER.

THE following is taken from the *Australian Medical Journal* for January 1874.

The subjoined letter was lately addressed to a daily contemporary. "If you consider the following facts worth inserting, I would feel obliged by your according me a small space in your valuable paper. A short time since, I was served with a bottle of soda-water at the bar of an hotel in Melbourne; almost immediately after, I had a violent retching, and threw off what I had just drunk, leaving a nasty metallic taste in my mouth. Being in good health at the time, I could not account for this sudden illness, and on the following day called again and got another bottle of the same beverage, which I took home and in a rude manner analysed, when, to my great surprise, I found it to contain a very large portion of copper. On making some further inquiries, I learnt that the manufacturer of this beverage uses copper cylinders for the generation of gas used in the manufacture of the same, and that those cylinders have been in use for a number of years. I can assure my teetotal readers and others who like to indulge in a bottle of soda, that some of this hitherto considered innocuous beverage contains an ingredient quite as injurious to health as cocculus Indicus, fusel oil, or any of those materials said to be used in the adulteration of ales and spirits retailed in Melbourne." The subjoined, on the same subject, was addressed to an up-country journal about the same date. "Very lately I was requested to analyse some aërated water suspected of not being 'all right'. The drinking of a glass of it had been attended with unpleasant effects, similar in every respect to those experienced by your correspondent. Subjecting the sample I received to the proper analytical processes, it was soon proved that copper was present in proportion sufficient to render the soda-water unfit for use. Indeed, I have beside me a needle pretty thickly coated with copper extracted from one bottle of the water. Thinking that probably a mishap had caused this batch to be contaminated, some time after samples from the same source were obtained. Copper was again present, but in less quantity. The same is the result attendant upon testing another maker's aërated waters. Such experience leads me to the belief that soda-water, as made in Melbourne, is liable to be found at any time contaminated more or less with copper. But, while stating this, I have no desire to be an alarmist. To most people a minimum of copper in solution will cause no inconvenience. The manufacturers can control the amount, and sufficient care will reduce it to *nil*."

SCOTLAND.

CHAIRS OF CLINICAL MEDICINE AND SURGERY IN GLASGOW UNIVERSITY.

DR. MCCALL ANDERSON has been appointed to the newly instituted chair of clinical medicine, and Dr. George Buchanan to that of clinical surgery. These appointments leave two vacancies in the Andersonian University, where Dr. Anderson was Professor of Practice of Medicine, and Dr. George Buchanan of Anatomy.

IRELAND.

ROYAL COLLEGE OF SURGEONS OF IRELAND.

THE election of President, Vice-President, Secretary, and Council of this College took place on Monday last, June 1st. Mr. Joliffe Tufnell was elected President; and the contest for the Vice-Presidency terminated in the election of Mr. Edward Hamilton, who obtained 123 votes, whilst his opponent, Dr. Mapother, secured 72. All the members of the Council who offered themselves for re-election were returned with the exception of Mr. Archibald Jacob, who was unsuccessful. There were twenty-seven candidates for nineteen vacancies. The following are the office-bearers selected for the ensuing year. *President:* Joliffe Tufnell; *Vice-President:* Edward Hamilton; *Secretary:* William Colles; *Council:* Robert Adams, William Colles, John Hamilton, Frederick Kirkpatrick, Richard G. H. Butcher, Alfred H. McClintock, George H. Porter, B. G. McDowel, Albert Walsh, Edward Ledwich, Rawdon Macnamara, John Morgan, George H. Kidd, John Denham, M. Harry Stapleton, John K. Barton, Philip C. Smyly, William Stokes, Samuel Chaplin. The last five are new members.

CONJOINT EXAMINING SCHEME.

AT a meeting of Fellows of the College of Surgeons of Ireland, held on May 25th, it was resolved that no further steps should be taken to carry out this scheme until the Council has submitted the same to a specially convened meeting of the Fellows.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.

THE annual meeting of this excellent institution was held on Monday last, at the College of Physicians in Dublin, the chair being occupied by Dr. Duncan, President of the College. The chairman referred to the satisfactory condition of the Society, there being £1674 available for distribution for the year; and alluded to the branches in Belfast and India, which had contributed most liberally. Two legacies were received during the year, amounting to £220, and numerous donations, including £100 from Dr. Tagert; Lady Johnston, £100; Surgeon Johnston, £50; Dr. W. J. Purdon, £25; Dr. Whitaker, £25, etc. The total amount of subscriptions came to £663. The number of applicants this year was 94, 15 of whom were fresh cases; of the entire, 10 were medical practitioners, 73 widows, and 11 orphans. A vote of thanks having been passed to Dr. Duncan, the meeting separated.

IRISH MEDICAL ASSOCIATION.

THE annual meeting of this Association was held on June 1st, at the College of Surgeons, Dr. Wharton, President, in the chair. The annual report stated that the Council congratulated the Society on an increase of pay having been conceded to the medical officers of the Royal Irish Constabulary; and alluded to the Public Health Bill now before Parliament, stating that representatives from the College of Surgeons, College of Physicians, Dublin Sanitary Association, Poor-law Medical Officers' Association, and their own Association, had been selected to watch the Bill, and the Council hoped that, by their suggestions and exertions, an efficient and useful measure might be obtained. The members, to the number of about seventy, dined together in the evening in the Albert Hall of the College of Surgeons.

THE ROYAL COLLEGE OF SURGEONS OF IRELAND.

THE Council has printed and circulated its report for the past year. The report contains the usual routine details about income and expenditure, attendance of members of Council, the condition of the library, museum, etc. Besides these, there are some points of special interest from a medico-political point of view. An opinion of the late Solicitor-General for Ireland informs the Council that "it cannot, with propriety, pay any sums of money out of the corporate funds, by way of gift or presentation, to retiring members of Council or professors". This decision was given about a year ago, when it was proposed by the Council to present, in accordance with a practice which had become ordinary, sums of money from the College fund to Drs. Hargrave and Benson on their retirement. On the same occasion, the Solicitor-General gave another opinion, which is also mentioned in the report, and seems to be rather severe; namely, that the Council "are not at liberty to pay the members of the Council who attend the examinations any fees for such discharge of duty". This is rather hard law, for, undoubtedly, the attendance of the members of Council is an useful supervision over the examinations, and entails considerable expenditure of valuable time, which has scarcely been compensated for by the small fee paid for such attendance. The report refers also to the Conjoint Examining Scheme, and contains the following resolution, passed by the Council on March 23rd, 1874, after the consideration of the resolutions of the College, of the 17th of the same month, referred to by us some time since: "That the Council of the College, elected in 1871, 1872, and 1873, agreed with the University of Dublin, the King and Queen's College of Physicians, and the Apothecaries' Hall, to form a Conjoint Scheme of Examination for Ireland, which Scheme has been confirmed by the existing Council; and as the Council of 1872 has, in the most direct manner, conveyed its sanction and approval of the Scheme above noticed to the General Medical Council, which body has delivered its approval of it, it is not competent for this Council to recede from its obligations to the medical authorities above named, and to the General Medical Council, without incurring a charge of breach of faith. That, under such circumstances, this Council, as the Executive of the College, feels bound most respectfully to dissent from the recommendations of the College, at its meeting held on the 19th instant." The Council, nevertheless, willingly considered such objections as the College might from time to time raise. We consider this was the only honourable course open to the Council. Yet the section of the College, who recently passed a resolution condemning the Conjoint Scheme, reiterated their opinions last week, although in a slightly modified form. May we ask, was the Council asleep during the years 1871, 1872, 1873, when the Conjoint Scheme was constructed, agreed upon, and brought under its notice by the Council Report? Why is it that gentlemen, who were on the Council when the Scheme was agreed to, have suddenly come out of "the cave" to oppose it, after three years of long silence? There is a wonderful show of zeal for the interests of the Irish College of Surgeons suddenly developed, and now "Opposition to the Conjoint Examination Scheme" has become an electioneering banner—one not likely, we may suppose, to lead the Irish College to successful competition with its elder sister in London. Another sudden development of zeal for the College is in the wonderful influx of new Fellows. Surely something must have happened to the Licentiates of the Irish College, for they have become wonderfully anxious to obtain the Fellowship before the next election. There are unpleasant reports as to the source of the funds by which the heavy fees on the fellowship are paid. We hope the reports are untrue; but reports have reached us, and we feel bound to notice them, true or false, that candidates for collegiate honours are assisting in making votes, and we should be glad of a substantial denial as soon as possible. We thought our remarks about the railway tickets, and the action of the Council thereon, had prevented the possibility of even a report of this kind.

THE RIVER LIFFEY.

NOW that the warm weather has come, this disagreeable subject has again been placed in a prominent position. At present, the river is an eyesore and a nuisance, and at low water emits an effluvium which one would imagine could not be permitted to assail the olfactory nerves of the citizens, more especially of those resident along its quays, for a moment longer than was necessary; but years have now elapsed since this matter, a most important one in a sanitary point of view, has again and again been ventilated and brought forward in every possible way. The Corporation possess powers authorising them to adopt the plan of intercepting sewers recommended by Mr. Bazalgette for the drainage of Dublin; but that gigantic undertaking will take years before it is completed, and in the meantime some temporary arrangement might assuredly be constructed pending the formation of that system. At present, the sewage of the city falls along both sides of the Liffey; and, when the tide is low, these shores are uncovered; the sun, acting on the deposited matter, causes most noxious and distressing exhalations to be eliminated, prejudicial to the health and the comfort of those who inhale them. A Mr. Warren has lately suggested that two side-water channels should be made along the walls; whilst between tidal gates, of a self-acting kind, water could be accumulated during the upflow; and, when the tide recedes, the natural downflow would open the gates, and the water would enter the side channels, flushing them and sweeping down the sewage, and leaving the bed of the river covered by the water. The plan seems a feasible one, and it or a similar temporary expedient is undoubtedly wanted without further delay.

A FEVER-NEST.

IN the return of the Irish Registrar-General for the week ending Saturday, May 23rd, is the following paragraph.

"The Deputy-Registrar of No. 1 South City District (Meath Street) states that 'a house in Braithwaite Street is a perfect fever-nest, and for the last two years has never for any lengthened period been without a case of febrile disease of some sort. A case of scarlatina has just ended fatally; another from it is in hospital; a case of fever has just been sent to hospital from it; and two of the inmates have only just returned from hospital, having had fever.'"

SURGERY BY TELEGRAPH.—A professional contemporary records a tale from Australia, of a fight between a few white men and a number of blacks at an outlying station. Several of the white men being wounded, instructions for dressing the wounds were sent by telegraph from a surgeon in Adelaide.

DR. ROLLESTON ON MEDICAL EXAMINATIONS AND THEIR PREREQUISITES.

AFTER the recent distribution of prizes at St. Mary's Hospital, Dr. Rolleston, who was in the chair, delivered an address. After some introductory remarks, he said :

I take it that a person who is put into the honourable position which I this day hold has generally something which he is glad to have the opportunity of saying from so good a standing point. And I wish to say a few words upon a subject to which I have of late devoted a very considerable amount of my very fully occupied time—to wit, the Examination System and the Prerequisites of Candidature. The system of requiring certificates of attendance at lectures and upon other courses of instruction, and the examination system, are two very distinct means intended to co-operate towards one end—that, namely, of securing to the public that its future physicians and surgeons shall, firstly, have had certain opportunities, and, secondly, have made certain use of them. I must not fail to add, what will disabuse any, either old or young, of the idea that I have anything very revolutionary to propose—namely, that these two systems are necessary as much in the interests of the future doctor as in those of his future patients, and that without some such apparatus and machinery as that which they represent many a man would lose chances of forming in himself habits of attention indispensable for any success, or indeed any virtue, which chances may never recur. Indeed, it is a matter of common observation, at least of possible common observation, and I would it were matter of more common remark, that it is necessary not only for the acquirement of habits which belong only in part to our intellectual nature, but even for the acquirement of purely intellectual accomplishments, that certain kinds of work should be done at certain times and fixed periods in a boy's, in a young or in an older man's life. Languages can be gained with greater facility before the age of twenty-five than they can ever afterwards ; and the same may, I am inclined to believe, be said of the power of recognising and recollecting specific differences in zoology and botany. It is well that the same natural restriction does not invariably exist as to the power of mastering that of which, however, it is of more importance that early mastery should be gained than of almost any other subject—to wit, mathematics. These are the words of a man whose experience and success as an educator has been great, not intended for the particular case we deal with, and applying only in the way of analogy, but forcible in that way and appropriate.

There is but a certain time allotted for each thing to be done that we have to do, whether it belongs to this world or the other, and if we pass the allotted time it is too late for that work to be done. If you are idle here at school, it may for a short time make little difference, perhaps no perceptible difference at all. But you know perfectly well that that is not so always. After a time it becomes too late to recover what you have not chosen to take when it was within your reach. There are things which can be learnt when you are not twelve which can never be learnt so well afterwards ; there are still more which must be learnt before you are seventeen or eighteen, or you can never really learn them at all. You may afterwards wish very much that you had not missed the chance ; but your wishes will not give you back the power that is gone ; you are too late. And the same holds good long after. Each time of life, as it comes, marks off the foundations of certain studies as done with ; if you have not laid them by that time you never can. And precisely the same thing is true of other things besides studies. (*Temple Sermons*, ii, Ser. 15, p. 308.) So much for the good to be expected and attained by the observance of a regular curriculum. It admits no question. What does, I think, admit question, and what is, I think, capable of improvement, is the method for securing such observance. The method at present in vogue for this end is known as the "signing up" of certificates of attendance at lectures. Now, such a certificate can only really depose to the fact that a student was present at the delivery of particular sets of discourses or demonstrations ; it cannot depose to his having profited by them. What the public wish to be assured of is the latter matter, and its results, in the shape of the possession by him of a certain amount of attainments and dexterity. But this can only be done by an examination held by one set of authorities or another ; and the very first and the very last principle of any and every examination which deserves the name is the principle of English law—*De non existentibus et de non apparentibus eadem est ratio.* Nothing in the words of the examination statutes of any one university should influence the result of the examination, except what arises during or directly out of the examination itself. I do not question the good to be had from attending lectures ; I am well assured that good lectures, not over numerous, bless both him who gives and him who takes. The giver is benefited by having to put his knowledge into a compact form, so as to be readily transmissible and communicable in public ; the hearer is benefited by obtaining orally, or rather auditorially, what it would have cost him more time to obtain, if indeed he could obtain it at all, by reading or otherwise. Besides, hearing is what is known as a "natural process", and no improvement in the way of printing can ever entirely supersede it or make it a barbarous anachronism. I say nothing of the advantage to be drawn from contact with a living personal source of knowledge, though it is clear that a few striking expressions, delivered by an earnest man *vivâ voce*, may awaken more thought and create more lively interest than a whole volume of print, however well illustrated. For as iron sharpeneth iron so man the face of his friend. I see, know, and gratefully recollect the benefits of lectures ; but the more excellent an institution is the more is it likely to be injured by compulsory enactments intended to govern or protect it. Attendance at morning or evening chapel, or both, is an excellent practice ; but the making it compulsory has a very sure, I do not say an invariable, tendency to rob it of its beneficial effect. It is a more edifying sight to see a single individual going to such a service spontaneously, as I am told a very distinguished statesman, the junior member for a constituency not a hundred miles hence, may be seen doing in all weathers, than to see a whole college of young men hurrying to Divine service to have their attendance upon it entered as upon a roll call. I am glad to think that the answering a roll call, pure and simple, is allowed in some of our colleges to stand as an alternative for attendance in chapel. Now compulsory attendance at lectures, like compulsory attendance at chapels, aims at attaining something which I believe to be distinctly good, but which I also know to be as distinctly not securable by it.

I cannot see the wisdom of aiming at the unattainable, and as testimony to bodily attendance is the only result really attained by the process of signing up, I should distinctly limit the bearing of the documents I refer to to the scope really attainable—to wit, the scope of a roll call. I am informed that in one of the largest of continental countries the system of signing for students is entirely given up, it having been so much abused, and that if a student only passes his examinations well he need not have attended a single lecture. Hereby, however, I submit that the public are robbed of some of the security which they have a right to demand. No examination, however large a factor of it the practical part may be, can give entirely satisfactory proof that a man knows his subject thoroughly and practically : the elasticity of words, the power of verbal memory, the possibility of "preparing" and "grafting" a candidate for examination, as, in America and elsewhere, a mine is "prepared" and "grafted" for unwary speculators, are not all the heads under which sources of fallacy to examination might be enumerated. Hence, I should wish to secure for the public what a system of roll calls can secure—namely, the attendance of a student in a particular spot where particular opportunities for learning particular things should be available for him in a particular order and succession. This system of requirements should be made to tally with the system of examinations, and thereby teachers and pupils, examiners and candidates, would all alike be relieved from much that is onerous, unreal, and a snare. The examination system would dignify the system of the roll call, which, indeed, as aiming at something definitely attainable and attaining it, even if nothing more, would at any rate possess the dignity which faith possesses, that of "incorrupta fides nudaque veritas". Common sense would consider the advantage, sense of duty would enforce the necessity, of using opportunities whilst they were available and the two systems, that of examinations and that of the prerequisites for them, would be brought into a more harmonious and less burdensome solidarity than they at present enjoy.

I have been speaking of the duties of young men and of learners, but do not suppose that I think that older men and teachers, like myself, have not their duties too. I know that I have mine, and that I often perform them very much otherwise than I should, and wish to. One hears talk sometimes which makes one think that the talker supposes that morality belongs to one sphere and science to another, and that the two may impinge upon or collide with one another, but cannot otherwise influence each other. This is an entire mistake. "Faith" and "duty" are words which may, when on the outside of a tract, prepare us for finding ethical and other disquisitions *in pari materie* within its covers ; but faith and duty, faithfulness and thoroughness, are also things which can no more be left out of the world of scientific work than they can or ought to be left out of "that other world" to which I have just alluded. Examining is scientific work ; indeed, in these days, it is a work which occupies a very large portion of the time of many a scientific man, whether to his benefit or to that of science I do not stop to discuss. But I submit, and without any fear of contradiction, that there is no work which calls for more exercise of conscience; no work—not even that of judge on the bench—which, when well done, illustrates more completely the truth of the old doctrine, "In justice all moral virtue lies involved". An examiner has many temptations to strive against: the temptation to idleness; to give way to weariness; to treat the sameness of his subject-matter with perfunctoriness in dealing with it; to give way to feelings of pique when he finds that his own pet views or papers are entirely unknown to the examinee. Of course, a strong and upright man resists all these temptations; but strength and uprightness are largely or entirely moral qualities. I need not labour, however, at what is self-evident. Let me say a few words about the way in which a man's moral nature is, or ought to be, called into activity, not when he is engaged in testing, but when he is engaged in communicating or acquiring, knowledge. As regards the duties of a teacher when teaching, he is bound to beware of leaving any one side of a question, any one set of facts, in neglect and inadequately expounded. Imperfection of exposition in a teacher not only produces, in the second generation, so to say, imperfection of investigation in the hearer, but—as words terribly shoot back, like the Tartar's bow, mightily entangling and perverting the judgment—such imperfection and want of fulness in the communication reacts by producing imperfection and want of fulness in investigation in the teacher himself. It is (trite remark) difficult to estimate the consequences of any one action; but it is easy to see that an example set by a person, himself set in authority, of slovenliness and inadequacy in his methods of work may hurt the consciences of his younger brethren, and have widely and lengthily ramifying consequences in neutralising chances for neutralising evil and suffering.

Having said thus much about the responsibilities of students and teachers *in præsenti*, Dr. Rolleston concluded with some remarks upon the responsibilities which will gather round the student *in futuro*.

THE IRISH MEDICAL ASSOCIATION.

The annual public meeting of the Irish Medical Association was held on Tuesday last, Dr. Wharton, the President of the Association, in the chair. In his opening address, the President called attention to the great importance that some regulations should be enacted for the limitation of the sale of intoxicating drinks. He expressed his belief that howsoever admirable might be the provisions of the new Public Health Bill (Ireland), yet they would be of comparatively small practical importance unless means be devised to check the vice of intemperance. Dr. Wharton then alluded to the efforts of Sir Dominic Corrigan to close public-houses on Sundays, a measure which has hitherto not met with legislative success, but has been carried into practical effect by Archbishop Leahy in the town of Thurles with the happiest effects. Dr. Wharton pointed out how much of the broken-down health seen in hospital wards and dispensaries is traceable to intemperance; and threw out a suggestion whether the same cause does not, to some extent at least, contribute to the spread of enteric fever and zymotic disease generally. He also alluded to the baneful practice of sending children to fetch intoxicating drinks in open vessels, thereby giving them an early taste for drink; and concluded by exhorting his hearers and all who have the public good at heart to put forth their best efforts to render sanitary legislation as prohibitive as possible of intemperance. The Honorary Secretary then read the report which stated, amongst other matters, that the result of the inquiry by the Civil Service Commissioners into the complaints of the medical officers of the Royal Irish Constabulary has resulted in an increase of pay of two shillings per month per man. The same report, which allowed this increase, also recommends that the office of medical Poor-law commissioner should be abolished, and the Poor-law medical officers thereby deprived of the professional supervision provided for them by the Medical Charities Act, a step which has been protested against by the Council of the Irish Medical Association. Petitions from that body, together with the College of Physicians and College of Surgeons, were presented to Mr. Gladstone, who replied that there was no desire to exclude the medical element from the Local Government Board. The prosecution of defaulters in vaccination having been productive of a vast amount of annoyance and trouble to some of the dispensary medical officers, and doubts having arisen as to their right to the usual fee, the Local Government Board have stated that, if the justice before whom the proceedings are laid certify that expenses ought to be allowed, and ascertain the amount, the medical officer is entitled to be paid out of the poor-rates. The Chief Secretary for Ireland, having obtained leave to introduce a Public Health Bill, a conjoint committee, formed of the Irish Medical Association, the College of Physicians, the Royal College of Surgeons, the Dublin Sanitary Society, and the Poor-law Medical Association, have prepared a measure which it is hoped will prove efficient, useful, and satisfactory.

Dr. Morgan, in the course of his remarks, referred to the tenth and eighteenth clauses of the new Public Health Bill as the most important, the first enacting that the medical officer should be, without option of refusal, the sanitary officer of that district, the dispensary district being taken as the limit of area by Sir M. H. Beach. The eighteenth clause of the Bill referred to the amalgamation of districts, where it was found that certain districts were, from their smallness or other causes, unable to provide for the working of the Act.

PASS AND PLUCK FOR THE FELLOWSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS.

At the pass examination for the diploma of Fellow, which was brought to a close on Saturday last, it is stated that only six out of the nineteen candidates were successful. We publish a letter from a teacher in reply to the observations we were constrained to make last week, and we shall be pleased to see the subject further discussed. Several old anatomical teachers have, however, added testimony confirmatory of the correctness of our observations. From some of these, it appears that at Guy's and St. Thomas's Hospitals, former demonstrators attended as early as eight o'clock every morning; at the Charing Cross, we remember seeing Mr. Hancock at 8.30, his successor Mr. Hird attended at the same early hour. This, we believe, was also the case at St. Bartholomew's, an old pupil of which writes that he was "always in the dissecting-room at eight, and soon afterwards met his teacher there".

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-SECOND ANNUAL MEETING.

The Annual Meeting of the British Medical Association will be held at Norwich, on Tuesday, Wednesday, Thursday, and Friday, August 11th, 12th, 13th, and 14th, 1874.

President—Sir William Fergusson, Bart., F.R.S., Surgeon to King's College Hospital, London.

President-elect—Edward Copeman, M.D., Senior Physician to the Norfolk and Norwich Hospital.

The business of the Association will be transacted in four Sections, viz.:—

Section A. Medicine.—*President:* Dr. Eade, Norwich. *Vice-Presidents:* Dr. Sydney Ringer, London; Dr. Durrant, Ipswich. *Secretaries:* Dr. Bradbury, Cambridge; Dr. Lowe, Lynn.

Section B. Surgery.—*President:* Sir James Paget, Bart., F.R.S., London. *Vice-Presidents:* T. W. Crosse, Esq., Norwich; Dr. Macnamara, Dublin. *Secretaries:* F. Worthington, Esq., Lowestoft; Reginald Harrison, Esq., Liverpool.

Section C. Obstetric Medicine.—*President:* Dr. Churchill, Dublin. *Vice-Presidents:* Dr. W. S. Playfair, London; Dr. Steele, Liverpool. *Secretaries:* Dr. Edis, London; F. Image, Esq., Bury St. Edmunds.

Section D. Public Medicine.—*President:* W. H. Michael, Esq., London; *Vice-Presidents:* Dr. Bateman, Norwich; Dr. Ransome, Bowden. *Secretaries:* Dr. Bond, Gloucester; Dr. Leech, Manchester.

The Honorary Local Secretaries are:
Dr. J. B. Pitt, Norwich.
H. S. Robinson, Esq., Norwich.
Dr. Beverley, Norwich.

Tuesday, *August 11th.*

10.30 a.m.—Cathedral Service.
1 p.m.—Meeting of Committee of Council.
3 p.m.—Meeting of the Council, 1873-74.
8. p.m.—General Meeting—President's Address, Annual Report of Council, and other business.

Wednesday, *August 12th.*

9.30 a.m.—Meeting of Council, 1874-75.
11.30 a.m.—Second General Meeting.
11.30 a.m.—Address in Medicine.
2 to 5 p.m.—Sectional Meetings.
9 p.m.—Soirée at St. Andrew's Hall.

THURSDAY, *August 13th.*

9 A.M.—MEETING OF THE COMMITTEE OF COUNCIL.
10 A.M.—THIRD GENERAL MEETING—Reports of Committees.
11 A.M.—ADDRESS IN SURGERY.
2 to 5 P.M.—SECTIONAL MEETINGS.
6.30 P.M.—PUBLIC DINNER.

FRIDAY, *August 4th.*

10 A.M.—ADDRESS IN OBSTETRIC MEDICINE.
11 A.M.—SECTIONAL MEETINGS.
1.30 P.M.—CONCLUDING GENERAL MEETING.

EXCURSIONS.—The Excursion Committee will make arrangements for the convenience of members and their friends wishing to visit the factories and places of interest in the city and neighbourhood during the meeting, and for parties of ladies and gentlemen to do so on Friday afternoon.

On Saturday, there will be excursions to geological and botanical stations and places of antiquarian and general interest in Norfolk and Suffolk.

The Honorary Secretary will endeavour to arrange for gentlemen well acquainted with the locality to accompany the parties on Friday and Saturday.

Any information will be given by Mr. H. B. FRANCIS, St. Clement's, Norwich, Honorary Secretary to the Excursion Committee.

Members of the Association will receive cards for the above proceedings, evening meetings, etc., at the Reception Room, Assembly Rooms, Norwich.

ANNUAL MUSEUM.

The seventh annual Museum of the British Medical Association will be held at the Assembly Rooms, and will be open daily from 10 A.M. till 6 P.M., on August 11th, 12th, 13th, and 14th, for the exhibition of the following objects.

1. Latest inventions in medical and surgical instruments and appliances of all kinds.
2. New chemicals and apparatus; new drugs and their preparations; and new articles of diet for invalids.
3. General pathological specimens; with photographic models, drawings, etc., illustrating disease.
4. Urinary calculi; with drawings or diagrams of urinary disease, and of operations on the urinary organs. [Also instruments with diagrams, etc., illustrating the history of the operation of lithotomy from the earliest periods up to the present day.]
5. Drawings, diagrams, or models illustrating the ventilation of hospitals and private dwellings.
6. Microscopic pathological specimens.

The following is a list of the Museum Committee; to any member of which communications, etc., may be addressed—Mr. William Cadge, *Chairman*, 24, St. Giles' Street, Norwich; Mr. Francis Sutton, London Street, Norwich; Mr. Jonathan Hutchinson, 4, Finsbury Circus, London, E.C.; Mr. Joseph Allen, Tombland, Norwich; Mr. Francis Fowke, 37, Great Queen Street, London, W.C.; Mr. Chas. Williams, 9, Prince of Wales' Road, Norwich; Mr. J. R. Baumgartner, Norfolk and Norwich Hospital; Mr. Charles Firth, *Hon. Sec.*, 65, St. Giles' Street, Norwich.

NOTICE TO EXHIBITORS.—Application to be made as soon as possible, at the same time giving a list of objects, and mentioning the space required. Each object to be accompanied by a printed or written description, or reference, for insertion in the Catalogue; and it is important that these descriptions should be sent *as early as possible*—viz., not later than July 28th.

All parcels to be delivered on or before August 4th, and to be removed within three days after August 14th. They must be addressed "British Medical Association, care of C. Firth, Esq., Assembly Rooms, Norwich". All expenses of carriage and all risk to be borne by the exhibitors. A card bearing the name and address of the exhibitor to be enclosed in each package, ready to be fixed on the outside.

N.B.—Specimens of disease and calculi which have been exhibited at former meetings cannot be received on this occasion.

Communications to be addressed to CHARLES FIRTH, Esq., St. Giles' Street, Norwich, the Secretary for the Museum Department.

MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the Guildhall, in the city of Lincoln, on Thursday, June 25th.

Members wishing to read papers are requested to communicate at once with C. HARRISON, *Honorary Local Secretary.*

Lincoln, May 25th, 1874.

SOUTH-EASTERN BRANCH: WEST SUSSEX DISTRICT.

THE next meeting of the above District will be held at the Royal Sea House Hotel, Worthing, on Tuesday, June 9th, at 3 P.M.; WM. J. HARRIS, Esq., in the Chair.

The dinner will take place at 5.15 P.M. precisely. Charge, 5s., exclusive of wine.

The Chairman kindly invites members and their friends to luncheon at his house from 1.15 to 3.45 P.M.

Gentlemen desirous of attending the dinner, are requested to give me notice by Saturday, June 6th.

Notice of the following communication has been received: "Case of Obstruction from Gall-Stones", by A. H. Collet, Esq.

WM. J. HARRIS, *Honorary Secretary.*

Worthing, May 25th, 1874.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting will be held in the Town Hall, Blackburn, on Wednesday, June 17th, at 1 P.M.—CHARLES WHITE, Esq., President; JOHN SKAIFE, Esq., President-elect.

The following papers have been promised.

1. Remarks on Pleuritic Effusions, and their Treatment. By Dr. Waters (Liverpool).
2. On the Treatment of the Bites of Dogs by Lunar Caustic, as being unsound in theory, injurious and unsuccessful in practice. By Dr. Haddon.
3. Retropharyngeal Abscess in the Child. By Dr. Oxley.
4. Specimens of rarer forms of Contracted Pelvis. By Dr. D. Lloyd Roberts.
5. Some of the Uses of Chloral-Hydrate in Labour. By Dr. Wallace.
6. On the Action of Stimulants. By Dr. Ross.
7. Remarks on the Position of the Heart's Action, based upon Chest-rule Measurements made by Mr. Patchett. By Dr. Ransome.
8. On Mazoitis (apud Lactantes): its Course, Result, and Management. Also, the exhibition of various articles of interest. By Dr. Garstang, Blackburn.
9. Brain and Lung, from a case of Tubercular Meningitis. By Dr. Oxley.
10. Morbid Growths removed from the Uterus. By Dr. Steele.

The Honorary Secretary of the Branch will briefly call attention to the proposed erection of a County Convalescent Hospital with the surplus of the "Cotton Famine Relief Fund".

The dinner will take place at the Town Hall at 4.30 P.M. precisely. Tickets, 7s. 6d. each, exclusive of wine.

A. B. STEELE, *Honorary Secretary.*

54, Rodney Street, Liverpool, June 3rd, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Midland Hotel, New Street, Birmingham, on Tuesday, June 23rd, at 3 P.M.; when an address will be delivered by the President, W. C. GARMAN, Esq.

The annual dinner will also be held at the Midland Hotel, at 5 P.M. precisely. Dinner tickets (exclusive of wine), 7s. 6d.

T. H. BARTLEET. }
BALTHAZAR W. FOSTER, M.D. } *Honorary Secretaries.*

Birmingham, May 26th, 1874.

SOUTH MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the Town Hall, Buckingham, on Thursday, the 25th June, at 2 P.M.—Dr. BRYAN, President; Robert DE'ATH, Esq., President-elect.

Refreshments kindly provided from 1 P.M. to 1.30 P.M. previously, by Robert De'Ath, Esq., at his residence.

Dinner, at the White Hart Hotel, at 5 P.M. Tickets, 6s. each, including waiters.

Gentlemen intending to furnish papers and cases, are requested to send the titles of same at once to Dr. Bryan, or to

W. MOXON, *Honorary Secretary.*

Northampton, May 27th, 1874.

NORTHERN BRANCH.

THE annual meeting of this Branch will be held at South Shields, on Tuesday, June 30th.—President, 1873-74, G. Y. HEATH, M.D.; President-elect, 1874-75, A. LEGAT, M.D.

G. H. PHILIPSON, M.D., *Honorary Secretary.*

Newcastle-upon-Tyne, May 30th, 1874.

NORTH WALES BRANCH.

THE annual meeting of this Branch will be held at the Royal Oak Hotel, Bettwsycoed, on Tuesday, July 7th, at 1 P.M.; T. EVANS JONES, Esq., President.

Luncheon will be kindly provided by the President at the Hotel, from 12 to 1 P.M.

The dinner will be ready at 4 P.M. precisely. Tickets, 10s. 6d. each, including a pint of wine.

Gentlemen who may wish to communicate papers or cases, and who intend dining, will please to give early intimation to the Secretary.

D. KENT JONES, *Honorary Secretary.*

Beaumaris, June 3rd, 1874.

METROPOLITAN COUNTIES BRANCH.

AN ordinary meeting of this Branch will be held at the rooms of the Medical Society of London, on Tuesday, June 30th, at 8 P.M., when a paper will read by W. Eassie, Esq., C.E., on "Cremation in its Sanitary Aspect".

A. P. STEWART, M.D.,
ALEXANDER HENRY, M.D., } *Hon. Secs.*

London, June 4th, 1874.

SOUTH-WESTERN BRANCH.

THE annual meeting of this Branch will be held at the Museum, Torquay, on Thursday, June 25th, at 1.30 P.M.; J. KEMPTHORNE, F.R.C.S., President; SPENCER THOMSON, M.D., President-elect.

After the meeting, a visit will be paid to Kent's Cavern, under the guidance of W. Pengelly, Esq., who has kindly offered to accompany the party.

The dinner will be at the Torbay Hotel, at 5.30 P.M. Tickets, 7s. 6d., exclusive of wine.

The South Devon and Cornwall Railway Companies will grant (on production of dinner-ticket) return tickets at single fares.

Gentlemen intending to read papers or exhibit cases are requested to communicate at once with JOHN WOODMAN, F.R.C.S.,

Exeter, June 3rd, 1874. *Honorary Secretary.*

SOUTH-EASTERN BRANCH.

THE thirtieth annual meeting of the South-Eastern Branch will be held in the Royal Pavilion, Brighton, on Thursday, the 25th June, at two o'clock; G. F. HODGSON, Esq., President-elect.

Dinner punctually at half-past five. Tickets, 8s. each.

Dover, June 1874. CHARLES PARSONS, M.D., *Hon. Sec.*

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE attention of the Publisher having been drawn to the paragraph which appeared in this JOURNAL of April 25th, headed 'South Wales and Monmouthshire Branch: General Meeting', and which paragraph contained certain resolutions passed by a Committee of such Branch in reference to certain alleged conduct on the part of Mr. J. D. Brown, F.R.C.S., of Haverfordwest, he has to express regret that the resolution should have been published.

37, Great Queen Street, June 1st, 1874.

YORKSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Cutlers' Hall, Sheffield, on the 27th instant; M. MARTIN DE BARTOLOMÉ, M.D., President, in the Chair.

President's Address.—After making some remarks upon the advantages of the Association to the medical profession, the President considered the desirability of the general appointment of medical coroners. He then referred to the advantages which had followed the appointment of sanitary officers, and especially the good results which had followed that legislation in Sheffield; this had been shown in the improved and increased water-supply, and in the establishment of baths; and he concluded this subject by praise of the first annual report of the medical officer as an able and voluminous production. Allusion was then made to other sanitary topics, and the alteration in the type of disease within the past thirty years, which was said to be less adynamic, and the effect upon the character of disease by the improved means which had been adopted by the public authorities for the preservation of health. In conclusion, it was said, in the present day, however, there appears to be a greater disposition than ever to acknowledge our shortcomings, and to exculpate nature from much of the blame unfairly laid to her charge. Let us hope, then, for the future, that we may all join, with unbiassed minds and willing hands, in furthering sanitary measures, without, at the same time, failing to study both the constitution of the atmosphere and the peculiar characters of individual disease.

Report of Council.—Dr. PROCTER, the Local Secretary, read the report. The Council, in the first instance, drew attention to some general matters of the Association, in relation to its great increase in members and income, as well as in power and importance. During the past ten years, from 2422 members, with a total income of £2755, in 1864, it had increased to from 5800 to 6000 members, with an income of £8500 in 1874, with twenty-six Branches in active operation. Coupled with this fact, it was said that the Association was now free from debt, and was in a position to set apart a fund for original research in some branch of medical science. The report then proceeded to discuss some other general questions before the profession, as those of medical reform, the required personal voting of the provincial fellows of the College of Surgeons, and the proposed amalgamated diploma of the College of Surgeons and the College of Physicians, together with the suggested special sanitary qualification for officers of health. In relation to the Branch, it was reported that the number of Branch members now amount to 214, and that twenty-six new members had been added during the year, whilst the loss had been five by resignations and deaths. During the past year, since the annual meeting at York, successful meetings had been held in the spring at Wakefield, and in the autumn at Halifax, and to them twelve communications had been made. The report concluded by showing the advantages to medical men of the Association, and the benefits which resulted from the Branch organisation, where subjects of local interest and importance could be discussed; and it could be developed according to its local exigencies and character, and proper representations made to the parent Association as they were demanded.

President and Council.—Dr. HEATON proposed, Mr. FAVELL seconded, and it was resolved—"That Mr. Teale of Leeds be elected President for 1875-76, and that the following gentlemen constitute the Council and representatives for the year. *Branch Council:* B. Dodsworth, Esq., W. D. Husband, Esq., W. Matterson, M.D., F. Needham, M.D., S. W. North, Esq., G. Shann, M.D., of York; T. C. Allbutt, M.D., C. Chadwick, M.D., J. C. Heaton, M.D., S. Hey, Esq., T. R. Jessop, Esq., T. P. Teale, Esq., T. Scattergood, Esq., C. G. Wheelhouse, Esq., of Leeds; M. Martin de Bartolomé, M.D., J. Benson, Esq., W. F. Favell, Esq., J. C. Hall, M.D., A. Jackson, Esq., J. H. Keeling, M.D., of Sheffield; R. H. Meade, Esq., Bradford; S. Knaggs, Esq., Huddersfield; R. T. E. B. Cooke, Esq., Hadleigh; S. Holdsworth, M.D., Wakefield. *Representatives in the General Council:* T. C. Allbutt, M.D., W. F. Favell, Esq., J. C. Hall, M.D., J. C. Heaton, M.D., S. Holdsworth, M.D., A. Jackson, Esq., W. Matterson, M.D., G. Shann, M.D., T. P. Teale, Esq., C. G. Wheelhouse, Esq."

Secretary.—On the motion of Dr. HOLDSWORTH, seconded by Mr. A. JACKSON, Dr. Procter was re-elected Secretary.

Dinner.—After the meeting, thirty-five members dined together at the Royal Hotel.

CORRESPONDENCE.

THE FELLOWSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS.

SIR,—As a demonstrator of anatomy, of eight years' standing, I feel that I cannot allow the remarks in your number for May 30th, on the fellowship examination, to pass by without saying something on behalf of the abused teacher. I contend that it is not fair to say that it is our fault that men are plucked for the fellowship, for it is by no means the rule for men to go up for this examination straight from the schools; but, after completing their third winter's dissection, they pursue a more independent course, form their own opinion on their fitness, and go up when they please. We can and do control the movements of men going in for the primary membership examination.

Out of the sixty-nine candidates for the recent examination, only five had not passed any examination in anatomy. Of the remainder, forty-two had passed the primary examination for membership, fifteen may be said to be members (one wanting only a qualification in medicine before receiving his diploma), and seven were men of eight years' standing. To say that teachers do not work as hard as before is certainly untrue, as far as our school is concerned; we have now added to our former work a system of evening examinations, which will be more numerous and extend over a still longer period next year, and we are always seeking to improve ourselves, our method and appliances for teaching, etc.; and, in justice to my colleague Mr. Reeves, I must say that he is most energetic. It is difficult to get candidates for fellowship examination to work with men reading for the primary of the membership; but I am sure that, if they only remembered all that they were told, they would be quite equal to any fellowship questions that have yet been asked. As I do not know to whom you allude in speaking of a demonstrator riding in a well-appointed brougham in dainty kid gloves at noon, I may as well state that the remark does not apply to me. I am, etc., JAMES E. ADAMS, F.R.C.S.,

Senior Demonstrator of Anatomy at
London Hospital Medical College.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE Cambridge Urban Sanitary Authority have deferred the appointment of a medical officer of health, which it was recently proposed to make at a salary of £250 *per annum*.

MR. FOX has been reappointed medical officer of health for the combined Cockermouth Rural, Cockermouth Urban, Keswick Urban, and Workington Port sanitary districts; but the Workington Urban Sanitary Authority have withdrawn, and intend to appoint separately.

THE METROPOLITAN WATER-SUPPLY.

A BILL, which bears the names of Colonel Beresford, Sir Charles Russell, Mr. Forsyth, and Mr. Ritchie, has for its object the "making more effectual provision for a constant supply of water, and for the protection of life and property against fire in the metropolis". The Bill proposes the incorporation, by an Order in Council, of a Commission, by the name of the Metropolitan Water Commission, in which the several undertakings of the eight companies now supplying water in the metropolitan district shall be vested. The Commission, besides powers of purchase, etc., is to have power to combine, as far as physical conditions admit, the sources of supply and works of the several companies, to put the works into a condition for the maintenance of a constant supply at high pressure, to provide and place hydrants and apparatus for high pressure supply in case of fire, and to provide and fix apparatus for cleansing and watering streets, and for other sanitary purposes. The Commission is to have power to borrow money for capital expenditure, and the Public Works Loan Commissioners are to be empowered to lend money to the Commission on the security of their income, without other security. The shareholders of the water companies are, in consideration of the transfer of their respective undertakings, to receive perpetual annuities, equal in amount to the annual dividends paid on the average of the five years before the transfer. The Treasury is to guarantee the payment of the annuities, but if a municipal corporation for the metropolis should at any time be constituted, the corporation are to become the guarantors. The Bill also contains various provisions relating to the winding up and dissolution of the companies, allowances to directors and other officers, and other matters. The eight companies named in the schedule are the New River, the East London, the Southwark and Vauxhall, the West Middlesex, the Lambeth, the Chelsea, the Grand Junction, and the Kent Companies.

THE Dublin Town Council is in a difficulty with respect to its main drainage scheme, for which it received the sanction of Parliament, and a loan of £350,000. It was found that, in consequence of the greatly increased price of labour and materials, the original estimate for the works of Messrs. Bazalgette and Neville was insufficient, the lowest actual tenders having reached a sum of over £750,000, instead of £350,000; and it is now intended to cut down the scheme to such dimensions as will allow it to be carried out for £500,000; but much difference of opinion exists as to whether it could be carried out in any complete or sufficient way for that sum, and the engineers have been asked to report again upon the matter in a fortnight. The drainage of Dublin is very defective, and the purification of the River Liffey is a work of absolute necessity to the public health.

THE PUBLIC HEALTH (IRELAND) BILL.

SIR,—The Public Health (Ireland) Amendment Bill, now before the House of Commons, is, in most respects, identified with the English Public Health Act of 1872, but it differs from the latter in two or three important points. The Irish Bill proposes to make dispensary physicians *ex officio* medical officers of health. There can be no objection to this in the case of the rural districts, where they are appointed by the Poor-law Guardians, the rural nuisance authorities; but in Dublin, and the other urban districts, the municipal bodies, who are the health authorities, do not appoint the dispensary physicians; and it seems a hardship to compel these bodies to accept, as their sanitary officers, men over whom they exercise no control whatever—whom they can neither appoint nor remove. I think it would be desirable to secure the services of the dispensary physicians as health officers, for many reasons, needless to specify; but it is only reasonable that the local authorities should have some control over them, and also that they should be instructed to act under the directions of the Superintendent Officer of Health, wherever such an officer is in existence.

The towns of Ireland are, with few exceptions, very small, very few containing more than 10,000 inhabitants. There are not twenty towns in the whole country possessed of a proper municipal organisation, to carry into effect the provisions of the various sanitary Acts. In the Public Health Bill now before Parliament, it would be desirable to introduce a clause to incorporate with the rural public health authorities (*i.e.*, the Board of Guardians), all towns having a smaller population than 8000. The Superintendent Health Officer should be a medical man—the Bill allows a non-medical man to be appointed—and it should be enacted that, in all districts containing a population of more than 20,000, a Superintendent Medical Officer should be appointed. There are a few unions containing less than 8000 inhabitants; these should, for public health purposes, be compulsorily united into an adjacent union. In short, the Bill should be amended, in such a way as to render it necessary to appoint in most districts, if not in every part of the country, properly qualified sanitarians as Medical Superintendents of Health. I am, etc.,

CHARLES A. CAMERON,
Professor of Public Health, Royal College of Surgeons,
Ireland.

IRISH MEDICAL INTERESTS.

DR. D. T. MAUNSELL has issued, on behalf of the Irish Poor-law Medical Officers' Association, a circular, in which he announces that a meeting of the Dispensary Medical Officers of the County and City of Dublin was held at Blackhall Street Dispensary on May 20th, Dr. Whistler of Bray in the chair, when the various clauses of the Public Health (Ireland) Bill were discussed, and were generally approved of as affecting the Poor-law medical service of Ireland; and it was unanimously resolved that, in Clause 10, after the word "superintendent", the word "medical" should be inserted; so as to describe the officer referred to as "superintendent *medical* officer of health". He also directs attention to the "Coroners' (Ireland) Bill", now before Parliament. In it there is no provision made for the payment of medical witnesses. Owing to the absence of this provision, it often occurs that inquests are held without any medical examination, and it not unfrequently occurs that the coroners' fees to medical witnesses are disallowed by the Grand Jury. To remedy this, he proposes the insertion of Clause 2 of the 1st Vict., cap. 68, which regulates the payment of medical witnesses in the Coroners' Court in the other portions of Great Britain; viz.: "The Coroner shall, immediately after the termination of the proceedings at any inquest, advance and pay such remuneration or fee to every medical witness summoned under the provisions of the said Act, and the amount thereof shall be repaid to the said coroner in manner hereinafter mentioned." This clause must be taken in connection with Schedule B, attached to 6 and 7 Wm. IV, cap. 89—"An Act to provide for the attendance and remuneration of medical witnesses at coroners' inquests;" viz.: "1. To every legally qualified medical practitioner, for attending to give evidence under the provisions of this Act at any coroner's inquest whereat no *post mortem* examination has been made by such practitioner, the fee or remuneration shall be one guinea. 2. For the making of a *post mortem* examination of the body of the deceased, either with or without an analysis of the contents of the stomach or intestines, and for attending to give evidence thereon, the fee or remuneration shall be two guineas." He further remarks that the Chancellor of the Exchequer has devoted a portion of the surplus fund to the support of the lunatics in the county asylums. He proposes that from this fund the dispensary medical officers should be paid for their examination of dangerous lunatics. He also directs attention to the relative remuneration for the examination of alleged dangerous lunatics in Engalnd, Scotland, and Ireland. In England, by 16 and 17 Vict., cap. 97, sec. 69, it is provided: "It shall be lawful for any justice or justices causing any person to be examined by any physician, surgeon, or apothecary, under the provisions hereinbefore contained, if he or they think fit so to do, to make an order under his or their hand and seal, or hands and seals, upon the guardians of the union or parish to which such person is chargeable for the payment of such reasonable remuneration to any such physician, surgeon, or apothecary for the examination of such person," etc. In Scotland, by 25 and 26 Vict., cap. 54, sec. 15, it is provided that "it shall be lawful for the sheriff of the county in which such lunatic may have been apprehended or found, upon application of the Procurator Fiscal, or Inspector of the Poor, or other person, accompanied with a certificate from a medical person, bearing that the lunatic is in a state threatening such danger . . . to commit such lunatic . . . and the sheriff shall grant a decree for expenses against the parish within which the lunatic shall have been apprehended or found at large," etc. In Ireland, by 30 and 31 Vict., cap. 118, sec. 10, it is provided that "the justices shall call to their assistance the medical officer of the dispensary district . . . in which they shall be at the time, who shall examine such person *without fee or reward*, and, if such medical officer shall certify . . . it shall be lawful for the said justices, by warrant under their hands and seals, to direct that such person shall be taken to the lunatic asylum," etc.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

SHEFFIELD.—The general death-rate for the borough of Sheffield during the past year was 26.6 per 1000 living; the infantile mortality was exceedingly high, the percentage of deaths under one year of age to the yearly births being 18.1; and, although the number of deaths from zymotic diseases exhibited a considerable diminution on that of the previous two years, yet as many as 662 fatal cases of fever and diarrhœa occurred, indicating the prevalence of conditions favouring excremental poisoning which call for remedy. Dr. Griffiths's report contains a large amount of statistical information, and in it the various circumstances affecting the sanitary condition of the borough are dealt with in detail. A special section is devoted to the necessity of providing proper sewer-ventilation, and a caution is given as to the danger which often ensues when rain-pipes are used as ventilators, because by this means sewer-air is apt to pass into the windows of upper rooms. Holding this danger in view, Dr. Griffiths is unable to advise that the rain-pipes which now discharge their water on to the causeways should be extended to the drains; but it is, nevertheless, implied in the report that this may, perhaps, be done if the upper end of the pipe be carried six feet or eight feet above the roof. We would, however, point out that this extrusion of the pipe will in no way remedy the evil; for, since an opening must be left in it at the lowest point of the roof, in order that the rain may flow in, sewer-air will always have a means of escape at that point, whether there be a further height of piping or not. No rain-pipe should be allowed to act as a ventilating shaft for a sewer, if it be so situated that it can in any way convey foul air into a dwelling. The question of house-accommodation for the poor and for the labouring classes, which is at the present moment attracting general attention, appears to be one of the greatest sanitary difficulties in Sheffield. Many of the dwellings of the poor are quite unfit for habitation, and one room often serves the threefold purpose of bed-room, dwelling-room, and work-room, and it is, besides, greatly overcrowded. There is also a class of lodging-house which the authorities have hitherto felt themselves unable to deal with, the landlords endeavouring to evade the law which relates to common lodging-houses by placing in the wretched, dirty, and dilapidated rooms some vestige of furniture, and then letting them as "furnished" apartments—a subterfuge which is by no means confined to this town. With a view of dealing with these lodgings, Dr. Griffiths proposes that the Town Council should adopt the definition of the term common lodging-house which is given to it by the Metropolitan Commissioners of Police, and which defines that any house, or any part of a house, in which persons, being members of different families, or not born of the same parents, pass the night, is a common lodging-house. The adoption of this definition would, doubtless, be of great value in enabling the sanitary authority to enforce proper restrictions in many of these dwellings which at present escape the visit of the inspector; but, if Sheffield be in this respect like other large towns, many of the furnished apartments referred to will be ascertained to be in the occupation of one family only, although the various members composing it will be found huddled together, regardless of cubic space and often also of decency; and, therefore, whilst fully endorsing Dr. Griffiths's recommendation, we would further suggest that the Town Council should make application to the Local Government Board, under section 35 of the Sanitary Act of 1866, for power to fix "the number of persons who may occupy a house, or a part of a house, which is let in lodgings or occupied by members of more than one family", and for the registration and inspection of such houses. The powers given under this section would fully enable the authority to deal effectually with this class of lodging, and their enforcement would, doubtless, lead to the abandonment of a system which is so conducive to ill-health and disease.

HUNTINGDON.—In a preliminary report addressed to the United Sanitary Authorities of the Huntingdon District, Dr. Syson draws attention to the imperfect means which are at present at the disposal of medical officers of health for the efficient performance of their duties. There is an entire absence of any means by which the existence even of infectious diseases can be ascertained, and, in any scheme for the reform of sanitary administration, provision should be made for procuring regular and early returns of sickness and death. Since this report was written, some effort has been made in this direction by the Local Government Board, who have addressed a communication to Local Sanitary Authorities, advising them to supply their medical officers of health with weekly returns of death, and asking that a copy of all new cases of sickness brought before the Guardians may be transmitted to those officers at as early a date as practicable after each meeting. There is, however, apparently no means of enforcing the preparation of these returns of sickness, the Central Authority only deeming it "desirable" that they should be provided; and we fear that they can but rarely be relied on to supply the information which is so much required. Dr. Syson goes on to point out that, owing to the want of uniformity which characterises the various returns and reports from different districts, these documents become quite useless for the purposes of comparison; and he explains that the want of urban powers in rural districts, especially as regards the absence of any mode of controlling the construction of dwellings, is much felt in his district. Owing to the difficulties which surround the question of the drainage of villages, only palliative measures have as yet been recommended; but, as regards the excrement nuisances which prevail, it is proposed to adopt either the dry-earth closet or some other dry system. The necessity for some action in this direction is very evident, for it appears that a considerable proportion of the well-water is fouled by soakage from middens and privies. Slops and liquid refuse will, however, still remain to be dealt with; and, as experience has shown that nuisance must almost necessarily attend any system of cesspools, however well devised, the provision of means of drainage in some form or other can hardly be postponed for any length of time.

ASTON.—The report addressed to the rural district of the Aston Union is brief, and deals mainly in general principles; it also contains some excellent advice as to the precautions which should be taken to prevent the spread of infectious diseases, and points out the principal means by which such diseases are generally communicated. In dealing with the question of excrement removal, Dr. Hickinbotham speaks of the old fashioned privy as being open to very few objections if it be placed at a sufficient distance from the house; a statement which we cannot deem otherwise than unfortunate, because it is calculated to assist in prolonging the existence of a nuisance against which the weight of sanitary experience is unanimous, and which, though easily admitting of removal, has perhaps done as much as anything else in favouring the spread of infectious disease. So long as the contents of a privy-pit consist only of the excreta of healthy persons, it is probable that nothing beyond nuisance results; but should the evacuations of an enteric fever patient find their way into it, it at once affords a centre from which the disease can spread amongst those who frequent it, the danger being increased by the fact that this form of closet is purposely so constructed as to contain large quantities of excreta for a considerable period of time. It is quite possible to lessen the mere nuisance of such a structure by removing it from proximity to a dwelling, but the danger we have indicated, and one which experience has shown to be by no means theoretical, remains. It would be far better that, by degrees, every privy-pit in this district should be replaced by some such dry closet as Dr. Hickinbotham himself describes in the appendix to his report.

WARWICK.—In reporting on the sanitary condition of Warwick, Dr. G. Wilson draws attention to the risk of water-pollution which attends the present method by which water-closets are provided with means of flushing. The water is laid direct from the mains into the closet-pans, and, as the supply is an intermittent one, whenever the stop-cock is left open, foul air may be drawn into the empty water-pipe, and contamination of the water-supply may be the result. This danger is by no means exaggerated, for experience has shown that enteric fever has been spread in the manner indicated by Dr. Wilson. The proper ventilation of the sewers is another matter which has long required attention in Warwick. In 1870, Dr. Buchanan visited the town on behalf of the Local Government Board, and he pointed out that, at night, when the pumping of sewage was suspended, and also whenever the sewers became suddenly filled with storm-water, the sewage backed up the sewers into the town, and, in the absence of adequate means of ventilation, and owing to the facilities then existing for the escape of sewer-air into dwellings, much injury was done to the health of the inhabitants.

Nothing whatever has been done in this matter as yet; the conditions favouring sewer-poisoning still remain, and enteric fever results from it. Pigs seem to flourish in this ancient borough; they are met with in almost every part of it; it is estimated that the town, at the present time, contains no fewer than two thousand of them, and many of them are kept in such a manner as necessarily to occasion nuisance. The beautiful stretch of water which is so much admired from Warwick Bridge, and which forms so marked a feature in the view which is there obtained of Warwick Castle, turns out to be a sanitary evil; for, since the Avon is at this point held back by the castle weir, the water is more or less stagnant for at least a mile, and the consequence is, that it forms a huge settling bank for all animal and vegetable matter which comes down the stream, or which is conveyed to it by its tributary the Leam, and it is stated to give rise to very offensive effluvia in the warm weather. A considerable amount of sanitary work has been done in Warwick during recent years, and the sanitary authority is now engaged in procuring an improved water-supply. No possible excuse can, however, justify any further delay in carrying out an efficient system of sewer-ventilation, the more so as such a step would indubitably tend to diminish a death-rate which is now unnecessarily high. In conclusion, we would observe that the very diminutive form in which this report is published is hardly calculated to do it justice.

VACCINATION.

THE Local Government Board have awarded to Mr. George Lowther the sum of £34 10s. for efficient services rendered as Public Vaccinator for the East District, Kingston-upon-Hull.

REFUSAL TO ALLOW LYMPH TO BE TAKEN FROM A CHILD.—Elizabeth Adams, of Wootton, was lately summoned for having prevented lymph from being taken from her child, after vaccination had been performed. The charge was laid under the 17th section of the 30th and 31st Victoria. Mr. Henry Terry, surgeon to the Hardingstone Union, proved that the defendant had refused to allow him to take the lymph. The defendant said her husband had told her not to allow it to be taken. Mr. Terry said five children had to be taken away again because of the want of lymph. She was fined 1s., and costs 9s. 6d.—The section of the Act under which this charge was laid is a recent addition to the Vaccination Acts, and is found to be a great boon to public vaccinators, especially in small country districts, although many of them probably are not aware of the clause.

FEES FOR CERTIFICATES.

SIR,—Will you kindly inform me through the medium of your JOURNAL whether Resident Medical Officers of Workhouses are entitled to fees for signing Burial, Club, or Convalescent Homes Certificates. I am, etc., INQUIRENS.

*** No.

SIR,—I shall be glad to have information bearing on the following facts. The Vaccination Officers for the several districts of the Union in which I am Public Vaccinator present their reports, showing the number and names of those whose children remain unvaccinated; a proposition is made and carried by the Guardians that none of the persons reported be prosecuted. This process is repeated at certain meetings of the Board; the effect being an utter disregard of the requirements of the Act by the public. Small-pox surrounds the town and immediate locality, and several deaths have occurred. Hundreds of unvaccinated children live in my district, and the persons having the care of them know that the intention of the Guardians is not to enforce the law.

On whom rests the responsibility of suppressing a probable outbreak of small-pox? Can an Act based upon such overwhelming evidence be thus set aside? Has the Local Government Board no power to further the carrying out of the Act? I am, etc., PUBLIC VACCINATOR.

May 18th, 1874.

*** Application should, we think, be made to the Local Government Board on this point.

SIR,—On Saturday last, I sat for about half an hour in one of our numerous London charitable dispensaries: about fifteen cases passed through; nearly all of them were complaints caused by vicious conduct on the part of the sufferers or their belongings. Some were venereal cases; and the notes given to these by the wealthy governors living in the neighbourhood looked like a real premium on vice. Every case except one put money in the poor-box, at the request of the surgeon—some even putting in silver, showing how easily a provident principle might be introduced here as well as in all our other voluntary charities, as it is easier to put a penny by in health than a sixpence during illness. As I watched this surgeon labouring for the good of the wealthy employers, in restoring their *employés* back to them, recovered and fit for work, I thought how unjust of these rich men to take the labourer's services without giving his hire, for not a penny does the surgeon receive of their money, or of those he directly serves. The surgeon himself in the prime of life, and not yet able to surround himself with those useful comforts, a wife and children, or home that he can call his own, living a lonely life in a couple of rooms, how sad a system it is that throws a third of all our urban population on us, without fee or reward, impoverishing to the profession, and degrading and pauperising to the masses, by ever holding out a bait to them to neglect that wise provision for the future when old age and more chronic ailments are almost certain to be their lot. I am, etc., PERCY LESLIE, M.D.

May 22nd, 1874.

MILITARY AND NAVAL MEDICAL SERVICES.

MEDICAL OFFICERS OF THE ARMY.

SIR,—The medical officers of the army cannot feel too deep a sense of gratitude to the Chairman of the Parliamentary Bills Committee and the Committee, for the able and untiring efforts he is making in our behalf; and, if his kind exertions should be only crowned with even partial success, he will have conferred a boon on our Department which no words can express. If even three of the propositions, mentioned in the JOURNAL of May 25th, were conceded—the first, third, and fourth—the benefits would be as great as the demands therein specified are most justly and urgently needed. Take, for instance, the least of the three, the "Mess and Band Subscription" question. If anything is glaringly unjust, it is that I, as a surgeon-major, attached to a regiment under the late Warrant, should have to pay no less a sum than £42 *per annum* for unavoidable subscriptions towards their support, while my position at the mess-table, and my authority in any way connected with either mess or band, are subservient to that of the junior sub-lieutenant, or even still less, for it is *nil;* and this, too, while I am called upon to pay three shares of mess guest-expenses to his one, and other subscriptions in like proportion, amounting, as I have mentioned, to over £40 annually. More than £20 of this is therefore extra; but it is what the regimental field officers are supposed to subscribe, and I, as one of them, have the honour (in this one respect), conferred upon me of doing the same under existing regulations; and most willingly would I do so, did I enjoy those privileges and position at mess and elsewhere which are extended to all other officers of my rank. Were not special seats occupied by them at the mess table on all special occasions—General's inspection dinners, etc.—I should not feel aggrieved; but where such is still recognised, even under the eye of the general officer commanding, and the senior captain is placed in a position senior to me, I consider the pecuniary loss I suffer is only exceeded in injustice by this downright insult that is thus offered me on all such occasions. And I feel this the more, being a married man; for my wife, at all regimental entertainments where ladies are supposed to take a leading part, is subjected to the same "mess indignities" as I am myself, and ceded "no position", as the wife of a medical officer attached to a regiment under the late Warrant.

This condition is very derogatory, very degrading, and most humiliating; and the position in which we are placed is as false in every respect as it is extremely unjust, and it unquestionably requires immediate remedy. Why should we not be treated as paymasters of regiments are at present, and, like them, be looked upon as a separate department, "attached to a regiment", in the full sense of the word, and the true spirit of the Warrant, as originally framed, and be thus spared both the indignities and serious expenses to which we are now exposed? I am, etc.,

A SURGEON-MAJOR.

GAZETTING MEDICAL OFFICERS.

SIR,—I write to draw your attention to a matter which might have well been urged on the attention of the Secretary for War by the late deputation from the British Medical Association, but which has apparently escaped notice.

It is this. The recent change from the system of gazetting medical officers as an integral part of regiments to the present system of keeping these officers unattached, and belonging only to "the department", has for its chief aim economy. This economy is gained by a reduction in the number of medical officers, the reduced number being made to do the work formerly done by a larger number, by dint of their being more readily available for duty at any point; so that, where the need of medical officers may particularly arise, these medical officers may be at once despatched. And in this object the new system, no doubt, succeeds; money is saved, the numbers are reduced, and yet the work is somehow done.

But there is another phase of the matter, not to consider which would be both foolish and dishonest. How does this change affect the medical officer?

1. The diminution in the number of workers, without any lessening of the aggregate work to be done, involves, necessarily, increased work for the army surgeons.

2. The removal of medical officers from regiments and corps, in the society of which they formerly found a home, is a very serious drawback to their comfort; add to which the misery of constant removal.

3. The incessant hurrying from place to place, to meet the chronic emergency caused by their inadequate numbers, is the cause of serious

money loss to all executive medical officers, and, to the unfortunate married surgeon, nearly ruin.

Now, sir, the question which, I think, might have well been put with respectful confidence by the deputation to the Secretary of State for War, is somewhat in this wise. "Seeing that you are effecting a saving to the State by greatly increasing the work, the discomfort, and the expenses of the army surgeons, what is the consideration you propose to make to them in return?" I am, etc.,

AN OLD ARMY SURGEON.

OBITUARY.

EDMUND MANLEY, M.B., MANCHESTER.

WE have to record the death of Dr. Edmund Manley of Manchester, at the age of 46, which occurred on April 6th, at his residence, Rydal Mount, in that city. He was the son of the well known local practitioner, Mr. W. E. Manley, surgeon, of Tyldesley, near Manchester, and was educated at the Manchester Grammar School, where he early distinguished himself by his talent and application. He was apprenticed to his uncle, Dr. William Jepson of Salford, and studied at the Manchester School of Medicine. In the year 1849, he became a member of the Royal College of Surgeons, Licentiate of Apothecaries' Hall, and, in the following year, he took his degree of M.B. at the University of London, coming out in the first division. After qualifying, he became physicians' assistant at the Manchester Royal Infirmary—a position which he filled with great credit; and the next public appointment he held was that of Resident Medical Officer to the Manchester Workhouse, where he remained for four years; after which time the guardians opened their new workhouse at Crumpsall, and appointed Dr. Manley the Visiting Medical Officer. This appointment, to the regret of the guardians, by whom he was held in high esteem, he had to resign on account of illness; but, upon regaining his health, and being again anxious for work, he accepted the position of Assistant Medical Officer at the Prestwich County Lunatic Asylum, near Manchester. He next succeeded to the important office of Resident Medical Superintendent to the Ashton Street Lunatic Asylum, Liverpool, and he afterwards settled down to private practice in Manchester. About three years ago, he was struck down by an attack of paraplegia, to which he ultimately succumbed. Latterly, the pain in his legs and feet was so excruciating and incessant, that he had to take large quantities of morphia, and inhaled as much as a pound of chloroform per day, in order to obtain even moderate relief from his sufferings, which he bore with most exemplary patience and Christian fortitude. After death, there was found extensive softening of the lateral and posterior columns of the spinal cord. Dr. Manley was an accomplished botanist and microscopist, and possessed an extensive knowledge of classics, mathematics, and modern languages. He leaves a widow, but no family.

ROBERT COWIE, M.D., M.A., LERWICK.

DR. COWIE died at his residence, in Lerwick, on the morning of Friday, May 1st, at the early age of 32. He was a tall, powerful man, capable of undergoing very great fatigue, and was in his usual health till the Wednesday evening before he died. For some time past, he had been suffering from occasional attacks of dyspepsia, and on the night of April 29th, was attacked by severe inflammation of the bowels, which carried him off after twenty-six hours' illness. Dr. Cowie succeeded to his father's practice in 1866, and although then only twenty-four years of age, and having just completed his studies, he very soon attained a good position. His uncle, Dr. Isaac Cowie, was also well known in Lerwick as a medical practitioner.

Dr. Cowie received his education partly at Aberdeen, where he took the degree of M.A., and partly at the University of Edinburgh, where he was a favourite student of the late Sir James Simpson. Dr. Cowie sent a paper on "Health and Longevity" to the International Medical Congress of Paris. The "Graduation Thesis" (on small-pox, etc.), and the paper on "Health and Longevity," were the basis of Dr. Cowie's *Handbook of Shetland*, which is, on the whole, the most complete work yet published on the islands. He had completed a second edition of this book, carefully revised only a few days before his death. He was so enthustically devoted to the interests of Shetland, that everything affecting it had a charm for him; and perhaps there is no man living who has as intimate an acquaintance with the history and topography of the islands, and the manners, customs and habits of the people, as the author of *Shetland and its Inhabitants*.

Dr. Cowie, besides a good private practice, was Admiralty Surgeon at this port, medical officer to the Northern Lighthouses, the Prison Board, the Oddfellows' Society, and to the Parochial Boards of Dingwall and Bressay. He was also vaccinator for almost the whole Islands. He was a man of thorough public spirit, and whatever seemed for the best interests of the people met with his ready and energetic support. His death cast a gloom over the whole town, and, indeed, over the whole islands his loss is lamented. The poor found in him a follower of the great Physician, ministering to the wants both of body and soul, and mourn the loss of one of their truest friends.

JOHN McLENNAN, M.D., F.R.C.P.Lond., late Physician-General of the Bombay Army.

DR. McLENNAN died suddenly at his residence in Harley Street on April 5th, in the seventy-second year of his age. He had served thirty years in the Bombay Presidency, from 1822 to 1855, and, during this period, had filled the chief positions of importance in the Medical Department. He was, at the outset of his career, Assistant-Surgeon of the European General Hospital, then Surgeon of the Native General Hospital, Civil Surgeon at the Presidency, Surgeon of the European General Hospital, Medical Store-keeper, Surgeon to four Governors, Superintending Surgeon of the Presidency Division, and finally Physician-General of the Bombay Army.

For nearly twenty years, Dr. McLennan practised as a physician in Bombay with great success, and acquired a high reputation for skill and assiduous and generous devotion to the interests of the sick, and for a liberal and upright bearing to his fellows. He was at all times fully conversant with the literature of his profession, and his library was always abreast of its progress and its changes. He understood well the theories and principles of medicines, but he never discussed them in writing and rarely in conversation. His mind was of that practical character which quietly accepts and appropriates principles, but deals only with their application. He did not discourse on disease in the abstract, but took each case as it came before him, and brought the full power of his disciplined mind to bear upon it in all its aspects. He had no peculiar views regarding tropical disease, no peculiar methods of treatment. He observed with care and applied the lessons of experience and of study with great judgment and skill. He practised at a time when antiphlogistic treatment was in vogue, and he followed it freely, but with a method and a reserve peculiarly his own. He knew the force of the periods of exacerbation of forms of tropical disease in sthenic Europeans, and he controlled it by antiphlogistic means; but he also knew the tendency of remissions to pass into states of exhaustion, and he was, therefore, always careful to have means of support—of which beef-tea was his favourite—ready at hand, and to time his visits with reference to these risks.

As superintending surgeon and physician-general, Dr. McLennan evinced great ability in all departments of medical administration. Every question relating to the health of the troops, the jails, and the general population commanded his prompt and careful consideration; and many important measures originated during the period of his control. He was much interested in the medical education of the natives of India. At the very commencement of his service, he had charge of a vernacular medical school, and, when, at a more advanced period, Grant's Medical College was established, he, as a member of the Board of Education, gave the college his most earnest support. When, in March 1851, it became necessary to determine the methods of conducting the final examination in medicine, surgery, midwifery, and medical jurisprudence, Dr. McLennan accepted the office of Government Examiner, assisted by three assessors, and discharged the duties in 1851-52-53-54. The examinations were open to the public, and were attended by the principal, the professors, and many members of the European and native community. He allotted three days to each subject—one for written, a second for oral, and a third for practical exercises. The clinical examination in medicine and surgery was conducted in a special manner. During the month or six weeks preceding the other examinations, Dr. McLennan, three days in each week, was present in the clinical wards during the visit. The candidates were in charge of the cases, and the examiner watched their proceedings, interrogated regarding the sick under their care, and thus formed his judgment and estimate of their practical acquirements.

Dr. McLennan retired from the Indian Service on January 26th, 1855, honoured by the well-deserved eulogy of the Government, and commemorated by the public by the endowment of a scholarship, and a medal bearing his name, in Grant's Medical College.

Dr. McLennan, on returning to England, resumed with ardour the subjects of study which, even in his active life in India, he had never entirely neglected. He substituted for the languages of the East—with several of which he was well acquainted—the modern languages of Europe. He was a careful student of all questions of public polity and interest, a zealous reader of books of travels and of history, especially military history. He was well conversant with the achievements of the British Army, particularly of the Highland regiments; indeed, he used at times, playfully, to say that he had mistaken his profession, and that he ought to have been a soldier; and no one who knew him well could fail to note that he possessed in no ordinary degree many of the qualities which go to form the able and successful commander.

During the first ten years after his retirement, he visited many of the countries of Europe, and studied their objects of interest. Dr. McLennan, for many years before he left India, was apprehensive regarding his health. He at times suffered from irregular action of the heart, with sense of faintness, which seemed to indicate cardiac mischief, though even to the last the physical signs were not very evident. His habits of life had been careful—perhaps, at times, even too much so. He took little or no wine, and, for years in India, was very abstemious in the use of animal food; but he abandoned this almost vegetarian system after his return to Europe. We have seen, however, that there was no relaxation in mental labour, and, owing probably to this want of rest in the winter of 1864-65, after fatigue and exposure to continued cold, he suffered from an attack of cerebral congestion with muscular disturbance and sopor. From this he recovered, but he never regained his original energy. He ceased to mix in general society, but enjoyed the social intercourse of his family and his friends. He maintained his interest in passing public events, followed with attention the incidents of the Franco-Prussian war, and, in times of greater languor, Scott's novels read aloud were a never-ending source of pleasure.

From time to time, but with very considerable intervals, there were recurrences, generally slight in degree, of the attacks of nervous disturbance, which were evidently much controlled by the frequent use of bromide of potassium, directed with other means by the skill of his attached friend Dr. C. J. B. Williams, whose watchful care and never failing sympathy were the comfort and the solace of these years of gentle decay, until "the silver cord was loosed and the golden bowl was broken".

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, May 28th, 1874.

Armstrong, Henry George, Staines
Brummitt, Robert, Banbury
Burtonshaw, Thomas, Crowle, Lincolnshire
Chinery, Charles Warner, Lymington
Collenette, Frank de Beauchamp, Guernsey
Crowe, George Wyndham, Hartlepool
Evans, David Thomas, 33, Trinity Square, S.E.
Hawkins, William, Dorchester
Paley, James Hewitt, York
Stanigar, Francis Lionel, Jamaica

The following gentlemen also on the same day passed their primary professional examination.

Buckland, Alfred George, London Hospital
Day, Edward Joseph, St. Thomas's Hospital

Apothecaries' Hall of Ireland.—At the April examinations, the following gentlemen obtained the licence to practise Medicine and Pharmacy.

Edward Allingham, James S. Conway, Robert Gilmer, Francis B. Gregg, William Howlin, Robert D. Kenny, John F. O'Ryan, Thomas M. Roberts, and Charles B. Sparrow.

The following passed the Preliminary Examination in Arts.

William H. Allen, Charles Ernest Denning, John Finigan, Joseph Alphonsus Fitzmaurice, Richard Godly, George Anthony Horneik, Joseph B. Jackson, Edward E. Lennon, and Robert Wall.

Mr. Robert Alexander Shannon obtained the Annual Prize in Chemistry and Pharmacy.

Mr. William Z. Myles was awarded the Honour Certificate of second rank.

MEDICAL VACANCIES.

The following vacancies are announced:—

BARONY PARISH NEW LUNATIC FARM ASYLUM, Woodilie, Glasgow—Medical Superintendent: £500 per annum, house, etc. Applications, 1st July, to Peter Beattie, Inspector of Poor.

BRADFORD (Yorkshire) INFIRMARY and DISPENSARY—Junior House-Surgeon: £50 per annum, board and residence. Applications, 8th instant, to Charles Woodcock, Secretary.

CROYDON GENERAL HOSPITAL—House-Surgeon: £80 first year, with annual increase of £10 up to £100, with board and furnished apartments. Applications, 8th instant, to A. G. Roper, Honorary Secretary.

CASTLE WARD UNION, Northumberland—Medical Officer to the Workhouse and the Ponteland District: £30 and £20 per annum respectively.

EAST STONEHOUSE URBAN SANITARY DISTRICT—Medical Officer of Health: £50 for one year. Applications, 8th June, to E. Wilkes, Clerk.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff—House-Surgeon and Secretary: £100 a year, board, washing, and furnished apartments. Applications, 20th inst., to the Committee.

GLASGOW ROYAL LUNATIC ASYLUM—Resident Physician-Superintendent: £600 per annum, house partly furnished, coal, etc. Applications, 12th instant, to J. Roxburgh Strong, Secretary, 110, West George Street, Glasgow.

GRAY'S HOSPITAL, Elgin—House-Surgeon: £55 per annum, board and lodging. Applications, 6th instant, to David Forsyth, Secretary.

HECKMONDWIKE URBAN SANITARY DISTRICT—Medical Officer of Health: £20 per annum.

INDIAN MEDICAL SERVICE—Fourteen Surgeons. Applications, to T. P. Pears, Major-General, Military Secretary.

INFIRMARY FOR CONSUMPTION, etc., Margaret Street—Visiting Physician. Applications, 16th instant, to Francis Baily, Secretary.

LAMBETH, Parish of—Resident Medical Officer and Dispenser for the Infirmary in Princes Road: £100 per annum, board, apartments, etc. Applications, 8th instant, to W. B. Wilmot, Clerk, Brook Street, Kennington Road.

LEICESTERSHIRE and RUTLANDSHIRE LUNATIC ASYLUM, near Leicester—Assistant Medical Officer: £100 per annum, board, and lodging. Applications, 6th instant, to W. Napier Reeve, Esq., Leicester.

MANCHESTER TOWNSHIP—Junior Assistant Medical Officer to the Workhouse Infirmary: £120 per annum, and residence.

MANSFIELD UNION—Medical Officer for No. 5 District: £32:10 per annum.

MONAGHAN COUNTY INFIRMARY—Registrar and Apothecary: £60 per annum, rations, and apartments. Applications, 10th instant, to P. J. Loughnan, Acting Registrar.

NEWPORT (Monmouthshire) INFIRMARY and DISPENSARY—Resident Medical Officer: £85 per annum, furnished lodgings, board, etc. Applications, 10th instant, to E. W. Willey, Secretary.

OLDCASTLE UNION, co. Meath—Medical Officer for the Crossakeel Dispensary District: £100 per annum.

PRESTON URBAN SANITARY DISTRICT—Medical Officer of Health: £100 for one year. Applications, 8th instant, to Robert Ascroft, Clerk.

ST. GEORGE'S HOSPITAL—Resident Medical Officer.

ST. PANCRAS and NORTHERN DISPENSARY—Resident Medical Officer: £100 per annum, residence, and allowance for servant. Applications to S. S. Wigg, Honorary Secretary, 33, Gordon Street, Gordon Square.

STOCKTON UNION, Durham—Medical Officer for the Middlesborough North District: £85 per annum.

SUDBURY UNION, Suffolk—Medical Officer for No. 3 District, and the Workhouse: £122 per annum, and £35 per annum, respectively.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne—Lectureship on Physiology.

WELLINGTON (Salop) UNION—Medical Officer and Public Vaccinator for the Northern Division of No. 2 District, and the Workhouse: £80 per annum, and fees. Applications, 11th June, to George Marcy, Clerk.

WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £80 per ann. board, residence, etc. Applications, 15th instant, to F. D. Bennett, Hon. Sec.

WESTERN INFIRMARY, Glasgow—Superintendent: £250 per annum, with board and lodging. Applications, 15th instant, to W. H. Hill, Honorary Secretary, 106, Ingram Street, Glasgow.

WORKINGTON URBAN SANITARY DISTRICT—Medical Officer of Health.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*Beddoe, John, M.D., F.R.S., appointed Consulting Physician to the Bristol Hospital for Sick Children.

Brown, George, M.R.C.S., appointed House-Surgeon to the North-Eastern Hospital for Children, Hackney Road.

Gibson, Charles H., M.R.C.S.Eng., appointed Medical Officer and Public Vaccinator for District No. 1 of the Daventry Union, *vice* B. C. Gowing, M.R.C.S.Eng., resigned.

Haldane, William, M.B., appointed Medical Officer for the Parishes of Crathie and Braemar, *vice* W. Lyon, M.B., resigned.

*Hosking, Ethelbert, M.R.C.S., appointed Junior Assistant Medical Officer to the Surrey County Lunatic Asylum, Wandsworth Common.

*Lewtas, John, M.B. (late House-Physician to the Seamen's Hospital), appointed Honorary Medical Officer to the North Dispensary, Liverpool.

Newcombe, Charles Frederick, M.B. and C.M.Aberdeen (late Clinical Assistant, West Riding Asylum, Wakefield), appointed Assistant Medical Officer to the County Asylum, Rainhill, Lancashire.

Pickles, John Jagger, L.R.C.P.Ed., M.R.C.S.Eng., appointed House-Physician to the General Infirmary at Leeds, *vice* G. H. Barfoot, M.B., resigned.

Sinclair, Alexander J., M.D., appointed Physician to the Royal Infirmary, Edinburgh.

Turner, F. Charlwood, M.A., M.D., elected Resident Assistant Physician to St. Thomas's Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTH.

Benham.—On June 1st, at 40, Westgate Street, Ipswich, the wife of Henry James Benham, M.B.Lond., of a son.

DEATH.

Geere, George, Esq., surgeon, very suddenly, at his residence, 21, Broad Street, Brighton, on June 1st.

The Duke of Cambridge was in the Chair at the Annual Festival held at Willis's Rooms in behalf of the German Hospital at Dalston. The subscriptions during the evening amounted to £4,368.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Epidemiological Society, 8 P.M. M. Leon Colins, "On the Conditions of Propagation of Small-Pox and Cholera".

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

X.—At the office of the General Council of Medical Education, 32, Soho Square.

PHLOX asks for the titles of any works showing "the evidences of design in the mental and physical constitution of man", especially the former subject.

A. D. will, we believe, find all he requires at Westminster Hospital School. There are good opportunities and excellent teachers.

AN OLD MEMBER OF THE ASSOCIATION.—Dr. P. H. Green, a former Editor of this JOURNAL, is residing, we believe, in France.

MR. J. HINDLE (Blackpool).—The practice of publishing by advertisement "cards" of address, is one which is, we think, professionally objectionable, and we should be sorry to see it introduced into this country.

NOTWITHSTANDING that nearly every number of the BRITISH MEDICAL JOURNAL published this year has included a supplement of eight pages, and that one-third more of original matter has been published this year in the BRITISH MEDICAL JOURNAL up to the present date than in any former year, we have still a considerable accumulation of manuscripts from town and country contributors. We would therefore especially ask our correspondents to compress, as much as possible, any communications with which they may favour us, with a view to their publication with the least possible delay.

ERRATUM.—In our note on the History of Clinical Lectures at page 724 of last week's JOURNAL, the statement regarding the origin of clinical lectures in London (last paragraph but one) was incorrect. What Dr. George Harley said on this subject was, "that clinical lectures had been occasionally given in the London hospitals from 1804; but that no systematic course was given until 1824, when the Apothecaries' Company made attendance on them compulsory on students."

MEDICAL ETIQUETTE.

SIR,—On the point of etiquette contained in Mr. Griffith Thomas's letter, there can be no two opinions; but the question is a more serious one than one of mere etiquette. What is the law upon the subject? We who are in the habit of taking an annual holiday, must not be in any uncertainty about this matter. I was under the impression that the agent who sends down a *locum tenens*, made a point of requiring his signature to a bond not to practise in opposition to the person whom he goes to assist. If this be not so, or if such a bond be of no legal value, then it behoves each one who engages the services of a *locum tenens* to require an undertaking from him previously. Some of those learned in the law should enlighten us on this most important subject; and Mr. Thomas would do well to say through whose agency he obtained the services of his present opponent.

I am, etc.,
BONA FIDES.

NOTICE TO ADVERTISERS.—Advertisements for insertion in the BRITISH MEDICAL JOURNAL, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. FOWKE, not later than *Thursday*, twelve o'clock.

AN OLD MEMBER.—At present, the College of Surgeons has not the power to erase the name of the notorious person mentioned by our correspondent from the list of members. Legal opinion was taken immediately after the learned judge's severe but just remarks on the conclusion of the trial.

THE ADMISSION OF LADIES TO THE DEGREES OF THE UNIVERSITY OF LONDON.

SIR,—At the meeting of Convocation, on May 12th, I voted for the enfranchisement of woman's intellect, and I glory in the deed. In future, academic titles must be regarded as of common gender, appertaining to "homo", and no longer confined to "vir". Universities may well follow the lead of the Church of England in this matter. Thus, in the Prayer for the Queen, we find the title "governor", not "governess". Yet, if grammarians insist on distinction of gender, what would be easier than to use Magistra, Baccalaurea, Doctrix, Socia, etc.? But I adhere to the opinion that the common gender is best adapted to academic titles.

It is a matter of wonder to me that no one has spoken or written on the improvement of the human intellect that will surely follow on the intellectual culture of mothers. Who does not know that great men have been indebted to their mothers rather than to their fathers? Surely we may look for many great men in the future.

Amongst bestial animals, we find every variety in the respective endowments of the sexes. In the case of the dog, cat, and horse, there is perfect equality of mind and body. In the human animal, as well savage as cultivated, the female is usually physically weaker than the male, and mentally inclined to occupations different from those of the male, yet there are notable exceptions.

I verily believe that mankind would be benefited by the extension to females of the great principles of liberty, equality, and fraternity; yet, whilst advocating these principles, I need scarcely state that the social relations of the sexes must be based on the law of God.

Amongst the ancient Germans, woman was not considered as mentally inferior to man, but only as physically weaker, and requiring protection.—See *Introduction to Anthropology*, by Dr. Theodor Waitz.

I am, etc.,
FREDERICK JAMES BROWN, M.D.Lond.
Rochester, May 23rd, 1874.

P.S.—In the French language, words expressing professions, trades, etc., usually followed by men, have no feminine, even when exercised by women, as *docteur, sculpteur, graveur, imprimeur.*

TREATMENT OF LARGE ABSCESSES BY THE ASPIRATOR.

SIR,—I beg to inform "Surgeon" that a short time ago I had under treatment, in conjunction with a physician in this neighbourhood, in a lady aged 43, married, an abscess situated in the ovarian region. Being anxious to extract a small amount of fluid at a time, we used the "pneumatic aspirator" and removed about six ounces, without inconvenience to the patient. From what I observed in this case, I should say the instrument in question is most useful in all cases of the class named by "Surgeon".

I am, etc.,
H. HAILEY.
Newport Pagnell, June 3rd, 1874.

A COUNTRY SURGEON.—1. The holder of L.R.C.P.Ed. is a physician, if we use the word to denote one who has received his qualification from a College of Physicians, and follows the medical department of general practice. It does not follow, however, that by calling himself a physician, he can at once take rank with those members of the profession to whom the term has hitherto been mostly applied, or expect to obtain equal fees with them. There are surgeons and surgeons; and so there will be physicians and physicians. 2. A patient (or his friend) has the right to change the medical attendant. 3. The charge of a guinea per visit is decidedly high. Whatever our correspondent may call himself, he is only acting as a general practitioner; and we think he would act wisely by regulating his charges by the rules of general practice.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Birmingham Daily Gazette, June 1st; The Carlisle Patriot, May 30th; The Macclesfield Advertiser; The Shield; The Glasgow News; The Manchester Guardian; The Cork Examiner; The Hastings and St. Leonard's Chronicle; The Paris Journal; The Lancaster Daily Courier; The Leeds Weekly Express; The Liverpool Daily Courier; The Brighton Daily News; Nouvelle Chronique de Jersey; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. J. Lockhart Clarke, London: Dr. J. B. Bradbury, Cambridge; Mr. Lawson Tait, Birmingham; Dr. Ransome, Bowden; Mr. Hindle, Blackpool; Dr. George Johnson, Birmingham; Dr. Vider, London; Dr. Shepherd, London; Our Paris Correspondent; Bona Fides; P. B.; Miss Beale, Cheltenham; Dr. R. Shingleton Smith, Clifton; Phlox; Dr. Railton, Chorlton; Dr. Cheadle, London; Mr. Hyde Houghton, Dudley; Mr. Kesteven, Earlswood; A Surgeon-Major, Halifax; An Associate; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. E. W. Thurston, Ashford; Dr. Steele, Liverpool; Dr. Rumsey, Cheltenham; The Secretary of the Royal Medical and Chirurgical Society; Dr. Procter, York; Our Edinburgh Correspondent; Mr. Dalziel, London; Dr. Paine, Cardiff; Dr. A. J. Sinclair, Edinburgh; Our Dublin Correspondent; Dr. Cameron, Dublin; A Member of Convocation (M.B.); Dr. Shingleton Smith, Bristol; Dr. W. C. Arnison, Newcastle-on-Tyne; Our Glasgow Correspondent; Dr. F. J. Brown, Rochester; Dr. F. M. Pierce, Manchester; Mr. Kent Jones, Beaumaris; Dr. J. W. Moore, Dublin; Dr. Orange, Broadmoor; Mr. F. Mahomed, London; Assistant-Surgeon; Mr. Bryden, Uffculme; Dr. Ransome, Nottingham; Mr. J. L. W. Nimmo, New Brompton; Mr. Hosegood, Swinton; Sanitas; Dr. J. G. Davey, Northwoods; Mr. W. J. Walsham, London; Mr. Taylor, Ticehurst; Mr. C. Mayhew, Chatham; Mr. W. Fairlie Clarke, London: Mr. J. E. Adams, London; Mr. John Woodman, Exeter; Dr. Edis, London; Mr. Ethelbert Hosking, London; Dr. Parsons, Dover; Mr. G. F. Hodgson, Brighton; Mr. H. B. Norman, Southsea; Dr. Mickle, Bow; Mr. H. Hailey, Newport Pagnell; Mr. James Collins, London; Mr. Mitchell Wilson, London.

LECTURES
ON
THE FORMATION AND EARLY GROWTH OF THE BRAIN OF MAN.

Delivered at the Royal College of Surgeons of England.

BY GEORGE W. CALLENDER, F.R.S.,
Lecturer on Anatomy and Physiology in the College; Surgeon to St. Bartholomew's Hospital; etc.

LECTURE II.

FROM the examination of the case which contains the brain, it appears that its anterior limits at the earliest stage of its formation are measured by the ring of tissue forming eventually the basal cartilage; that at the inferior extremity of this is found the pituitary body; at the superior, the pineal gland; and that the anterior dilatation of the brain-case is developed in connection with the superior closure of the dorsal or axial arches. By the growth forward of the trabeculæ, and by the occipital deflection, the antero-posterior length of the basal tissue is increased. By the membranous connection which follows the line of constriction between the first and second vesicles, the pineal body retains its relations with the pituitary (Fig. 8, M); a band of membrane gradually forming between it and the occipital plate as the latter deflects backwards.

Having referred to the formation of the case, we come to the consideration of that of its contents; and, first, the chief parts of which these consist, and their general arrangement at an early period of development, may be briefly noticed.

In a fœtus six-tenths of an inch long, one in which the dorsal and yet lower axial arches are incomplete, the part of the cerebro-spinal axis which lies above the proto-vertebræ is marked by four constrictions, one separating it from the cervico-vertebral region, another terminal, and two intermediate between these. These constrictions give the appearance of slight dilatations to the intermediate portions of the cranium. These are the anterior, middle, and posterior primary vesicles, as they are commonly called; and they contain respectively the fore-brain, the mid-brain, and the hind-brain.

When the membranous portion of the brain-case is removed, the nerve-tissue is seen to be arranged, not in vesicles, but as an elongated tube, which rapidly becomes solid except at certain points, and which is flexed and twisted after a definite fashion. It may be true that the primary bend is due to the cranial flexure of the notochord; but this is not the only flexure at this stage of development. The fore portion of the brain is turned down at a sharp angle, and its middle part is thrown up so as to form the highest part; and this is what is named the meso-cephalic flexure. The lowest, originally the most anterior, portion of the fore brain, is attached to the pituitary fossa immediately in front of the termination of the notochord; and the attaching structures in a fœtus 1.5 inches long have the ordinary characters of the infundibulum and pituitary body. Reichert thought that this body might be the end of the notochord, the invariable termination of which immediately beneath the pituitary fossa has been dwelt upon as a notable fact by Professor Huxley.

If we bring together the facts which bear upon the nature of the infundibulum and of the pituitary body, we learn that, by the projection and subsequent junction of the trabeculæ, a fossa is provided for the reception of the body (Fig. 8, Pt); and this is deepened by the raising up of the clinoid processes. Over the termination of the axis-tissue is the anterior, and, as flexion occurs, the inferior extremity of the fore-brain. (Fig. 8, Cr.) A portion of this fore-brain is enclosed by the trabeculæ as they grow forward; and this portion continues to retain its connection on the one side with the tissue in front of the notochord; on the other side, with the fore-brain, of which, indeed, it is a part. It is also held in place by the development around it of the brain-membranes which are fixed to the clinoid processes. There can be no doubt but that this is the origin of the pituitary body, and of its infundibulum, which, in the adult, represent structures which played their parts during fœtal life; and it is easy to see that their purpose was to anchor the fore-brain to the fossa (sella Turcica), forming a fixed point, from which, as from a centre, the further steps in the development of the cerebrum might be controlled. The relations between the fore-brain and the pituitary body never vary during all the changes which occur in other parts of the cerebrum during the progress of their development. It is, in fact, the inferior ligament of the brain.

There is a second fixed point which also holds its position unaltered during the development of the cerebrum; and this is the pineal gland, the superior ligament of the brain. Its position corresponds with that of the second cranial constriction (Fig. 8, P); and from it two bands (the crura) pass forward along the upper and inner margin of the optic thalami, in which they are gradually lost; the reason for this not being traceable to the infundibulum being evident when the structure of the thalami is examined. Whilst examining a fœtus 1.2 inch long, I observed that this gland had another attachment—viz., to the upper centre of that portion of the occipital bone which is formed in cartilage. It is, as has been already mentioned, only during the early stages of development that this relation of the supraoccipital cartilage with the pineal centre can be recognised; for the growth of the periotic cartilage forces the occipital backwards, the pineal centre remaining fixed by its membranous connections with the base of the skull. (Fig. 8, M.) A prolongation of membrane, however, always connects it with the internal occipital prominence, and marks the line of junction in the adult between the falx cerebri and the tentorium.

The pineal body is the centre of attachment for the membranes of the brain; and, through these, it assists in determining the form of the hemispheres. In a fœtus 1.5 inches long, it is a mere thickening of tissue; it only acquires comparatively considerable size as the corpus callosum is formed, and brings to this centre an accession of membrane-tissue.

It is at least a remarkable fact that, as the pituitary centre fixes the fore-brain to the end of the axis-cartilage, and the pineal centre attaches it posteriorly to the first axial arch, so there is found at the lower end of the cerebro-spinal axis a body fixed in a cleft at the end of the coccyx, between the ligaments attached to that bone. This is the coccygeal gland, or gland of Luschka—a structure to which, in the adult, no possible purpose has been assigned, but which, like the two centres at the opposite end of the canal, is not improbably the remains of some tissue connected with the closure of the spine. Formed, as it is said to be, of a confused mass of tortuous, dilated, and thick-walled vessels, forming lobules, with nerve-cells scattered in its substance, its likeness to the pituitary body is best expressed by the fact that both are compared by all observers to the suprarenal capsules.

The membranes of the brain are formed in the tissue intermediate between the cartilaginous and membranous cranium on the one hand and the nerve-tissue on the other. The inner portion of this tissue (Fig. 9, dotted line) is closely applied to the brain, and no doubt assists in its growth, just as the periosteum does in that of the bones. It follows its various outgrowths, and dips in between its fissures; but, as the folds within these deepen, the opposed surfaces of the arachnoid adhere and lose their distinctive characters, and the vascular portion of the tunic alone remains in the recesses of the fissures. The arachnoid and the pia mater, being developed in the same tissue, and being at first equally spread over the nerve-centres, are virtually parts of one membrane; and although, in the way referred to, the arachnoid in the completed brain fails to pass in between the convolutions, and so far appears to be distinct from the pia mater, yet their mode of development gives good ground for objecting to regard these as distinct membranes, and for preferring to consider them but as one investing tunic, which may be named the perineural. (Fig. 9, P N.)

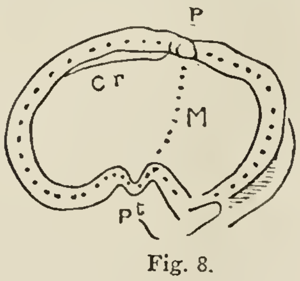

Fig. 8.

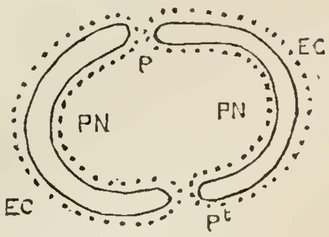

Fig. 9.

The endocranial (Fig. 9, E C) membrane (dura mater) is a continuation of the perineural reflected over the cranial cavity. It has its arachnoid surface, and its vascular layer (Fig. 9, dotted line), which, besides giving a strong nutrient coat to the bones, forms the various processes which project into the cranial cavity, and the passages for the veins. All these processes converge towards the pineal centre. In a fœtus 1.7 inches long, they cover the rudimentary cerebellum and the site of the corpora quadrigemina (tentorium), and ascend from this layer to form the falx, which is a mere ridge in the middle line. From the tentorium, the endocranium is prolonged forwards and downwards on each side of the mid-brain, which it encloses, and then extends to the pituitary fossa; and this portion is at this period the chief and strongest part of the membrane, and serves evidently to fix the pineal centre to the basal structures. In a fœtus five inches long, the falx is still a narrow band; and it is only as the hemispheres rise up above the fore-brain, that it slowly deepens into the fissure between these structures.

As the hemispheres of the cerebrum and of the cerebellum are developed, they raise before them the arachnoid and pia mater (perineural tunic); and, by the mode of growth of the mantles, this tunic is thrown into duplicate folds, in most of which the arachnoid is obliterated; but one of them on each side, where the mantle rises at an angle from the side of the optic thalamus, persists (Fig. 10, between S and Op), and the roll thus formed eventually constitutes the choroid plexus. It may be traced over the upper surface of the optic thalamus to its posterior border; then over its lower surface, where the peduncle of the mantle passes through its tissue, just above the track of the optic nerve; it then turns up above that nerve and around the front border of the thalamus, anterior to the infundibulum. Thus it constitutes a vascular ring around the peduncle. It may be followed in precisely the same course in the adult brain, forming a continuous band with the relations as in the fœtus.

The formation of the velum interpositum, and the provision for the lining of the lateral ventricles (which, it must be remembered, are only parts of the surface of the brain), may be explained by the aid of this diagram. As the corpus callosum grows backwards, opposite sides uniting in the middle line, it pushes before it the perineural tunic (Fig. 10, C C), which is fixed below by its connections around the pituitary centre (Fig. 10, Pt). The investment it thus acquires it carries to the pineal centre (Fig. 10, at P), where this callosal process of membrane blends with that extending from this centre over adjacent portions of the brain. By this means, the upper surface of the corpus callosum is covered with arachnoid and pia mater, like other parts of the cerebrum (Fig. 10, dotted and inner lines); and from it these membranes pass to the hemispheres. The under surface of the corpus callosum is also lined, the vascular tunic being next to the brain-tissue; next to this is the arachnoid; then follows the arachnoid lining the optic thalamus and the ventricular part of the corpus striatum; and beneath this is the pia mater, which, where rolled up to form the choroid plexus, is covered with arachnoid (Fig. 10, between P and S). The arachnoid and pia mater which cover the bourrelet, or pad, adhere to the corresponding tunics, here passing to the posterior surface of the thalamus of each side; and consequently there is, at a later period, no communication between the general sac (so called) of the arachnoid and the cavity of the third ventricle. The vessels of the pia mater, however, pass freely from the pineal centre to the surface of the thalami.

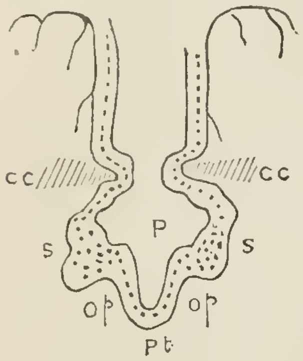

Fig. 10.

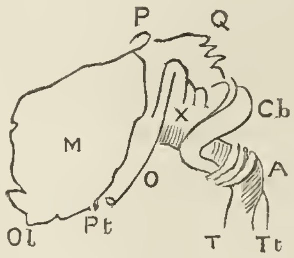

Fig. 11.

In the development of the cerebellum, a fold of arachnoid and of pia mater (perineural tunic) is raised on each side from the ascending columns; and the two, coming into relation in the middle line, unite, and shut off the cavity of the future fourth ventricle from the sac of the arachnoid. The line of reflection is marked by a vascular fringe on each side (choroid plexus), which reaches, in the adult brain, from the inferior vermiform process to the restiform track.

The endocranial membrane is adherent to the margins of the foramen magnum.

The tissue enclosed by these membranes, and in which the brain-centres and the cerebral nerves are developed, consists, in a fœtus one inch long, of two elongated tracks, which ascend through the foramen magnum; then bend forward at an acute angle; then backwards, and again forwards and downwards. Two curves are thus formed; the higher being the superior cerebral (meso-cephalic) (Fig. 11, at Q); the lower, the inferior cerebral (Fig. 11, at O). On the higher curve is placed the pineal centre (Fig. 11, at P). The end of the tortuous tube is fixed to the pituitary fossa (Fig. 11, Pt).

In front of the superior cerebral curve, the brain-tissue, having become solid, expands and ends by throwing out a number of processes which overlap the anterior lateral and superior surfaces of the mesial tissue (Fig. 11, M), and are connected, or rather held down to the pineal centre, by means of their investing membrane; whilst below they are fixed to the pituitary centre (Fig. 11, P). These processes are the rudiments of the mantles (surface-parts of the hemispheres). The peduncles of the pineal centre, marginating the optic thalami, are of great comparative size, and are lost gradually as they pass forward. Each thalamus has a smooth upper surface, but is nearly overgrown by the mantle. On its inner surface are several marks, the nature of which will require subsequent consideration.

Behind the thalami is the elevation for the corpora quadrigemina (Fig. 11, Q), corresponding to the bulging portion of the primitive brain-case, between the second and third constrictions. The two side-pieces unite by interdigitating; and the superior layer of its tissue seems folded on each side, as in Fig. XI, Q.

Beneath the buds of each mantle, the optic nerve forms a distinct band, with two bulging portions (Fig. 11, at O), and then ascends by the side of the corpora quadrigemina, where it makes a series of folds, and ends close to the upper portion of the cerebellum. It would seem from this, that the mode of development of this nerve indicates a connection with the optic thalamus, the corpora quadrigemina, and the deeper and central (vermiform) process of the cerebellum.

Below the corpora quadrigemina, the curve forward of the tissue represents the cerebellum (hinder brain); and, at the most posterior portion of this, there is a thickening of tissue in the middle line, which is the vermiform process (Figs. 11 and 12, Cb). The rest of the cerebellum is a mere track of tissue; but, just behind the inferior cerebral curve, three buds project, and indicate its laminated structure. This lifting up of the tissue is continued backwards until the central thickening or vermiform process is reached, and at a later period the buds begin to overlap it.

These parts must now be referred to in relation with the tissue ascending from the cord. This tissue, just at the level of the foramen magnum, is divided on either side into two distinct tracks. Of these, the two which at first are partly lateral and anterior are curved backwards (see Fig. XI, T); whilst those which are partly lateral and posterior, curve forward beneath them (centrally) (Fig. XI, Tt). The tracks again cross a little higher up; but now the posterior are external, and the anterior are central; the curve of the former, posterior, bearing the rudiments of the cerebellum, then pass through, or rather form the upper portion of the corpora quadrigemina (the mesial fissure, Sylvian, is at this period closed), and are then continued to the optic thalami. The anterior tracks pass along the base of the corpora quadrigemina, throwing up some tissue to join the posterior tracks through the upper portion of the mid-brain; then skirt that of each thalamus, and, following its floor, surround the infundibulum; those of opposite sides being at this stage united in the middle line from the point at which they open to give passage to the posterior tracks, to their anterior relations about the infundibulum. The fissure above these and below the cerebellum is the site of the fourth ventricle. The continuation of the median fissure is closed through the corpora quadrigemina as a canal; but, by separating the optic thalami, it is exposed to its front termination, being here closed below by the union between the two anterior tracks. There is no fifth ventricle.

If the basal portion be examined at a somewhat more advanced stage, the thalamus above it is seen to be deeply indented posteriorly. Below it, the thick masses of the anterior tracks pass forward, edged by a slight ridge, easily distinguished by its white colour, which is broken at the pituitary centre, but, on reappearing, ascends in front of the thalamus. In front of this, again, is a considerable mass of a whitish colour. This is the point at which the fore part of each mantle begins to unite with its fellow, forming the corpus callosum. If the brain be turned over, so that its base is exposed, the union of the anterior tracks and their surrounding of the infundibulum are distinct, the infundibulum appearing as a foramen, from being torn from its connections with the pituitary body. At this period, this body is formed, and the pineal centre can be recognised.

In a fœtus 1.6 inches long, the origins of the cranial nerves can be examined. The first, or olfactory (Fig. XI, Ol), which can also be traced in a fœtus one inch long, consists of a bud growing out with those for each mantle. It is the second in order from the anterior curve of the thalamus, and is the lowest. At first of great proportionate size, it consists of a layer of tissue which soon folds over, closing above, so that the bulb appears hollow. It lies throughout in the fossa formed on the trabeculæ, with which it is permanently associated. It is in relation with the three anterior inferior folds of the mantle, and immediately behind it is the point at which opposite sides unite to form the corpus callosum. The optic nerves have been referred to. The tracks are united by commissural fibres in a fœtus 1.5 inches long. I have not been able to fix an earlier period for the appearance of this commissure, from the difficulty experienced in dissecting for it. The third, the fifth, and the facial division of the seventh pair, grow out from the anterior columns, where crossed above by the posterior; and the fifth is close to the fissure which serves to divide them (Fig. XI, at X), so that it may be equally connected with either track. The facial is placed higher up (Fig. XI, above X), and curves round the anterior bulge of the cerebellum to reach, and thence to accompany, the auditory nerve. The fourth nerve forms a conspicuous line curving along the upper border of the cerebellum; it comes out just by the side of the vermiform portion (Fig. 11, above Cb), and is thus in relation with the groove between the posterior tracks. The auditory nerve is of large size (Fig. 11, A), and grows from the open floor of the fourth ventricle by a series of bands which form a thick projection curving below the cerebellum and over the lip of the ventricle formed by the diverging anterior tracks, until, at the anterior curve of the cerebellum, it passes to the periotic cartilage in company with the facial nerve. Although the two nerves pass off from the brain in company, their origins are widely apart and dissimilar. The remaining cerebral nerves have their origins from the side of the decussating fibres below the fourth ventricle—the sides of the future medulla oblongata.

In a fœtus 1.8 inches long, it seems as if the change of direction in the tracks passing through the medulla oblongata is also from side to side, as viewed from the posterior surface. The track thus seen is the one spoken of as the anterior; the tissue ascending on the right side lies, as it crosses, behind that of the left. On looking at the front surface between the elevations for the medulla oblongata, no such crossing is indicated.

In a fœtus 1.6 inches long (ten to twelve weeks), little change has taken place in the relations of the hinder portions of the brain. The medulla has enlarged considerably, and the auditory nerve on each side forms a thick cord of fibres as it curves out over its upper margin, which margin is nearly horizontal. The cerebellum is little more than a smooth band (posterior column of each side), with slight bud-like projections behind the inferior cerebral flexure. The corpora quadrigemina, somewhat lobed on their surface, but their permanent elevations not yet defined, are still marked with the irregular lines of junction of opposite sides, the most conspicuous being at the lower portion, where the section from the right side (Fig. XI, Q) is prolonged far to the left, forming a superficial elevation. The optic thalami are concealed by the mantles, which are connected with one another above at the site of the pineal centre.

The mantle of each side presents its especial characters; and it may be mentioned that in none of the brains examined have the appearances of the mantles during these early stages been alike to each other in any one, or similar in any two brains. It seems as if the development of the left mantle were throughout somewhat in advance of that of the right; a statement which I make with some hesitation, not only because it is itself a remarkable fact, but because it is quite opposed to the view I had formed from some dissections made a few years ago. Repeated observations lead me to the conclusion that these were made in error, and that some precedency must be allowed to the left side of the mantle portion of the hemispheres.

The right mantle, viewed on the outer side, presents a smooth surface, except towards its margins. At these, beginning from below (see Fig. 13), are seen the distinct lobe of the olfactory nerve, then two rather deep fissures, then three notches, then, after an interval, a well defined fissure succeeded by three notches, and then by a long sweep of comparatively smooth border. On the general surface, there is a rising of the fore part of the mantle; the depression behind this, vertical in its direction, is the line of the fissure of Sylvius. The left mantle (see Fig. 14), on its outer surface, has the line of the Sylvian fissure more distinctly indicated. Below, after a notch on the margin, the olfactory lobe is conspicuous. Then follow four distinct fissures, twice the number of those seen on the right side. Where the notches occupy the right margin, there is, on the left side, a broad fissure with notched margins; this corresponds with the future fissure of Rolando; and, again, there is a considerable fissure at the superior extremity of the Sylvian line. The fissures on the hinder margin are deeper and more numerous, and the intervening brain-tissue (gyri) is wider than on the opposite side.

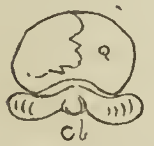

Fig. 12.

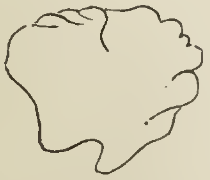

Fig. 13.

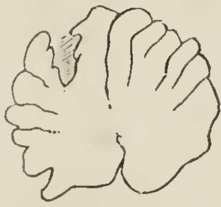

Fig. 14.

To separate the mantles, which lie flat upon the thalami, it is necessary to break through the folds of membrane which unite them at the pineal centre; and, on turning them aside, the membrane can be traced over their outer and inner aspects, dipping in between the fissures wherever these exist. The endocranial membrane forms a ridge of no great depth, projecting from the cranium between the hemispheres, and elsewhere following that disposition of a separating membrane, which it has in the adult brain.

THE HASTINGS PRIZE ESSAY,

1873.

ON THE PATHOLOGY AND TREATMENT OF OVARIAN DISEASES.

By LAWSON TAIT, F.R.C.S.,
Surgeon to the Birmingham and Midland Hospital for Women, etc.

III.

THE remaining affections of the ovary are those which are included in the results of increased growth, taking the form, in the largest number of instances, of cystic degeneration; in some rarer instances, the growth is solid, and may be either fibro-myomatous or more commonly cancer. So much has been written lately, and so much done for the pathology and treatment of Ovarian Tumours, that I can scarcely hope to add anything new in this essay; but, as I have had a special experience in the investigation and treatment of ovarian tumours, I shall limit myself to the discussion of what I have seen and done myself, in preference to making a mere summary of what is to be found in perfection in the recent publications of Spencer Wells, Atlee, Peaslee, and Gallez.

For this purpose, I shall first discuss the diagnosis of ovarian tumours and their varieties; their therapeutic and surgical treatment. I shall also describe such ovarian tumours as I have met with which have not admitted of surgical treatment; and, finally, I shall give the results of some original investigations in the pathology and method of growth of these tumours.

There are, perhaps, no diseases in the province of surgery where so much caution is necessary in weighing carefully every point in the history, every symptom and every sign, for the purpose of establishing an accurate diagnosis as in those usually classed under the head of ovarian tumours. There are so many conditions which mimic them, and so few facts in connection with them upon which implicit reliance can be placed, that the only safety is to be found in the process of reasoning by exclusion; that is, for a proper diagnosis in the case of an ovarian tumour it will be found the best plan, first of all, to make a mental list of all the conditions that it might be, and exclude them one after another until no alternative is left. Anyone who habitually follows a converse plan will sooner or later be led into some fatal blunder. Our anxiety should always be, not to prove that a given tumour is ovarian, but to show that it cannot by any chance be anything else.

It may be said with perfect certainty that from the history alone no ovarian tumour could be diagnosed, so various are the stories told by the patients about their cases. Thus one patient will present herself totally unaware of the fact that there is any tumour, her only sensation being one of discomfort from the swelling, whilst another may have known for many years of the presence of a small lump which had long remained quiescent and had taken to enlarging only for a few weeks or months. The rate of increase gives no guide, either in unilocular or in multilocular tumours; for I have removed two multilocular tumours which had been in progress respectively seven and eleven years, and I have removed one of great size from a patient aged 66 which had grown in four months. I have removed, on the other hand, a large unilocular tumour which had been in existence for more than ten years, and the structure of which showed that it always had been unilocular; and I have removed two unilocular tumours, one of which grew so as to completely distend the abdomen in seven weeks, and another, almost as large, which had not been noticed for more than five weeks.

The details given by the patients as to the region in which the tumours were first observed are often very misleading, and no dependence whatever can be placed on some. One patient, in whom there exists an undoubted fibroid tumour of the uterus, asserted that it originally grew somewhere in the neighbourhood of the spleen, and gradually descended to its present uterine situation. Tumours of one ovary are often stated by their bearers to have originated in the side opposite to that from which they are found to grow. One condition which on rare occasions comes under our notice, hydatids of the peritoneum, beginning as it does generally by rupture of the acephalocyst of the liver, presents usually a history of origin at the upper part of the abdomen; so that, when such a story is given with subsequent general enlargement of the abdomen, caution is necessary before excluding hydatids from the possibilities. A tumour which began centrally and remains so is, of course, likely to be uterine; but this is far from being constantly the rule. I have heard a patient state that an ovarian tumour of considerable size had appeared suddenly; and this might have really happened, for its escape from the pelvis might have been sudden. More than once I have pushed an ovarian tumour out of the pelvis that had been impacted there, but I never saw a fibroid tumour of the uterus so impacted.*

The menstrual histories given by patients with ovarian tumours have been so various in my experience, as to lead me almost entirely to disregard them in the diagnosis. Dubois asserted that he had not known an ovarian cystic tumour accompanied by hæmorrhage, but this has been repeatedly noticed in my practice; and the explanation of the apparent discrepancy is that, when the great obstetrician wrote, the diagnosis of pelvic tumours had not arrived at its present state. I have known complete arrest of menstruation coincident with the growth of an extremely rapidly formed unilocular cyst, in a case to which I have already alluded; and, from the presence of an impacted mass in the pelvis behind the uterus, the diagnosis was complicated by the possibility of an extrauterine gestation, *plus* an ovarian cyst. The real condition was revealed only at the operation, when the pelvic mass was found to be a dermoid cyst of the other ovary. In this case, the diagnosis was one of great difficulty, chiefly owing to the suspicious indication of the cessation of the menses. Such a fact in the history of any case ought to make us especially careful to eliminate pregnancy, more especially the condition of hydramnios, which I have known to be treated fatally on two occasions by tapping, once as an ovarian tumour and once as ascites. The uterus, in the early months of normal pregnancy, is not unfrequently displaced to one or other side, and has been often mistaken for an ovarian cyst; in one case, by myself, for an abscess in the broad ligament. In this latter case, I was led astray by the general symptoms of hectic from which the patient suffered. It was to me a lesson to trust to no one symptom, nor to any group of symptoms, in a pelvic diagnosis; and fortunately the patient recovered completely after a miscarriage.

For the diagnosis of ovarian tumours, either subjective or differential, there are varieties of symptoms, almost numberless, the great majority being of little or no consequence for accuracy, and none of them alone being trustworthy. The symptoms vary in their character and intensity very much, according to the size of the tumour, though this is far from being the rule. Thus the largest ovarian tumour which I have removed, somewhere over one hundred pounds in weight, gave rise to no other symptoms than the inability of the patient to get about from its immense weight; while the smallest, only six and a half ounces, was the source of agonising pain, and a great variety of reflex symptoms, including aphonia, and it had completely disabled the patient for some years. In the early growth of a simple cyst, symptoms of any kind are seldom met with until the tumour is sufficiently large to be impacted in the pelvis. The growth of dermoid cysts, on the contrary, is often accompanied by pain of a most intense kind, for which no explanation can be advanced. As a rule, pain is not met with until cystic tumours are large enough, if out of the pelvis, to press on important viscera, or unless the surface of the tumour undergoes inflammatory change. Then pain and increase of pulse and temperature are the indications, though it is surprising to what an extent a tumour may be found to be adherent, and yet, throughout its history, no indications of inflammatory attacks have been given. Until the tumour is sufficiently large to interfere with nutrition, and if it be not of a cancerous character, there are rarely any symptoms of constitutional disturbance, though sometimes I have seen a small tumour very loose in the cavity of the abdomen give rise to great pain and discomfort. The appetite is usually not interfered with until the case is far advanced; nor sleep, though it is often found that the patient can lie only on one side; nor do we find that either the temperature or the pulse is affected to any appreciable extent. Hysteria is sometimes found in connection with ovarian tumours, and to depend directly upon them. In one of my cases this was markedly the fact, for the hysteria disappeared entirely after recovery from ovariotomy. Hysteria is a constant symptom of phantom tumours, and these cases, in the days of the early ovariotomists, were in several instances cut into by mistake.

As the tumour enlarges, the symptoms become more numerous and various; thus in the pelvis, by pressure on the rectum, bladder, and nerves, it may give rise to dysuria or incontinence, to constipation or diarrhœa, and to various neuralgiæ. In the abdominal cavity, by pressure on the stomach, liver, and diaphragm, it produces very frequently nausea and vomiting, distaste for food; in one case in my own experience, jaundice; and very often difficulty of breathing, amounting in the later stages to orthopnœa. Coincidently with the production of these visceral symptoms, there come on gradually indications of great systemic alterations, due partly to direct interference with nutrition and partly to its perversion. Thus the patient becomes thinner and the skin dry and often hot; the eyes sink, and the features become pinched, and then comes on the peculiar expression of face named by Mr. Wells the "facies ovariana". The legs at this stage generally become œdematous, from the mechanical obstruction to the return of the blood from the limbs, and the œdema extends to the vulva and over the lower and central walls of the abdomen. When the tumour has reached such extreme size as indicated by these symptoms, if then seen for the first time, its diagnosis becomes a matter of some difficulty, even by the careful consideration of its signs; for it is in the very small and in the very large ovarian tumours that the diagnosis is most difficult. In those of medium size, the task is much more easy.

The physical signs which indicate the presence of an ovarian tumour come under the notice of the surgeon, as a rule, only when the tumour has reached a size sufficient to have obliged it to rise out of the pelvis, and appear as an abdominal enlargement. It is sometimes, however, necessary to determine the nature of a small pelvic tumour, and, as I have already said, to remove it. Such a diagnosis is a matter of no great difficulty to one accustomed to make the bimanual examination, more especially if it be conducted while the patient is under the influence of an anæsthetic. An ovarian tumour will be found to be almost invariably behind the uterus, that viscus being pressed forwards close to the pubes; and its fundus may, save in exceptionally obese patients, be felt just above the pubes. Usually the uterus can be fixed between the two hands, and then no doubt can be entertained as to what it is. Behind it is the tumour, and if the uterus can be moved independently of it, and if the tumour can also be raised out of the pelvis independently of the uterus, no doubt need be felt that it is a tumour of the ovary or of the broad ligament. How to determine between these two I do not know, nor do I think it can be of much consequence. It may be possible, as I have repeatedly experienced, to determine fluctuation by this method of examination.

As the tumour increases in size and rises out of the pelvis, it becomes somewhat more difficult to determine that it is not intimately associated with the uterus. It is often necessary to introduce the sound in order to determine this point, but this, as a rule to which I think there can scarcely be an exception, ought never to be done at the first examination. I have known a miscarriage, in more than one instance, brought on by neglect of this rule by competent surgeons. It not unfrequently happens that menstruation, or some loss resembling it, goes on for the first few months of pregnancy; and to assert the diagnosis between early pregnancy and an ovarian tumour just rising out of the pelvis, at a first examination, is a task which only the rash or the greatly experienced will undertake. If, with the patient on her back, one forefinger in the os uteri and the other in the fundus of the tumour, the two be found to embrace something which moves *en masse*, then it is, of course, certainly uterine. But, if the two fingers seem to be in relation with different structures, then the outside finger must search for the fundus uteri, and, after it has been found, and after it has been ascertained that the uterus is not enlarged, *and then only*, the sound may be introduced into the uterus and its relation with the tumour readily ascertained. The first matter, then, is to be certain that the tumour is not uterine. If it be not, and it be rounded, elastic, and capable of being raised to some extent out of the pelvis, then it is almost certainly ovarian. It still may be ovarian, even if fixed to the pelvis, though it is rare that ovarian tumours contract adhesions at such an early stage of their growth. If fixed, then, it may be a hæmatocele, or an abscess, or a soft tumour growing from bone; but the diagnosis of all these may be greatly assisted by the previous history and the general symptoms; and, finally, they may be set at rest by what may always be resorted to in cases of doubt—an appeal to exploration by the aspirator. The contents of an abscess, of a hæmatocele, or of an ovarian cyst will reveal their origin, and a solid tumour will be indicated by negative results. I have punctured many pelvic tumours with the aspirator, and have never seen any ill results; the practice I adopt being to make the puncture from the vagina, and if a cavity be found to ensure that its contents be evacuated as far as possible.

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* Since writing this essay, I have, however, seen two fibroid tumours of the uterus impacted in the pelvis, and capable of being pushed out of it; but in both cases the tumours were fundal and the uterus was retroflexed.

I may here say, that I have never found, in an ovarian tumour, that examination by the rectum revealed anything undiscoverable by the vagina.*

When an ovarian tumour has risen out of the pelvis, and has as yet met with none of the accidents to which they are liable, and which lead to complications, its diagnosis is a matter of ease. First of all, palpation will discover that it is a tumour by its resistance, and firm pressure on it with the fingers of one hand, and percussion on them with the fingers of the other, yielding a dull note, will exclude the possibility of the case being one of phantom tumour; and, as the tumour pushes the intestines before it upwards and to each side, in these regions a tympanic note will give the indications by percussion peculiar to uterine and ovarian tumours. To exclude the possibility of its being an uterine tumour, some care is necessary; but it is not difficult, when the educated touch has determined that the tumour fluctuates and that, throughout its extent, the peculiar wave passes which is found on gently striking any part of a bag of fluid while the hand rests on some other part of its circumference. A knowledge of what fluctuation is, and what this peculiar thrill is, cannot be communicated by description. If this wave be sharply communicated in every direction all over the tumour, then, in all probability, it is unilocular. A multilocular tumour, or one composed of two or three large cysts, may often be recognised by the practised fingers detecting a difference in intensity of the wave along different diameters of the tumour. There are two conditions, however, which must be carefully excluded from the possibilities, and, just because they are both very uncommon, their probabilities are every now and then overlooked. They are cystic disease of the uterus and hydramnios. In the former, the tumour will be found associated with the uterus, the latter moving along with it when moved, and being dragged upwards by it to an extent that ought always to make us cautious, and warn us to wait and watch.

Solid uterine tumours, besides the absence of fluctuation, have in addition two vascular signs which I have never met with in ovarian tumours; namely, an aortic impulse, which may be seen and felt, and an enlargement of the uterine arteries to be felt in the vagina. In one case, I satisfied myself that the tumour was uterine, mainly because, at the flexure of the vagina on one side, I felt an artery as large as the radial.

Hydramnios generally occurs with twins, and, where there is any doubt in the case, it is easily determined by getting the patient into the erect position and then making a vaginal examination. The child or children will be found settling down on the point of the finger, and can be easily felt through the thinned uterus. A slight push will send the mass floating up towards the fundus, whence it will sink in a few seconds. In this way, I have made a differential diagnosis between an unilocular ovarian cyst and a distended uterus.

If the tumour be found to be not uterine and solid, yet attached to the uterus and moving it to an extent which may lead to the belief that it is ovarian, then we have a choice between a dermoid cyst, a fibrous tumour of the ovary, cancer of the ovary, or a pedunculated fibrous tumour of the uterus. A dermoid cyst is rarely so constituted that it will not give fluctuation at some part or other, and its peculiar nodulated character, with here and there spots of bony hardness, may often betray it. Fibrous tumours of the ovary are very rare, and cancer of the ovary alone occurs in only one form, the fibroid, which is of extreme rarity. I have been fortunate enough to meet with one case of it, and to diagnose it in life. The signs on which I depended were, that the uterus was free; that the tumours were large, smooth, oval, and solid; that they grew rapidly, and that the patient's failure in health was not commensurate with the idea of a non-malignant tumour. The fibroid tumour of the ovary may be diagnosed by its slow growth and small size. There are, of course, a great many tumours that have been confounded with ovarian growths, and may be again; but to exhaust a consideration of them would be to exceed by far the limits of this essay, and to wander out of my own experience.

It is in the subsequent stages of the growth of an ovarian tumour that the main difficulties in diagnosis are met with; that is, between the time when a tumour has escaped from the pelvis and risen above its brim as far as the umbilicus, until it has reached its extremest size possible by the distension of the abdomen. Thus the sign of fluctuation, of so great use in the earlier period of growth, comes to have a decreasing value, because it is common to other diseases from which a large ovarian tumour must be carefully diagnosed, and a consideration of other signs is requisite. Thus inspection will reveal that in ascites the abdomen is usually enlarged uniformly, and this may also be the case in a large unilocular cyst; while in a multilocular tumour, as a rule, the irregularities of the surface will reveal the nature of the case either to the eye or to the fingers. Percussion will generally show, in an ovarian tumour, the characteristic distribution of dulness, though the accidental adhesion of a coil of intestine in front of the tumour may vitiate this indication. There is a very simple and neat way of confirming the value of the sign of percussion in such a case which I have had occasion to practise, and which will almost always decide between ascites and ovarian dropsy in such exceptional cases. It consists in mapping out the marginal area of clear percussion-note by a pen-and-ink line, and then ascertaining whether a clear note, obtained by percussing on a finger laid gently on the skin immediately outside that line, can be altered to a dull note by increasing the pressure. If this alteration take place generally round the line or throughout its greater part, then it may be taken for certain that an ovarian tumour is present. On the other hand, if there be a clear note somewhere over the area of the swelling which is not removed by firm pressure, but rather extended, still more if pressure bring out a clear note when dulness existed without it, then it will be evident that ascites is present, and not an ovarian cyst. The explanation of these signs is, that pressure round the margin of an ovarian tumour will bring it into more extensive relation with the abdominal wall, displacing the intestines, and this is most easily accomplished in the epigastrium; in the converse condition, when a clear note is produced by pressure in ascites, the abdominal wall is brought into contact with floating intestine, the mesentery of which was so short and the quantity of fluid so great, as to keep the structures apart without the pressure. We have, further, a difference between the percussion-notes of ascites and ovarian dropsy, in that the former readily alters its position, always appearing at the part of the tumour highest in relation to the patient's position. Thus, in a doubtful case, if there be a corona of clearness above the supposed tumour, extending from the hepatic to the splenic regions, and any alteration of position, such as lowering the shoulders and raising the pelvis, should alter the position of the area of clearness to the region of the umbilicus, then the case is almost certainly one of peritoneal dropsy. It very frequently happens that we have both ascites and an ovarian tumour present at the same time, and then it requires a careful consideration of the signs to prevent mistakes.

The *tactus eruditus* of a practised ovariotomist can recognise at once that there is a double wave of fluctuation; one superficial and rapid, due to the ascitic fluid, and another, deeper and perceptibly less rapid, due to the fluid in the cyst; but, to the beginner, such a complication is puzzling. If the fluid outside the cyst be small in quantity, its diagnosis is of no great consequence; but, if large, its non-recognition may lead to serious mistakes. For instance, in one of my recent cases, I satisfied myself that there was an ovarian tumour from the signs given by percussion, and that there was evidently some ascites from the double wave of fluctuation. The patient was of an enormous size, and the growth had not existed for more than six months. It was a grave question whether I had to deal with a multilocular tumour with one or two very large cysts and a small quantity of ascitic fluid, or with a small tumour and a large quantity of ascitic fluid. The only method of deciding the question would have been to tap the abdomen above the tumour by Mr. Wells's blunt trocar, and to have evacuated the ascitic fluid only; but to this the patient would not accede, and I had to begin the operation in serious doubt. The result showed that the plan referred to would have been a wise one, for it turned out to be a comparatively small tumour with an enormous ascitic collection, all the intestines having been pushed above the tumour. There are some minor signs which often serve to indicate the presence or absence of ascites to any marked extent, as the protrusion of fluid through the omphalic ring, carrying in front of it a layer of peritoneum like the finger of a glove. The uniformity of enlargement with ascitic fluid is greater than that with ovarian dropsy, though in the case just referred to this indication failed me; for it was the want of symmetry in the measurement that chiefly suggested that the great enlargement was cystic. The readiness of alteration of the form usual in an abdomen distended with peritoneal dropsy was also absent; for, in whatever position the patient lay, the same outlines were preserved; and the greatest proportional increment of measurement had occurred between the umbilicus and the pubes. This peculiarity is usually an indication of ovarian cysts or uterine tumours.

The enlargement of the veins often seen in the skin of the abdomen in cases of ovarian tumour is of no great assistance as a diagnostic sign, for it is present in almost every other disease simulating ovarian dropsy. Vaginal examination of a case in such a stage as we have been discussing gives very often totally negative signs, and these are generally satisfactory. Thus, if the uterus be normally placed and freely movable, then the indications are in favour of a long pedicle and the absence of pelvic complications. If, on the other hand, the uterus be drawn up out of reach, or is fixed and can be moved only with the tumour, more especially if it be tilted to one side, then the pedicle will probably be short. Some minor cysts may be felt at the roof of the pelvis, and, if there be much fluid outside the tumour, the recto-vaginal *cul-de-sac* may be felt distended. I have not yet, however, met with this sign of ascites; not even in the exceptional case I have referred to did it help me.

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* Since writing this, I have had the advantage of the instruction of my friend Professor Simon, in his *clinique* at Heidelberg, and my opinion of the value of rectal examinations has been very materially altered by subsequent experience.

Auscultation of ovarian tumours gives chiefly negative signs, but these are often of value, as in the case of perfect absence of intestinal gurgling over the tumour. A loud friction-sound is often heard, but this is only an indication of a dryness of the peritoneal surfaces where it is heard, and there is sure to be an absence of adhesions at the spot. The hydatid fremitus, so well described by Mr. Wells, I have not been fortunate enough ever to meet with.

Tapping, either for the removal of ascitic fluid or the contents of a cyst, is often a great help towards an accurate diagnosis. By the removal of peritoneal dropsy, we may discover the actual relations of an ovarian tumour, or we may even find that the supposed tumour has no existence. By the removal of the contents of a large unilocular tumour, or of the contents of one or more of the major cysts of a multilocular growth, we may determine the existence of pelvic adhesions, the existence of pregnancy, or of some other condition that may alter in great measure our views as to treatment. I am strongly of opinion that preliminary tapping in doubtful cases is not resorted to with sufficient frequency; for Mr. Spencer Wells has certainly disabused us of the idea that it is such a very formidable proceeding as was once taught and believed, and he has shown that it is very efficacious in gaining time and in clearing up difficulties. The chemical and microscopic examination of fluid withdrawn by tapping has not as yet yielded any greater certainty than any of the other signs I have previously referred to. No one can speak more authoritatively than Mr. Wells on any subject connected with ovarian disease, and he has written on this point as follows. "While it is certain, therefore, that, in cases of doubtful diagnosis, complete reliance cannot be placed on the chemical characters of fluid removed from the abdomen, and that the rule of paralbumen being the characteristic of ovarian fluids, and fibrin of serous fluid, and the conjoint presence of paralbumen and fibrin pointing to a mixture of the two fluids, is open to many exceptions, it is still true that the rule is sufficiently often correct to become an aid of some value in arriving at a diagnosis, and to encourage us to attain more accurate knowledge by more extensive observation and more complete research."

Great stress used to be laid in former times on the diagnosis of adhesions; but, with greater experience of the disease, we are now led to disregard almost wholly any adhesions that are not visceral or pelvic. Parietal adhesions seem to be of very little consequence; and, if of any great extent, they may be diagnosed, provided the tumour be not of extreme size, by carefully watching the movements of the tumour during respiration. If it be free in front, its upper margin may be seen gliding under the abdominal wall synchronously with the play of the diaphragm. Mr. Wells states he has seen the umbilicus move with an adherent tumour during respiration. Perhaps, the most trustworthy point in the diagnosis of adhesions is a careful inquiry into the patient's history, for the occurrence of febrile attacks accompanied by localised abdominal or pelvic pain.

The diagnosis of the variety of tumour in each case is of importance in guiding us to its treatment; therefore, it is not for the mere exercise of ingenuity that I recommend every practitioner dealing with a case of ovarian tumour to exhaust every point on which I have dwelt, together with many others to which I have not alluded, but which the individual peculiarities of his case and his personal shrewdness may suggest. Above all, let me urge the necessity of reasoning by exclusion, and of making repeated examinations at intervals before any certainty of diagnosis is felt. Three times it has occurred to me to remove ovarian tumours which had hastily been set down at an early period of their history as floating kidneys, that diagnosis being made in all three cases because the wish was father to the thought, and because the practitioners who made it had not learned the value of patience. It is this want of patience that is to blame for those melancholy instances of blunders, altogether unpardonable, where the abdomen has been opened in cases of normal pregnancy mistaken for ovarian tumours.

A final means to be employed in the diagnosis of ovarian tumours, a *dernier ressort* in cases of doubt, is the exploratory incision. Such a proceeding is quite justifiable in any case of abdominal tumour which has been watched for some time, and where none of the ordinary indications suffice to make its nature certain. It is also to be recommended as a preliminary to the surgical treatment of some tumours, either uterine or ovarian, when the possibility of removal is doubtful, and the relations of the tumour can be ascertained only by exploration. The mortality of exploratory incisions has, in Mr. Wells's practice, seemed to have been small enough to support this opinion, and out of five I have not lost one.

[*To be continued.*]

ON MODIFIED SYPHILIS.

By J. MORGAN, F.R.C.S.I.,
Surgeon to Mercer's and to the Westmorland Lock Hospitals, etc., Dublin.

THE remarks of Surgeon-Major Oliver in the number of the JOURNAL for May 9th, 1874, lead me to hope that this subject, which I ventilated at the meeting of the Medical Society of London on February 9th, has attracted attention, and will lead practical observers like Mr. Oliver to throw aside the bondage of preconceived opinion, and will disturb the blind faith which is accorded to the dicta of observers on the Continent more especially. Why, in these countries, where, from density of population and disregard of compulsory legislation, the venereal disease in all its forms is particularly rampant, we should be less capable of forming accurate deductions, I cannot understand; yet we find men with vast fields of information and observation in their own immediate sphere prefer to follow, and even strain to accept, the dogmas of foreign syphilographers. We all admit that climate, habits of life, legislative interference, diathesis, etc., have wonderfully modifying influences in other diseases; still it is constantly endeavoured to mould our deductions so as to suit the views that have been dogmatised and sanctioned elsewhere as to this affection. The maxim *nullius addictus jurare in verba magistri* should be specially applied in investigating the phenomena of this disease, and all deductions should be tested by the common sense of applied facts and observations. The dualists have issued the dogma of the existence of an infecting and a non-infecting sore, but, to avoid the difficulties which will constantly present themselves, have invented the mixed chancre or sore—a source which introduces the local effects of the non-infecting with the constitutional results of the infecting ulcer, or a sore presenting a convenient amount of duplicity of character to explain any break in the chain of proof as to the duality of the venereal sore. Others, again, will lay all the errors of diagnosis to the want of discerning power in the surgeon, who, they hint, cannot distinguish induration or appreciate the mild degree of induration termed "parchment", from the dense and cartilaginous feel of a cartilaginous induration. Others, again, and, indeed, as Mr. Oliver remarks, it is a not unfrequent suggestion, say, when instances are brought forward totally subversive of the dual theory, that the surgeon did not see or discover the real infecting sore—a speedy and easy way, and an extensively applicable one, no doubt, of overcoming the difficulty. While, as my own observation shows me, strict duality cannot for a moment be admitted, yet the rule holds good that, from the true indurated chancre, constitutional symptoms are apparently invariable, yet, from the non-indurated sore, constitutional signs of a modified and usually milder nature are not infrequent. In hospital practice, I see constantly soft patchy sores in the male followed by constitutional signs. Mr. Oliver, a staff-surgeon, gives his experience for sixteen years amongst the military; he says the modified form of syphilis, or descent modified syphilis, is in 70 per cent. of "the primary syphilis" patients, the form met with; and that "not more than 30 per cent. of these can be considered as true syphilitic chancre, but merely the local evidence of the transmission of secondary syphilis"; and he remarks, in confirmation of the modification by descent of syphilis, that, while constitutional evidences will follow both the indurated and non-indurated sore, yet that the cachexia (which renders syphilis so formidable) is absent, or reduced to a minimum, in those instances where secondaries follow the non-indurated sore; this evidence, coming from a practical source, and based on statistical observation, is very remarkable. Surely, if they followed from a true indurated sore which was not found out, the symptoms should be formidable, whereas they were found to follow the type of "absence of cachexia" and of evidences "easily dispelled"; in fact, modified syphilis required but modified treatment. It is satisfactory to find thus an approximation at least to the solution of the difficulty, in reconciling the various treatments recommended by army surgeons more especially; and this explains, in a great measure, why it is that, in military practice, syphilitic evidences usually are docile to treatment of a comparatively simple nature, while in private practice, where the disease is more usually obtained from the better class of female communicators, the true virus is received.

At the meeting of the Medical Society of London, I showed, from the experience of the Lock Hospital in Dublin, where a vast number of patients came under my own observation, that the occurrence of the indurated sore in the female was rare indeed, while constitutional consequences were constant. This observation was confirmed by testings made, and statistics taken, where soft sores capable of inoculation, and often accompanied by buboes, were nevertheless followed by constitutional signs. The records of the various Lock Hospitals in this country prove this also.

"Any and every form of sore, whether with or without induration, may, in the female, be followed by constitutional signs." So says the surgeon to the Curragh Lock Hospital, and it is idle to suppose that he is incapable of forming a judgment. The surgeon to the Cork Lock Hospital, also of great experience, says: "Practically, I know no symptom which will enable me positively to pronounce on the contagiousness of a given sore in the female."

I am sufficiently patriotic to suppose that these surgeons, and many others at home, are as competent to observe, and are as truthful in their records, as those on the Continent; and, when I find these results corresponding with what I see every day both in male and female patients, there is no alternative left but to believe that what is seen abroad does not concern the same stamp of the disease as here; some modifying influence must exist. I believe it to be the fact that syphilis is capable of modification by descent, and that the vast majority of primary sores are not derived from sores, but from the inoculated discharges of constitutionally infected women. As Mr. Oliver remarks, "soldiers' women" have usually fallen to the lowest order, and have been saturated with the syphilitic taint, the local evidences of which have long disappeared; they are, nevertheless, capable of giving a sore or sores which have by no means the aspect of the typical chancre; I have over and over again tested this property of inoculability, and produced a sore on the patient's self, or on others also syphilitic, which, though typifying the chancroid or soft sore aspect and conduct, must have carried with it the virus of its parent. As these inoculated sores produced the same results as inoculations from the recognised soft sore, we may fairly assume the exciting cause was the same. All agree that the soft sore is inoculable on syphilitic patients, and pursues a certain course; but, by direct testing, I have shown that, though no sore exists, the discharge of a syphilitic female produces on syphilitics the sore identical with that produced from the soft sore or chancroid; hence we have indicated the source, and a very abundant one, of the infection of soldiers alluded to, under the aspect of the soft sore or chancroid, followed by constitutional signs usually of a milder type, fortunately, and without constitutional cachexia.

Some of the testings I have made are very remarkable, and point to this source of contamination with much certainty. The following is a good illustration, as proof of the inoculative power of the discharge of constitutionally infected women, such as are admitted constantly to the wards of the hospital.

A very fine ruddy complexioned girl, aged 20, had been some months previously under treatment for intense syphilis, with ulcers of a rupious character. On admission (July 6th), she was suffering from a reopening of an extensive ulceration of the nates, and from severe syphilitic pains. She also had an abundant vaginal discharge. No primary sore of any kind was to be discovered.

From a single drop of the discharge, the following inoculations were made, each with fresh and never previously used pins' points.

July 7th. On herself; produced an intense sore, which lasted for several weeks.—On Carr, on whom inoculation from a simple discharge of a non-syphilitic woman had already failed; produced a sore which lasted several weeks.—On A. Kavanagh; produced a smart sore.—On J. Byrne; produced a regular chancroid sore.—On Julia Carroll; produced a regular chancroid sore.—On H. Conroy; produced a regular chancroid sore.

Nothing much more active as a virus could be desired, yet the patient had no primary sore whatever; and the manner in which the inoculations were performed, and then covered with watch-glasses, rendered any extra virus incapable of being admitted. In this instance, it might be said that the patient carried into hospital the virus which was capable of producing these inoculations. Such a possibility as this I, however, disposed of by another observation, which I made thus, as proof of the inoculative power of the vaginal discharge, and of its giving origin to a pustular sore, capable of reproduction in its kind.

M. White, aged 20, with tumid labium, patches, vaginal discharge, no sore to be seen, indurated inguinal glands, alopecia, pains, and cachexia—admitted June 1st. The following inoculations were performed:

June 22nd. With M. Burke's discharge; failed.
June 23rd. With Conroy's discharge; failed.
June 25th. With Eustace's discharge; failed.
June 27th. With her own discharge; succeeded.—From her discharge on M. Lewis; succeeded.—From her discharge on A. Healy; succeeded.—From her discharge on M'Carthy; succeeded.—From her discharge on M. Burke; succeeded.—From her discharge on C. O'Donohoe; failed.

June 29th. From her discharge on A. Healy; succeeded.—From the auto-inoculation from her own vaginal discharge of the 27th on M. A. Carroll; succeeded, and produced a smart sore.—From her discharge on J. Warren; succeeded.—From her discharge on J. Byrne; succeeded.

June 30th. From her discharge on Bayley; succeeded, and produced a sore lasting for several weeks.—From her discharge on M. Eustace in two places; succeeded.

July 2nd. From Lewis's pustular sore (produced by the inoculation of vaginal discharge of June 27th) on Leonard; succeeded.

[*To be continued.*]

THE PATHOLOGY AND TREATMENT OF SPASMODIC ASTHMA.[*]

By C. THEODORE WILLIAMS, M.D., F.R.C.P.,
Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

SPASMODIC asthma, in its various degrees and complications, comes across the path of all of us; and, although it is happily not a fatal disease, yet it is one which gives rise to a large amount of suffering, and tends to cripple many active-minded and otherwise healthy people. It is a complaint, too, which has not received as careful a study at the hands of medical men as it deserves; and it must be confessed that it happens not rarely that the patient knows about as much concerning the way of treating his complaint as the practitioner who is attending him. It is difficult to avoid this, where idiosyncrasy and multiple causation exercise so large an influence; but it nevertheless behoves us to study with unswerving perseverance the leading features of every case, and to aim at arriving at a classification which may in future prove a satisfactory basis for successful treatment. Now, in order to get a just idea of the pathology of spasmodic asthma, we should contemplate it in its purest form, unalloyed by bronchitis, its occasional accompaniment, uncomplicated by emphysema, its frequent result. Such an example presents itself in cases arising from inhalation of dust or certain strong-smelling particles, such as ipecacuanha, where the attack passes off on removal from the exciting cause. A person with healthy lungs, and free from any suspicion of cough or short breath, inhales the dust of a threshing-floor, experiences a sense of oppression in his chest, and finds it difficult—aye, almost impossible—to draw a deep breath; he is aware of a whistling sound accompanying each act of respiration, and speedily attempts to withdraw from the exciting cause. If he do so, his breathing will soon become easy, and the spasm will leave no after-result on his lungs. If we could examine his chest during the dyspnœa, we should find the following physical signs: sibilant and sonorous inspiration at the root of the lungs, and almost entire absence of respiration in the lower portions. There might possibly be slightly increased resonance of the chest; but, after the attack, none of these signs will be present, and the respiration-sounds will be perfectly normal. This is the purest and perhaps the slightest form of asthmatic dyspnœa. If the individual, however, remain longer exposed to the irritant atmosphere, his breathing will become more and more difficult, and his efforts to introduce air into his chest in proportion greater. By holding on to some convenient object, he will endeavour to fix his shoulders as high as possible, so as to bring all the muscles of respiration, both ordinary and extraordinary, to his aid; and yet with little relief, for his respiration only becomes prolonged and more difficult; an inharmonious concert swells within him; his thorax becomes more dilated with air, which each inspiration adds to, and imperfect expiration hardly diminishes; the diaphragm is pushed down; and thus the heart, liver, and spleen become for the time displaced, while his dusky and livid countenance shows how much the circulation is obstructed. If we now examine his chest, we find it hyper-resonant even in the cardiac and hepatic regions; sibilant and sonorous rhonchi coming and going in all directions, the expiration loudly prolonged and wheezy, and the respiration altogether more marked where the bronchi lie than where there is only vesicular tissue. I would draw your attention especially to the transitory character of the physical signs, as being especially indicative of spasmodic asthma. The wheezing sounds, which were audible over a certain spot one instant, become inaudible in the next, and we find inharmonious noises spring up under our ears in all directions. Even from this state the sufferer may quickly recover without permanent lesion; but, should the attacks be often repeated, the emphysema, temporary during the fit, will assume a permanent character, and he will become, even in the intervals, more or less wheezy and short-breathed.

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[*] Read before the Brighton and Sussex Medico-Chirurgical Society.

This pure form of asthma may be excited by most of the local causes which bring on the complaint—by dust; by vegetable irritants, as the pollen of grasses; by chemical vapours, or climatic influences; by bronchial inflammation; but the form to which bronchial inflammation gives rise is somewhat more complicated in its commencement and results. A child has an attack of hooping-cough or measles, in which bronchitis has been the principal feature; and, after that time, it is liable to recurring attacks of spasmodic asthma, mixed up with catarrhal symptoms. The features by which these cases are distinguished from those of ordinary bronchitis are, first, the nocturnal orthopnœa; secondly, the paroxysmal character of the dyspnœa. Cough and expectoration are present, and often precede the asthmatic symptoms, and remain long after they have passed away. This form of the disease is not always so severe in character, but it leaves more marks behind it. The bronchial tubes, in consequence of the combined effect of inflammation and spasm, are apt to become somewhat thickened; and, as the obstruction in them depends not only on the muscular contraction, but also on this thickening and on the often tenacious expectoration, it is apt to last longer, and to give rise to more decided emphysema.

Among adults, too, catarrhal attacks may develope spasmodic asthma of this type; but, in investigating the origin of the complaint, we must bear in mind how, in this country, almost every malady, great or small, is assigned to a cold, and be cautious as to accepting it as a sole cause. In many of these cases, a hereditary predisposition is at the bottom of it; and the catarrh only acts as an exciting cause, in the same way as dust or any other mechanical irritant. A fit of asthma varies considerably in length; it may pass off in a few minutes, or it may last for days, during which time the sufferer undergoes a spell of starvation; for, as a rule, no solid food is taken during the attack. In the worst paroxysms, one often is inclined to wonder whether the patient will not be suffocated; and, when relief does come, it is so welcome, that its reason is not always inquired into. In many severe instances, the accumulation of carbonic acid in the lungs, which the spasm brings about, is the cause of its relaxation; for thus partial anæsthesia of the mucous membrane is produced, and the cramp relieved. An example of this occurred in a needlewoman under my care in the Brompton Hospital. In one of her violent attacks, she was sitting up in bed, resting on her hands and gasping for breath, the respiration being so noisy that loud cooing sounds were audible even at a distance. At length, her attempts at respiration became quite futile, and the chest seemed extended to its utmost capacity. The inspiratory muscles still worked spasmodically five or six times. She then became livid, and fell back exhausted; and soon afterwards the spasm relaxed, and she recovered.

A certain number of cases of asthma are closely associated with skin-disease, generally in the form either of eczema or of psoriasis; and it is not uncommon to find the attacks alternating with the appearance of this eruption, and subsiding when that is fully developed. Another set are those connected with gout, generally arising in advanced life; and both these classes of cases probably have their origin in a state of blood which acts more or less as an irritant to the lungs.

Let us now direct our attention to the pathology of the disease, and briefly discuss some of the theories which have been offered of its phenomena. The latest is that of Dr. Berkart, who states (BRITISH MEDICAL JOURNAL, Nov. 8, 1873) "that bronchial asthma is a symptom which accompanies diseases of the lungs in which deficient elasticity is the prominent feature, and in consequence of which the existing expiratory forces are only able to overcome an obstacle to respiration after prolonged and increased efforts"; also, "that asthma is no independent disease, no dynamic affection of a nerve; but that it really forms a link in the chain of diseases which commence with affections of the bronchi and terminate with emphysema; whilst asthma itself represents the stage intermediate between these two". He maintains that, when the emphysema *is* formed, we have to consider that its formation is by no means the pathological work of a day or week; and he affirms that true substantive emphysema is seldom or never found in children.

The only just way to discuss a new and somewhat bold theory is to apply it closely to the circumstances which it professes to explain. Now, how, I would ask, can diminished elasticity of the lung explain a pure paroxysmal attack of asthma, such as I have already described, which leaves no signs behind, if the fits be short, or be promptly relieved? If the lung-tissue have partially lost its elasticity, it can seldom be regained, and the lesion becomes permanent and probably progressive; but this is obviously not the case, as the individual recovers, and his breathing becomes as free as ever. Dr. Berkart does not explain how this diminished elasticity is brought about; nor does he apply its existence to the phenomena of an asthmatic seizure. His theory also partly accounts for cases in which asthma is brought on by mere mental excitement or temporary climatic influence. It is true that, when spasmodic asthma recurs frequently, and especially when it is attended with bronchitis, the continued constriction of the upper and middle bronchial tubes, rendering both inspiration and expiration difficult, leads to an overdistension of the lungs with air; and this, if prolonged, injures their elasticity, and they become permanently emphysematous. But this is a *consequence*, not a *cause*, of the asthmatic fits, which are originally and essentially spasmodic and bronchial, and may remain so throughout life. However, I am surprised at Dr. Berkart doubting the existence of emphysema of a substantive character among children, as I am sure many here must have detected it in children who have had frequent attacks of bronchitis. Dr. Berkart does not seem to recognise the fact that in adults, as well as in children, emphysema may be of a purely temporary kind. During attacks of bronchitis and asthma, the percussion-note may be raised while the breathing is difficult; but, on the cessation of the obstruction, the percussion-sound may again become normal; and, even if the manometric measurements, which Waldenburg is mentioned as having carried out, give some evidence of slight dilatation of the chest after asthma, opposed to this we have the fact of asthmatics, in the intervals of their attacks, being able to undertake great exertion without inducing any fresh symptom; so the emphysema cannot be very extensive. Lastly, with reference to this theory, we must not forget that it involves a gloomy prospect for the unhappy asthmatic, such as clinical facts do not warrant. He is doomed to diminished elasticity of his lungs, and emphysema; and he is told that his breath will only become shorter and shorter the longer he lives, and render his life, if not a short one, in time a truly pitiable one. But, fortunately for him, such is not the case; and we can point to plenty of instances where asthmatics have been cured without the occurrence of any such melancholy results, and have been enabled to follow comparatively active occupations for the remainder of their lives. We see that this theory does not at all explain the chief features of bronchial asthma. Let us now turn to another one.

Laennec's theory of asthma was, that the attack depended on spasm of the bronchial muscles, which he had never seen, although Reisseisen had described them. It remained for my father, Dr. C. J. B. Williams, to establish their existence by means of a series of experiments, carefully conducted, on mammals. Dr. Williams fixed a hæmadynamometer to the trachea of various animals, such as oxen, dogs, and rabbits; and then applied stimuli, electrical, mechanical, and chemical, to the lungs and air-tubes. It was found that galvanism, when applied to the margins* of the lobes, caused a small rise of liquid in the tubes; but, when applied at right angles to the bronchi themselves, produced a considerably greater effect; most effect, however, when the current was passed from the margin or even the middle of the lobes to the brass pipe of the hæmadynamometer, which was in the direction of the large air-tubes—the rise of the liquid then being from half to one-and-a-half inches; and, by repeating the contact after intervals of two or three minutes, these results continued for more than an hour. On testing the contractility of small parts of the larger tubes, it was found that the greatest extent of motion was produced on passing the current through the posterior part of the two great divisions of the trachea, where it subdivides into the large bronchial tubes. In the trachea, and in the tubes below, the effect was smaller, but still well marked. Contractility was most marked in the smaller bronchial tubes, in which little or no cartilage existed, and around which the muscular coat formed a continuous circle. Even mechanical irritation of the tubes, such as was produced by scratching the epithelium or cutting across the cartilages, gave rise to considerable contraction, enough in many cases to cause the ends of the cartilages to meet. It was not uncommon to find the larger tubes contracted to one-half of their diameter; and in one case, a smaller tube, about the size of a goose-quill, was entirely occluded. The contractility seemed to be exhausted by continued stimulation, but, after rest, soon recovered. Direct irritation of the pneumogastric nerves was also found capable of bringing on these phenomena, which, as regards their intensity, depended to some extent on the amount of air in the lungs. If the lungs were collapsed, the stimuli acted readily; if inflated, the effect was more slowly produced, but still it *was* produced.

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* This slight contraction may be explained by Dr. Klein's recent researches on the minute anatomy of the lungs (*Proceedings of the Royal Society*, January 1874); for he demonstrates the existence beneath the pulmonary pleura of a meshwork of bundles of unstriped muscle in guinea-pigs, rats, and rabbits, though sparingly in the two latter. The muscular bundles appear to radiate from the apex to the base of the lung, and are most abundant on the anterior and internal (mediastinal) lung-surfaces. When the lung becomes the seat of chronic inflammatory processes, the muscular bundles increase in breadth and in number, chiefly over the diseased portions.

These experiments have been repeated by various observers, unsuccessfully by Budd and Wintrich, and successfully by Longet, Volkmann, and Valentin. Wintrich's experiments, however, were not entirely unsuccessful. He noticed that, in the smaller and muscle-surrounded bronchi, contraction took place under the influence of electricity, or even of a current of cold air—a very suggestive experiment, which ought to have brought him to a better conclusion than that the contraction was due to elasticity of the lung; else why should he not have obtained the same phenomena from the vesicular structure of the lung, where no muscular tissue exists? Longet was more successful than Dr. Williams in stimulating the pneumogastric; for, in passing a stream of electricity across several of its branches, he caused visible contraction of the smallest bronchi in horses and in oxen. Recently, the experiments of Paul Bert have confirmed the above. He also dwelt on the fact of inflation of the lung considerably interfering with the results, and explained the failures of some of the observers, as well as his own previous ones, in this way. He seems to have applied electricity only to the margins of the lungs, and not to have made any relative observations on the bronchi of various sizes, and on the lung-tissue, or his results would probably have been more striking. He found that mammals yielded slight contractions, but that reptiles, such as tortoises, lizards, and serpents, yielded it more strikingly; and the contractility of the tubes seemed to last a considerable time after death. Dr. Berkart offers as an objection to the "bronchial spasm" theory, that in catarrhal asthma the bronchial muscle is so soaked with the exuded serum, that this would preclude its contraction. Why it should do so, he does not explain; and the idea is disproved by the fact that, in many of the above experiments, the bronchi did contract, in spite of containing a large quantity of bloody frothy mucus. It is probable, also, that in all cases of acute bronchitis, where there is certainly no lack of secretion, a certain amount of bronchial spasm is generally present, causing the wheezing and prolongation of the breath-sounds. There would, then, appear to be ample muscular machinery for the occurrence of spasm; and the next point of our inquiry is, How is it set in action?

The nerve-supply to the lungs and bronchial tubes is very abundant, being derived from the two pneumogastrics, the spinal nerves, and the third and fourth thoracic ganglia of the sympathetic. The pneumogastrics give off, within the thorax, anterior and posterior pulmonary branches. The anterior, passing in front of each lung, receive branches from the sympathetic ganglia, and form a small plexus. The anterior pulmonary, from which nerves are distributed to the bronchi, chiefly in the anterior portions of the lung, posterior pulmonary branches, with branches from the left recurrent laryngeal, and from the third and fourth thoracic ganglia, form the posterior pulmonary plexus. The branches of this very complicated plexus are thickly distributed to the bronchi, forming a network which accompanies these to their finest divisions; and, in connection with these, Remak discovered small ganglia. Here, then, are ample links to connect the bronchial muscle with the outer world, and to account for the various phenomena of a fit of spasmodic asthma. When the cause is a local one, acting directly on the bronchi, as, for instance, dirt or pollen, or, again, climatic influence, the spasm may be induced by reflex action through small ganglia connected with the pulmonary plexuses.

Wintrich's experiment of the effect of the cold air on the bronchus of the lung separated from the body gives strong probability to the above proposition, as there is reason to believe that cold air and other irritants can produce a spasm in the living body, as they succeeded in doing so in the dead one. This causation would suffice to explain the phenomena when only a slight wheeze or piping sound is heard, and the thoracic muscles are not called into play. If the local effect be more severe, then the pneumogastrics become largely involved; and, the irritation reaching the medulla and spinal cord, a motor effect takes place through the upper cervical, the phrenic, and the dorsal nerves; and then the diaphragm, the scaleni, and the external intercostals, are thrown into contraction. Thus can asthma arising from local causes be explained. How, then, from general causes which act indirectly through the lungs, as asthma from indigestion and emotion? Where emotion, or fright, or laughter, starts the fit, it must be considered that the irritation is centric, and causes a motor effect on the pulmonary plexus through the pneumogastrics. Where, again, indigestion excites it, the sensation passes through the gastric branches of the pneumogastric to the pulmonary plexus, and is thence reflected through its motor filaments. Lastly, where a fit is induced by a certain state of blood, as from gout or skin-disease, we may regard the blood itself as causing the local irritation.

Before quitting the pathology of this complaint, I should like to say one word respecting the asthmatic tendency. Why is it that, after measles and hooping-cough, children are more prone to asthma than before? It has been established that often, after these complaints, enlargement of the bronchial glands takes place; and Biermer has noted the occurrence of bronchial spasm in connection with enlarged bronchial glands involving the pneumogastric nerve. The view of Dr. Williams and myself is, that these glands become enlarged, and exercise slight pressure on the pneumogastric nerves, which is sufficient to cause the bronchial muscles to be more than ordinarily irritable; and thus spasm may be induced by even slight causes. Moreover, heredity may be put down as an important element in this tendency, as Dr. Hyde Salter has shown by his statistics; and, when we add the fact that it is not rare for consumptive parents to beget asthmatic children, and even for cases of cured phthisis to drift into well marked spasmodic asthma, the causation of the asthmatic tendency may be said to be pretty well explained. As a last link in the long chain of evidence by which the nervo-muscular theory of asthma is established, we may cite its close connection with other nervous affections. It is found alternating with cardiac angina, with gastrodynia, and with neuralgia in its varied forms; and I have even seen it closely connected with hysteria.

TREATMENT.—I feel rather timid in approaching the question of the treatment of spasmodic asthma, as I believe it is generally considered one of the most intractable maladies to which flesh is heir; and one cannot help recalling cases where all known drugs have failed, and yet the patient has recovered under the influence of fright or mental emotion, or some other irregular agencies, whose performances we have not yet been able to bring under our sway. Still, the treatment of asthma is not so unscientific as is usually thought; and a broad rule may be laid down, that the removal and avoidance of the exciting cause is the first requirement. When this is done, many of the cases arising from local causes, where no important lung-change has occurred, are relieved at once, and often cured. Such are the instances arising from dust and chemical irritants; also hay-asthma. In these cases, removal from the irritating atmosphere will often stop the whole train of symptoms. In the same way, where bronchial inflammation causes the spasm, it will subside if means be taken to subdue the inflammation, as by salines and expectorants, combined with some mild antispasmodics. In many cases, however, of asthma originating in bronchial inflammation, previous attacks have set their seal on the lung, either, as I have suggested above, by enlargement of the bronchial glands, or by some thickening of the walls of the larger bronchi, or, again, by inducing emphysema. Here iodide of potassium, after the inflammatory symptoms have passed away, does great good when given in doses of three to five grains, and was a favourite remedy of my old teacher Trousseau. Then, again, where the attacks depend upon a morbid state of blood, the treatment resolves itself into that of the particular state of blood complained of. The gout, or the syphilis, or that which causes the skin-disease, has to be treated, and then the asthma will be relieved. It is in skin-diseases alternating with asthma, where both diseases owe their origin to the same cause, that arsenic is invaluable. A steady perseverance with the drug causes both the eruption and the tendency to spasm gradually to disappear.

Where hereditary influence is the predisposing cause, the prospect is not a cheerful one, as we may look for its origin in the frame or the lung-structure of the patient. It is in these cases that I am in the habit of using gymnastics largely, and with decidedly good results. I instruct my patients to use Hodge's gymnast or some similar instrument, by which the upper extremities and upper ribs are raised, and the shoulders thrown back, and thus the asthmatic stoop is to some extent remedied. For the same purpose, a trapeze has been, by my direction, erected in the Brompton Hospital; and many of the asthmatic patients are set to swing on it for short periods every day. These exercises, combined with cold sponging, and as much out-door life as possible, to avert the tendency to catarrh, seem to me the most satisfactory general treatment in pure hereditary spasmodic asthma. In the majority of cases, asthma, being a pure neurosis, must be treated as such; and we must regard bronchial spasm in the same light as we do other muscular spasms, such as those of the intestine and urethra. It must be *relaxed, and kept relaxed*. The constant influence of the atmosphere on our lungs affords an explanation of how it is that climate often avails more in the treatment of asthma than medicine. "Find me a climate in which I can breathe, and I will for ever bless you," has often been addressed to me; but in some instances this investigation is of so empiric a nature, that it is only the individual himself who can arrive at its solution. However, a careful study of climatic influences has enabled us to arrive at certain principles which answer for the majority. There is a preponderance of evidence in favour of the climates of large and populous cities, and chiefly of the most smoky ones. Often and often have I had patients sent up to me from the country, especially from some of the damp close valleys in the West of England, where asthma is very rife; and their troubles have sometimes ceased the first night they passed in town, even before they had seen me, or undergone any special treatment. In most, however, the improvement is more gradual; and here I cannot forbear mentioning a remarkable case of a gentleman aged 55, sent to me by Mr. Mules of Ilminster, after reading my lectures on Asthma, published in the *Lancet*. It was a case of arrested phthisis of twenty years' standing, with considerable consolidation of the right lung; but the patient had been free from cough for many years till the last three winters, and since the last winter he had been subject to distinct attacks of spasmodic asthma, which came on each night, and passed away in the morning. After an attack of inflammation of the lungs in the summer, the fits became more frequent; and the breathing was so bad, that he was confined to his room, and generally to his bed; and he had not lain down or slept soundly for several months. He had tried stramonium, tatula, belladonna, opium, and a number of remedies, with only temporary relief. When I saw him (October 17th), his breathing was slow and difficult; and the least movement, even walking from the cab into my consulting-room, produced a spasm. His legs were œdematous, and the urine scanty, high coloured, highly albuminous, but of good specific gravity (1024). Besides the partial consolidation, there were signs of extensive emphysema, and abundance of wheezing and sonorous rhonchi over the entire chest. The asthma gradually subsided without the aid of antispasmodics. He slept two hours the first night in town, in Hanover Square, and gradually increased this amount until, at the end of ten days, all spasm had disappeared, and he slept well and soundly. Under the use of diuretics, the œdema and albuminuria vanished in three weeks, and the extent of emphysema in the chest was considerably reduced. He remained in London, under my charge, for three months, and regained his former vigour, being able to walk for several miles daily, and to enjoy life. The presence of albuminuria and dropsy in this case can hardly be ascribed to any other cause than the obstruction to the circulation which the asthma and emphysema gave rise to, inducing some dilatation of the heart and congestion of the kidneys; for, on this obstruction being removed, the renal symptoms disappeared.*

I think, therefore, that, for asthma at least, a claim may be put in for the climate of smoky old London, the peculiarities of whose atmosphere are, first, its dryness; second, its containing less oxygen, and more carbonic acid and free carbon, than that of the country; and these properties exercise a deadening influence on the neurosis of asthma.

The medicines useful for neurotic asthma are chiefly antispasmodics, and these may be divided into stimulant and sedative. Under stimulant, I include alcohol, strong coffee, and such medicines as spiritus ætheris and nitrite of amyl. I do not find these, as a class, so successful as the sedative antispasmodics, though occasionally spiritus ætheris and coffee have given relief. The nitrite of amyl has generally failed in my hands, and it is a very dangerous medicine to entrust to patients.

The sedative class is a large one, embracing as it does stramonium, belladonna, Indian hemp, lobelia, tatula, tobacco, and many others; and, whether smoked or taken internally, these will occasionally work wonders. The various pastilles and papers are often effective; most of them, like the famous nitre-paper, producing, by their combustion, carbonic acid, and thus providing us with a concentrated form of town-atmosphere. In the most severe spasms, almost everything fails, because it seems impossible to introduce drugs into the system through the mouth. Here, hypodermic injection of morphia or atropine often gives instantaneous relief; but it is not admissible if much emphysema be present. The same rule applies to chloroform. Ether, or possibly spiritus ætheris, may be tried in these cases, where, by the bye, I have found emetics fail. Where there is no marked lividity, chloroform generally gives signal relief, from twenty to sixty drops being usually sufficient. As this, however, is unsafe to trust to the patient himself, I tried chloral-hydrate, and with such good results, that I freely recommend it. In slight cases, it should be administered in doses of twenty to thirty grains once or twice in the night. In severe cases, fifteen or twenty grains should be given every three or four hours until sleep is induced. In by far the majority of instances of neurotic asthma, this treatment has succeeded in allaying the spasms, and in diminishing, or even abolishing, the attacks. For particulars of several cases treated by chloral, I must refer you to the forthcoming volume of the *Clinical Transactions*, where I have recorded some remarkable instances, and would strongly urge you to give a fair trial to this method of treatment.

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* This patient afterwards returned to Somersetshire, and remained tolerably well till the hot weather, and luxuriance of vegetation induced thereby, caused a return of the asthma, and necessitated a withdrawal to London.

PENETRATION OF BOWEL BY A STAB: RECOVERY.

By WILLIAM COOPER, M.R.C.S., Widnes, Warrington.

At midnight, on November 2nd, I was called to see T. B., a farm-labourer, thirty-five years age, who had been stabbed in a drunken fight. On arriving at the patient's home, I found him lying on a bed, nearly pulseless, and suffering from great collapse. On examining him, I found three incised wounds on the left side of the abdomen, and one on the buttock (this was only a flesh-wound). Through the lowest and largest of the abdominal wounds, which was situated midway on a line from the umbilicus to the anterior superior spine of the ilium, there protruded about five feet of intestine. On examining this carefully for perforations, I found two corresponding incisions in the intestine: one, where I suppose the knife entered, measuring about one inch and a half; while the one where it emerged was about one inch in length. The two smaller abdominal wounds lay on a level with the umbilicus, about two inches apart. These had both penetrated the abdominal cavity, but no bowel protruded; only a small piece of omentum, through the one nearest the umbilicus. After administering a little brandy, the patient rallied; and then, after sponging the intestine, and removing all clots from the interior of the bowel by gentle pressure, the wounds in the intestine were closed with a very fine silk thread, and the bowel returned, to do which, the enlarging of the external wound was found necessary. The omentum protruding from the other wound having been pushed back with a director, the external wounds were closed with sutures, and a pad of dry lint placed over them. No chloroform was given, as, on attempting to administer it, his pulse sank rapidly. There had been great hæmorrhage from the largest wound; he was, therefore, ordered half an ounce of brandy in a little milk every two hours; and, having in the course of a few hours rallied sufficiently, he was given two grains of powdered opium, and one grain was ordered to be taken in three hours, and repeated if required.

November 3rd, 9 A.M. He had slept two or three hours during the night. He complained of pain on pressure, mostly on the right side, where, he told me, he was kicked. He had some difficulty in passing urine. Pulse 82. Temperature nearly normal. I ordered ten minims of tincture of opium, and ten minims of spirit of nitrous ether every four hours. 4 P.M. His urine was passing freely. Pulse 86. There were more pain and tenderness. Temperature higher. Hot fomentations were ordered to be applied to the abdomen. He was given ten minims of tincture of opium and half a drachm of dilute solution of acetate of ammonia every two hours. The brandy and milk were continued.

November 4th, 10 A.M. He passed a restless night. Pulse 90. Temperature the same. The tongue was coating. The pain and tenderness were increasing. The treatment was continued. 3 P.M. He was little altered. Pulse 94.

November 5th, 9 A.M. He had a very restless night. Vomiting set in at midnight. The tongue was very foul. The pain was still increasing. Pulse 97. Temperature higher. I ordered a grain each of powdered opium and calomel every three hours, and the fomentations to be carefully attended to. 3 P.M. He complained very much of the right side. The vomiting was little better. He was ordered soda-water instead of milk. Pulse 94.

November 6th, 9.30 A.M. He had a bad night. The vomiting increased, and there was great tenderness. Pulse 95. The temperature was no lower. He had some difficulty in passing urine. Gin was substituted for brandy. I ordered the dose of calomel in the pills to be increased by one grain in each pill. About half an ounce of castor-oil was given. 4 P.M. He had a small motion. The symptoms were relieved. Pulse 89. The vomiting was less violent; and he felt easier.

November 7th. He passed a better night. The bowels were relieved twice. The tongue was cleaning nicely. Pulse 86. The vomiting ceased. The temperature was much lower. I ordered strong beef-tea, and brandy and egg mixture every four hours alternately, and plenty of milk. The pills were stopped, unless when required.

November 8th. He passed a good night. Pulse 82, and stronger. Tongue cleaner. The bowels were acting regularly. The beef-tea and milk were continued; the brandy was stopped. A small piece of bread with egg was allowed. November 9th. He was passing good nights. The bowels still were regular. He was ordered oatmeal porridge, and a small mutton-chop for dinner. From this time he made a rapid recovery, and was sitting up on November 13th, it being the tenth day of his illness. There remained a small hernial protrusion. A truss was applied on November 16th. I may state that his assailant received, very properly, a sentence of ten years' penal servitude.

CLINICAL MEMORANDA.

FUNGUS MEATUS AUDITORII EXTERNI.

In the JOURNAL for May 23rd, Dr. Cassells calls attention to the existence of fungi in the ear, and mentions three cases as having recently occurred in his practice. In addition to the few cases recorded in England of a form of ear-disease comparatively common in continental hospitals, I may mention one observed by myself amongst the out-patients of the Manchester Ear Institution. The above case—the only one I have yet encountered in public or private practice—was met with in a patient suffering from a cerumenous plug and intense deafness. The form of fungus was that of penicillium—aspergillus flavus—the same as Dr. Cassells found in the cases to which he alludes. Unfortunately, the specimen obtained from my patient, and which I had intended mounting microscopically, was lost, and would not have been referred to here, but for the extreme rarity of such records in English medical periodicals.

F. M. PIERCE, M.D., L.R.C.P., Surgeon, Manchester Ear Institution.

DYSPEPSIA, RELIEVED BY OBVIATING THE CAUSE.

M. G., aged 26, single, was first seen in January 7th, 1874. She complained of severe pain in the right hypochondrium and epigastrium, occurring in paroxysms, at times so severe that she hardly knew how to endure herself. It was always worse after eating; in fact, she was afraid to make a meal, lest a paroxysm should be induced. She was troubled much with flatulence. The bowels were very confined. She had passed blood *per rectum* during the last nine months. Her appetite was small and very capricious. The catamenia were regular, but scanty. She was emaciated. The urine was reported to be thick and high-coloured. As the majority of the symptoms had existed for many years, and various medicines had been taken with no beneficial result, it was evidently no ordinary case of dyspepsia. The chest and abdomen were examined carefully, but no trace of disease was detected beyond some slight tenderness over the epigastrium, and some slight dulness at the apex of the right lung. On requesting to see the tongue, which was furred, I noticed that the teeth were much decayed; and, on examining these more closely, I found that no two of the molars opposed each other; there was, in fact, no proper masticating surface, and this seemed quite sufficient to account for the symptoms present. The patient was urged at once to see her dentist, and have the defect remedied. In the meantime, some pepsine wine, with tincture of capsicum and dilute nitric acid, was ordered, and extreme carefulness in diet enjoined. Artificial teeth were inserted in due time, and since then the patient has had no return of her former symptoms. She is now stouter and much healthier in appearance; the bowels are more regular; there has been no recurrence of the hæmorrhage, and the condition generally is one of most marked improvement. She says herself "she has never felt so well in her life; nothing ails her now; she can eat and drink anything".

I have thought the case worthy of record, for I have met with many others where the *Pharmacopœia* has been exhausted in vain—the cause of the malady having never been detected, or even suspected. The narration of this may serve to put others on their guard in dealing with these tedious and troublesome cases.

ARTHUR W. EDIS, M.D., Assistant Obstetric Physician, Middlesex Hospital.

ABSTRACTION OF BROKEN GLASS SYRINGE FROM VAGINA.

On June 4th, I was called to visit Miss S., aged 20, who, whilst using a glass syringe for injection, felt it snap in two, leaving a piece two inches long by one in diameter in the upper portion of the vagina. It had fractured obliquely, with an irregular outline, the edges being as sharp as a razor. She complained of sharp cutting pains, and begged earnestly that it might be taken from her. I fortunately succeeded in abstracting the offending body, without any injury or pain to the patient, in the following manner. Having first introduced a medium sized tubular speculum, I found the foreign body lying perpendicularly across the vagina, just in front of the os uteri, the sharp cutting edge pressing on the vesico-vaginal septum, which it threatened to pierce. Owing to its position and length, it was impossible to get it into the smaller speculum, which I withdrew, and introduced a larger one. By gently manipulating it up to the fragment, I succeeded, with the aid of a steel rib of an umbrella, in loosening the glass (which fortunately was in one piece) from the folds of the vagina; and it fell into the speculum, and was thus withdrawn, without a scratch or the loss of a drop of blood, to the great delight and comfort of the patient.

W. HENRY DAY, L.R.C.P., Pentonville.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 26TH, 1874.

C. J. B. WILLIAMS, M.D., F.R.S., President, in the Chair.

AMONG the books presented to the Society's library was a MS. copy of the Clinical Lectures of Dr. Rutherford at Edinburgh in 1750. We referred to this subject at page 724 of the JOURNAL for May 30th.

ON A DISEASE OF THE SKIN CAUSED BY THE ACARUS FOLLICULORUM; ILLUSTRATED BY CASES OBSERVED IN THE DOG.

BY EDWARD SPARKS, M.A., M.B., M.R.C.P.

(Communicated by W. FAIRLIE CLARKE, F.R.C.S.)

THE author first reviewed the literature relating to the acarus folliculorum, and pointed out that there had been hitherto nearly an universal scepticism with regard to any injurious effect of that animal on the skin. Only Dr. Gruby (*Comptes Rendus*, 1845, and *Monthly Journal of Medical Sciences*, November 1846) had described a disease produced by inoculating a dog with the acarus, by which the animal lost its hair, and the skin became inflamed and covered with scabs of purulent exudation, while its strength became much reduced. Gruby's researches had, however, never received the credence they deserved, and their accuracy had even been doubted (for example, by Dr. Neumann of Vienna, in 1873). Dr. Sparks had, through the kindness of Mr. Duguid, the veterinary surgeon to the Brown Institution, been enabled to examine three cases of a disease occurring idiopathically in dogs, and similar to that described by Gruby; and he had examined the skin microscopically. The external features of the disease had a considerable resemblance in all three: these consisted of greater or less loss of hair over the whole body; scaliness, partly epidermic and partly exudative; abscesses resembling acne studded over the body and legs; gradual emaciation and loss of strength; and resistance to all treatment. All the dogs finally died, without any internal disease being found sufficient to account for death. Other dogs in the same kennel caught the disease from one of the affected dogs. Sections of the skin showed, microscopically, enormous dilatation of the hair-follicles and sebaceous glands with the acari and epithelial *debris*; subcutaneous abscesses containing acari, and accompanied with a fine nuclear infiltration of some parts of the skin; atrophy of the papillæ and sheaths of the hair-follicles; and, in one case, growth of nodules of a lymphatic tissue, especially around the coats of the sweat-glands and the hair-follicles most affected. The existence of such a disease as the one here described appeared not to be generally known to veterinary surgeons, and it was not, as far as the author knew, described in any book. Seeing what mischief the acarus could produce in the dog, we should not be too hasty in denying the possibility of its ever causing a disease of the skin in man; and its relation to some forms of acne deserved further investigation. At any rate, it was a most interesting fact that a creature which might exist in man without doing any harm, should produce such a serious disease in the dog. The author concluded this paper by thanking the authorities of the Brown Institution for the assistance they had afforded him.—Mr. FAIRLIE CLARKE remarked that the paper raised the question, whether the acarus folliculorum was, or was not, capable of producing disease in man. It certainly was not harmless in dogs, and might produce in them even fatal results.—Dr. E. S. THOMPSON hoped that more contributions to the explanation of the diseases of man by those of animals would be received from the Brown Institution.—Dr. SPARKS said that, as far as was known, the acarus folliculorum did not produce disease of the skin in man, unless, perhaps, it sometimes gave rise to acne of the face. He had been informed that none of the dogs affected with the disease recovered. The acari penetrated too deeply into the follicles to be reached, and the animals died of emaciation or were killed.

ON A CASE OF PSEUDO-HYPERTROPHIC MUSCULAR PARALYSIS.

BY J. LOCKHART CLARKE, M.D., F.R.S., AND W. R. GOWERS, M.D.

THE case was that of a boy, a patient of Mr. William Adams, who died, aged 14, with general muscular atrophy. The muscles of the calf had been, from an early age and until within two or three years of his death, considerably larger than natural. Difficulty in locomotion, due to muscular weakness, had been noticed from the time when he commenced to walk at three years old, and had increased until he had ceased to walk at eight, and to stand at ten. During the last three years of his life, the calves lessened in size to below the normal, and the muscles of the thighs and arms became atrophied. At the time of his death he could not move the hip, knee, or shoulder joints; he could move the ankle and elbow-joints a little, and the fingers well. There was but slight difference between the two sides. The flexors of the hip and elbow-joints were contracted. There was no affection of mind, or of cranial nerves, or of the sphincters. He died from a low form of pneumonia. After death the muscles showed in various degree the changes, naked-eye and microscopic, characteristic of the "pseudo-hypertrophic muscular paralysis" of Duchenne de Boulogne. The gastrocnemii looked like lumps of fat, and, under the microscope, consisted of fat-cells, among which still ran some muscular fibres, accompanied by a good deal of connective tissue. Many of the fibres were healthy in appearance and size; many were narrower than normal. still preserving, however, their transverse striæ, even when reduced to one quarter of their normal width. Many fibres were narrower at one place than at another. Very few fibres, except those greatly reduced in width, presented any granular or fatty degeneration. The deltoid and biceps muscles on each side presented similar changes, but they contained less fat and more fibrous tissue; the brain and medulla oblongata and meninges of cord were healthy; the spinal cord itself presented various changes throughout the cervical, dorsal, and lumbar regions. The most important was disintegration of the grey substance of the anterior, lower, and central portions of each lateral half. In some places this had occurred chiefly around the vessels, but in others it involved extensive areas, especially in the cervical enlargement, the upper part of the lumbar enlargement, and the conus medullaris. About the level of the last dorsal nerves, it had amounted to almost total destruction of the grey matter on each side between the posterior vesicular columns and the intermedio-lateral tract. Other changes were disintegration of nerve-roots, commencing sclerosis of the lateral and posterior columns, destruction of the white commissure in various places, dilatation of vessels, and extravasations. A comparison of the symptoms and of the character of the muscles in this case with those of other cases, left, the authors believed, no doubt of the identity of the disease. The spinal cord changes were much greater than any previously found, the examinations of Charcot and Cohnheim having given negative results, and the changes found by Barth and by Kesteven having been slight.

Dr. BUZZARD inquired whether the authors of the paper thought that the circumstance of changes in the spinal cord having been reported absent in most previous cases and present in this, which seemed to be a peculiarly advanced one, threw any doubt upon the correctness of the now generally received opinion that, in cases of muscular atrophy and analogous condition, the central changes preceded and induced those in the muscular system.—Dr. LOCKHART CLARKE thought that the idea of muscular atrophy giving rise to disease of the central nervous system had been disposed of long ago. In the examination of the spinal cords of persons whose legs had been amputated, he had found the nervous matter, especially the cells, changed; but there was nothing in the form of degenerative or necrotic change. The remarks had been confirmed by a writer in the *Archives de Physiologie*. The changes were quite different from those met with in muscular atrophy.—Dr. GREENFIELD said that secondary degeneration of the nervous tissue of the cord was distinctly seen in cases where there had been disease of the brain, with hemiplegia and rigidity of the limbs. There was here degeneration running down the anterior or the posterior column of the cord. This occurred, for instance, in cases of disease of the corpus striatum.—Dr. LOCKHART CLARKE said that the changes here were due to the cerebral disease interfering with the supply of nourishment. In reply to a question from Dr. Sparks, he said that observations had not been made on the temperature of the affected limb.—Mr. WILLIAM ADAMS believed that in past years a number of cases of the kind described by Dr. Lockhart Clarke had been mistaken by orthopædic surgeons, their nature not being understood. The condition was sometimes confounded with infantile paralysis and with spastic contraction.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, FEBRUARY 28TH, 1874.

ROBERT D. LYONS, M.D., President, in the Chair.

Dissecting Aneurism of the Heart.—Dr. GORDON exhibited the thoracic viscera of a man who had been admitted a fortnight ago into the Whitworth Hospital, complaining of intense epigastric pain. Cough soon became frequent, and after a time it was accompanied with expectoration, at first viscid and frothy, and streaked with blood, but afterwards serous, and intimately mixed with blood. Slight crepitation was perceived at the base of the right lung, puerile respiration prevailed posteriorly, and a diffused crepitation anteriorly. The liver was much enlarged. The only cardiac sign was a "tumbling" of the heart, which set in after a week. The man died on February 27th. Behind one of the aortic valves, which were quite competent, a rupture of the aorta existed in the sinus of Valsalva. The opening communicated with an aneurismal sac, situated in the wall of the left ventricle, and which had burrowed, and finally opened, into the cavity of the heart. In the rent was a large mass of firm fibrin. The lungs were in a condition of what might fitly be termed diffuse pulmonary apoplexy.

Urinary Calculus.—Dr. SINCLAIR showed a very large calculus, which had been spontaneously discharged from the bladder of a married woman, aged 25. When first seen, she had suffered from cystitis and trickling of urine, and was three or four months pregnant. Febrile symptoms soon appeared, and abortion occurred. In about three weeks, while on the night-chair, she suddenly discharged the stone through an opening, which just admitted the thumb. This fistula closed satisfactorily in due time. The calculus weighed more than two ounces, and consisted of three distinct layers—the exterior of ammoniaco-magnesian phosphate, the middle of uric acid, the central nucleus being of oxalate of lime.

Congenital Absence of the Vasa Deferentia.—Dr. T. E. LITTLE presented an example of this peculiarity from the body of a man, aged between 40 and 50. He was of masculine appearance, with bearded face, testicles, and a large penis. In the right testicle, the tunica vaginalis was found to be healthy, the epididymis was deficient inferiorly, the globus major small, the globus minor absent, no vas deferens. The left testicle was not atrophied, the epididymis was rudimentary to a greater degree than in the right organ. The "hydatid of Morgagni" was well developed on both sides. The convoluted canal of the epididymis, on the right side, contained a whitish fluid, abounding in spermatozoa. The corresponding vesicula seminalis was well developed. The prostate gland was healthy. The deficiencies were certainly congenital.

Round-celled Sarcoma of Arm.—Mr. TYRRELL showed the right arm of a girl, aged 27, who, in 1871, gave that limb a slight twist. Some time afterwards, she noticed a small "kernel" in the forearm. This lump was subsequently removed in America. In January 1873, a like tumour appeared on the arm at a higher point, and it was also excised. When she came under Mr. Tyrrell's care, a third large, elastic, rapidly growing tumour was found on the right arm. The limb was amputated through the shoulder-joint. There was no glandular contamination. An encephaloid mass lay in front, leaving the bone bare below. This extended into the triceps muscle posteriorly. Examined microscopically, the tumour presented all the characters of the "round-celled sarcoma".

Fatty Kidneys: Hypertrophied Heart: Apoplexy.—The PRESIDENT showed the kidneys, heart, and brain of a labouring man, aged 45, who had been admitted to hospital with general anasarca and cardiac pain. The urine was albuminous, of the specific gravity of 1010. Suddenly right hemiplegia occurred, with gradually increasing stertor, and death followed in three hours and a half. The cavities all contained serum. Two quarts of pale straw-coloured serum lay in the abdomen. The liver was enlarged, and the kidneys were in a state of advanced fatty degeneration. The pelvis of the right kidney was dilated. A fluid, similar to that found in the peritoneum, escaped from the pericardium and pleuræ. The heart was excessively hypertrophied, and of ovoid contour, its left ventricle especially enlarged. The valves were generally healthy, but there was a slight deposit on one curtain of the mitral valve. A considerable serous effusion lay within the calvarium, pressing upon the brain, and flattening the convolutions. A very abundant hæmorrhage had occurred on the left side; this had been so violent as to tear the brain-substance, destroying most of the corpus callosum, etc. The clot consisted of about four ounces of blood. The rapid occurrence of death in this case clearly depended on the extensive laceration of the brain by the effused blood.

Caries of Os Calcis.—Mr. TYRRELL presented the bone, which he had removed last October, owing to extensive caries. In parts the bone was hypertrophied, and had thrown out from its surface large stalactitic growths.

Diphtheria of the Intestinal Mucous Membrane.—Dr. GERALD YEO showed the intestines of a man, aged 42, who had died, after five days' suffering, from abdominal pain, typhoid diarrhœa, and intense choleraic collapse. On the mucous membrane of the lower part of the colon, were several irregular raised patches of yellowish tough material, firmly adherent to the membrane. The mucous membrane lining the entire of the ileum was intensely engorged, swollen, rigid, and brittle, the lower part being thickly dotted with small rough granulations. Dr. Yeo considered the case interesting, from the rapidity of the clinical events, and from its similarity to cholera. He regarded it as a well-marked case of diphtheritic disease of the lining membrane of the alimentary canal.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JUNE 13TH, 1874.

THE BLOODLESS BRAIN.

I.

A BLOODLESS condition of the brain is a matter of frequent occurrence, physiologically and pathologically. It has been found an indispensable requisite for sleep; and conditions of cerebral hyperæmia are times of sleeplessness, as seen in the wakefulness of mania. Certain soporific agents, as chloral-hydrate and bromide of potassium, owe their hypnotic properties chiefly to their effect upon the intracranial circulation.

That conditions of high vascularity—of erethism, almost—are requisite to functional activity, is now fully recognised. To this rule the brain is no exception. The cells of the cortical substance of the brain possess the power of attracting more blood at the time when the organ is either spontaneously active, or is bent to thought by an effort of the will. In a state of activity, these cells attract a larger and freer blood-supply, by that power which all tissues possess of adapting their blood-supply to their immediate wants. In sleep, these cells no longer attract blood so freely; they lose their activity, and, in doing so, their blood-current is narrowed and diminished in velocity. How far this action is furthered by some lessened activity in the vaso-motor centre, and consequent general dilatation of the blood-vessels by which the vascular current through the brain is affected, cannot be positively stated. At the same time, however, that we fully recognise the influence exerted by the cerebral cells upon their blood supply, we must not underrate the effect of an altered blood-supply upon the cells themselves. The functional activity of these cells is largely affected by modifications in the blood-current. Thus we have unconsciousness produced by the garotter, who compresses the carotids, and so suddenly shuts off the great source of blood-supply to the brain; while, on the other hand, we are all familiar with the effects of alcohol in producing a condition of heightened activity in the cerebral centres. A free blood-supply leads directly to great activity; the arrest of the blood-supply induces diminished or suspended function. Further, there is much reason to suppose that, while functional activity is associated with high vascularity, it is during sleep, when the blood-current flows more quietly, that the actual nutrition of the nerve-centres is effected. High vascularity of the stomach belongs to its period of functional activity—viz., digestion, while its tissue-nutrition is conducted during the comparatively anæmic condition of functional quiescence. These periods of vascular activity alternate with intervals of nutrition and repair of tissue when the blood-current is quiet, in all viscera whose work is not continuous.

A condition of brain-bloodlessness is a not uncommon pathological condition: it is found in general anæmia. According to Haller, no less than one-fifth of the whole bulk of blood circulating in a given time passes through the vascular brain; consequently, that viscus feels any change in the general condition very acutely. Thus we find convulsions with unconsciousness follow sharp hæmorrhages, as Kussmaul and Tenner found in their experiments of cutting off the blood-supply to the brain. This condition of general anæmia is usually associated with low arterial tension, and an unfilled condition of the blood-vessels; consequently, when the patient sits up, vertigo and giddiness are induced, which are relieved by the resumption of the recumbent posture. Vomiting is often produced under these circumstances, apparently from the roots of the vagus nerve being deprived of their usual blood-supply. In the more acute, as well as in the more chronic and pronounced conditions, palpitation of the heart is commonly met with. This also takes its origin in anæmia of the roots of the vagus, and arrested functional activity of the nerve itself, together with anæmia of the vaso-motor centre and activity of the accelerator nerves of the heart, so produced.

Cerebral anæmia is also induced by an apoplectic clot, by serous effusion, or by the growth of a tumour within the skull. The symptoms found under these circumstances are, according to Niemeyer, produced by the compression so induced interfering with the circulation through the brain, and not by mere pressure upon the nervous mass itself. Leyden and Traube, he states, agree with him in this view, that unconsciousness and abolition of function are the result of a consequent intracranial anæmia, and not of pressure upon the mass of the brain, as is ordinarily assumed.

Venous stasis leads to an impaired arterial current by the resistance which it opposes to the onward flow of the blood. Such venous stasis and impeded arterial current are found in conditions of advanced heart-disease. Sudden swooning, or pseudo-apoplexy, is given by Stokes as an usual outcome of fatty degeneration of the heart. Disturbed brain-function, impaired intelligence, a sense of general apprehension, with a feeling of muscular unsteadiness, are usually found in conditions of uncompensated valvular disease of the heart. The mental disturbances of severe and advanced heart-disease are familiar to all medical practitioners; the patient being at once capricious and irritable, vacillating and suspicious.

At other times, a condition of cerebral anæmia is induced by the presence of an excess of products of waste of tissue in the blood; these act upon the peripheral arterioles, including those of the encephalon, by inducing spasm of their muscular walls; and so we get the psychical symptoms of cerebral anæmia engrafted upon that irascibility, which is the effect of blood laden with excrementitious waste upon the cerebral cells. Sydenham has described the combination of bad temper, anxiety, and melancholia, which, he says, are the psychical characteristics of a fit of gout. This spasm of the cerebral vessels is the probable cause of the depression in the gouty condition.

The mental symptoms of cerebral anæmia produced by shock—either acting immediately upon the cerebral cells, and mediately through them affecting the calibre of the blood-vessels of the pia mater and convolutions; or by the shock falling upon the organic nervous system and the heart first, and then reaching the cerebral cells through the diminished blood-supply—are well seen in the general apprehensiveness, the panphobia and melancholia, which follow a sudden blow to an already depressed organism. The cortical cells, imperfectly fed with blood, lose much of their energy; and the thoughts are gloomy, anxious, and mournful, while the will can no longer banish them and supply their place with more cheerful thoughts. Gloomy images crowd the foreground of the consciousness; and if for a time other subject-matters assume the most prominent position, they gather together on the mental horizon, or merely retreat temporarily into the background, ready to resume their usual prominence on the slightest opportunity. Nor is the intelligence equal to the task of controlling these gloomy thoughts—the outcomes of an anæmic condition of the emotional centres. The emotional centres evolve morbid thoughts and dark misgivings, as the products of their impaired condition; as much as hilarity, mirth, and indifference to actually existing cares, mark a highly vascular condition, as in the intoxication produced by alcohol; and the intellectual or inhibitory centres are no longer equal to restraining the action of these emotional centres, or controlling their outcomes by a correct estimate of the morbidity of the thoughts so produced. Consequently, we find panphobia, or "low spirits", the characteristic mental condition of the anæmic, under-fed, or imperfectly nourished females of our out-patient rooms. At the same time, we find the functional activity of the muscular system much impaired; there is languor, lassitude, and loss of all sense of energy. The lowered condition of the nerve-centres is further usually shown by the coexistence of altered, perverted, or lost sensations. There are black specks before the eyes, or morbid sounds heard, which not uncommonly lead to illusions; while at other times the anæmic centres produce actual hallucinations. There is often, too, neuralgia, described by Romberg as "the prayer of a nerve for healthy blood". Vertical headache often marks the anæmic state of the encephalon within.

Such are the leading objective symptoms of cerebral anæmia. The physical signs are: pallor of the face, especially of the eye, which quite loses its lustre; coldness of the extremities; a feeble compressible pulse, with an adynamic condition of the heart, evidenced by feeble impulse, loss or marked diminution of the first sound, slight thin second sound, and not unfrequently anæmic *bruits*. Modifications of these leading signs may be found in certain cases, but they will not be invalidated by any special surroundings. There are sleeplessness at night in the recumbent posture, from the blood gravitating into the brain; and drowsiness from anæmia when sitting up, from the blood then gravitating into the dependent parts (Hammond). The effects of posture upon the intelligence, as given in Sir George Burrows's well-known work on the relations of the brain to the intracranial circulation (*Disorders of the Cerebral Circulation*), clearly demonstrate the difference produced upon the cerebral cells by varying conditions of vascularity.

THE PERCHLORIDE CONTROVERSY.

THE controversy between Dr. Barnes and Dr. Snow Beck has extended over so much time and space, that, at the close of Dr. Beck's last letter, we found some difficulty in deciding, without going through the whole matter from the first, what he had proved and what he had not. The result of such an examination of the facts has led us to conclusions which it may be as well to state.

Dr. Beck was pointedly accused by Dr. Barnes of having made a statement which he could not justify—viz., that "he had seen nine or ten cases of death caused by the injection of perchloride of iron to arrest *post partum* hæmorrhage".

In his letter, published May 30th, 1874, Dr. Beck says he was taken by surprise when he made the above statement: "he answered offhand". But, after many challenges to publish the cases, and some parley, he deliberately writes (see JOURNAL, January 31st, 1874, *i. e.*, nine months after this "offhand answer")—"it is quite correct that I have seen nine or ten cases where death followed the injection". He then promised our readers the account of the cases. He stopped short at four cases. In his last letter (May 30th, 1874), he calmly says—"the rest will be furnished in due time; but, as I am unable to see of what use they can be in a scientific point of view, I have not been in any haste to record them". . . "Of some I have no written record." Whatever other value they may have, the publication would at least be of value to redeem his promise, and to establish the veracity of his statements.

In his letter of May 30th, 1874, he reaffirms his statement. "I find eleven cases of death, and 'one unsuccessfully' were mentioned by different Fellows (Obstetrical Society) in the discussion." These, with the four now recorded, make a total of fifteen or sixteen. Now every case mentioned at the Society is distinctly quoted and numbered by Dr. Barnes. They amount to ten only. Dr. Beck boldly puts down three cases (Nos. 9, 10, and 11) to Dr. Protheroe Smith. But this gentleman only refers to *one* case of death after injecting iron into the uterus after labour; so that the total remains at ten, as Dr. Barnes stated, from which one has to be deducted as being counted twice over.

Then, as to counting the same case twice over, Dr. Beck denies having done this. He cannot make up even ten without either counting in Dr. Heywood Smith's case, or putting down to Dr. Protheroe Smith two or three cases; and this he does, although Dr. Protheroe Smith only refers to one. If he omit Dr. Heywood Smith's case from the Society's total, of course he is entitled to count it among his own four, but then there will only remain nine instead of eleven in the Society's total. And, more than this, Dr. Protheroe Smith's case, Dr. Barnes says, is the same as Dr. Graily Hewitt's. This Dr. Beck denies, saying: "These are two distinct cases, according to the more detailed notes which I possess." Drs. Hewitt and Protheroe Smith say it is the same, according to Dr. Barnes. If Dr. Barnes be right, there remain only eight distinct cases referred to in the Society. Dr. Barnes' statement that Dr. Protheroe Smith's case and Dr. Hewitt's are one and the same is precise. Let Dr. Beck justify his statement that they are two, by publishing his more "detailed notes".

The leading point, however, is that Dr. Beck deliberately affirms having seen nine or ten cases; and that, after promising to publish them, he gets no further than two.

One fact of great significance is pointedly referred to by Dr. Barnes. Dr. Beck says he has never used the injection himself. It follows, therefore, that the "nine or ten cases" occurred in the practice of other persons, and that he (Dr. Beck) must have seen them in company. But "not one word of confirmation" has come from any one. Dr. Beck's statements are so flatly denied by Dr. Barnes, and his obvious inaccuracies are so great, that he cannot afford to dispense with corroboration of his statements from the gentlemen who actually did see the cases of which he speaks at second-hand.

Finally, we must regret the acrimony of Dr. Beck's style of controversy: it has provoked Dr. Barnes to very severe retorts; but of that he has little reason to complain. We hope that, if the controversy be continued—and it is one which relates to facts of great importance—it will be carried on in a moderate and decorous manner.

DR. RUTHERFORD of King's College has been appointed Examiner in Physiology in the University of Cambridge.

THE Harveian Oration will be delivered this year by Dr. West at the Royal College of Physicians, on Saturday, June 27th, at five o'clock. The President and Fellows have also issued invitations for a *conversazione* at the College on Wednesday evening, July 1st.

THE International Conference upon the means of preventing the spread of cholera will meet in Vienna on the 15th instant. All the Powers have accepted the invitation of Count Andrassy to send representatives to this Conference, which will discuss the terms of an international treaty respecting measures of quarantine upon an outbreak of cholera, and the nomination of an International Commission to be appointed to study the causes of the disease.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ON Monday last, the time expired for candidates for seats in the Council to send in their nomination-papers. There are three vacancies, occasioned by the retirement, in the prescribed order, of Messrs. Hilton and Marshall (who offer themselves for re-election), and the resignation of Mr. J. Flint South. The candidates, in alphabetical order, are:

1. Mr. Alfred Baker, Senior Surgeon to the Birmingham General Hospital; Member, May 10th, 1837; Fellow by election, October 21st, 1852.
2. Mr. John Hilton, F.R.S., Consulting Surgeon to Guy's Hospital; Member, May 22nd, 1827; Honorary Fellow, December 11th, 1843.
3. Mr. Edward Law Hussey, Senior Surgeon to the Radcliffe Infirmary, Oxford; Member, August 16th, 1849; Fellow by examination, February 7th, 1845.
4. Mr. John Marshall, F.R.S., Surgeon to University College Hospital; Member, August 9th, 1844; Fellow by examination, December 7th, 1849.
5. Mr. Henry Smith, Surgeon to King's College Hospital; Member, April 24th, 1846; Fellow by examination, December 7th, 1849.

CONVERSAZIONE OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE President and Fellows of the Royal Medical and Chirurgical Society gave a very interesting *soirée* on the 9th instant. Many novel scientific inventions were exhibited, amongst which was a microscope, shown by Mr. James Smith, F.L.S., showing the arrangement of double objectives, a low power being placed on the body as usual, and a higher power attached by a tube underneath the stage. In the binocular exhibited a three-inch was used on the body, and one-inch below the stage, giving, with the A and B eye-pieces, powers varying from three diameters to about one hundred and seventy-five diameters. The objects exhibited are placed on a substage with the necessary apparatus for giving all needful movement to them, and can be examined as a whole or in detail by varying the power to the extent required. The arrangement being erecting, dissection can be carried on with great advantage, as a field of view varying from three to five inches and perfect binocular vision is obtained. The objects shown at the meeting—a blow-fly and living plant-lice—were much admired. Messrs. Mayer and Meltzer exhibited a new galvano-cautery battery, excited by bichromate of potash and sulphuric acid, which acted admirably, having the advantage of requiring no nitric acid, which is the agent of destruction in all other batteries. It promises to be very durable and practicable. It is very portable, easily worked and cleanly in action, emitting no fumes. It consists of three rows of elements, either of which, being inserted in the fluid, will instantaneously cause the platinum wire to become red hot. These makers also exhibited Dr. Buzzard's new hypodermic syringe, Mr. Clover's gas and ether inhaler, Mr. Teevan's new stricture instrument and lithotrite, and several well constructed batteries, with many other instruments. Mr. G. J. Symons exhibited a series of fourteen thermometers, consisting of five with spherical bulbs filled with alcohol, six with spherical bulbs filled with mercury, one mercurial thermometer with a cylindrical bulb, one of Cassella's bifurcated spirit minimum thermometers, and one of Hicks's hollow-cylindered spirit minimum thermometers. They were employed to ascertain (1) the relative sensitiveness of mercurial and alcohol thermometers; (2) whether increase of sensitiveness with decrease of size of bulb follows any regular law; (3) if so, whether it is similar for mercurial and alcohol thermometers; (4) to test the sensitiveness of the new bifurcated and hollow-cylindered thermometers. The results show that the two new forms (the bifurcated and the hollow cylinder) are of about equal sensitiveness, and are as prompt in action as a mercurial thermometer with a small bulb (0.31 in. in diameter). Messrs. John Bell and Co. sent the following: guarana, with preparations of the same; alcoolat and teinture vulnéraire of the French Pharmacopœia; Gurjun balsam or wood oil (*Dipterocarpus lævis*) of the Pharmacopœia of India, with liniment of the same, made with equal parts of the balsam and lime-water; oil of cashew-nuts (*Anacardium occidentale*); with other recently introduced preparations. They also exhibited a series of granular effervescent salts, containing, in each drachm of the citro-tartrate of soda, the ordinary dose of the various remedies, such as citrate of bismuth, citrate of iron, citrate of quinine and iron, citrate of lithia, bromide of potassium, iodide of sodium, as well as the salts of Carlsbad, Vichy, and Friedrichshall.

DRUGS AND THE ADULTERATION ACT.

DURING the sittings of the present Select Committee of the House of Commons appointed to inquire into the working of the Adulteration Act (1872), some interesting evidence has been given with regard to the adulteration of drugs, and a short synopsis of the first part of this evidence was recently given in this JOURNAL. On Monday, further information of a similar character was elicited. The borough analyst of Sheffield, Mr. Allen, was examined; and he said that, with regard to drugs, the Adulteration Act had not been enforced to any great extent, and there had been only a few prosecutions. It was important to note, however, that even these few prosecutions had mostly resulted unsuccessfully, and had been very ill-advised on the part of the analyst, who had in some cases condemned drugs as adulterated which were not fairly open to censure. There were, however, many cases in which drugs were adulterated. He remarked, in reference to this, that it was customary in Sheffield to sell laudanum which contained scarcely any opium in it, and very little power to send a person to sleep. He should consider such an article to be adulterated. In some cases, this impure laudanum might be bought as a genuine sample; and, if taken in such proportions as though it were a genuine sample, it would scarcely have the desired effect. There was, he said, less opium in it, more spirit, and it was coloured with burnt sugar. The ingredients were harmless in themselves, but they certainly should not have been used. There was no fixed standard of strength for laudanum, and he thought it would be desirable if such a standard were fixed by a competent authority. He pointed out that tincture of opium and laudanum were considered identical; and it would have been better, perhaps, if he had said that tincture of opium was adulterated and not up to the strength of the *Pharmacopœia*. The witness was then questioned shortly as to scammony. He said that, if a chemist or dealer were prosecuted for selling an article in which there was ten per cent. of something not scammony, he should not give a certificate of adulteration which would punish such a dealer. In cases of this kind, there should be some discretion used by the analyst. The best scammony did not contain more than eighty or ninety per cent. of the active principle. It was true that it was adulterated; but, because it contained only ninety per cent. of scammony, he did not think it ought to be considered as an adulterated article, and he should not certify it to be so. As he had before remarked, in such cases, analysts should use their discretion. In regard to drugs generally, there was no defined standard; but for drugs which it was possible to treat in this way, there should be some such treatment. He was of opinion that pharmaceutical preparations, as a rule, could be purchased all over the country of the same strength, and as good in provincial towns as in London. It was merely a question of paying for them. Certain drugs deteriorated in value by keeping; but the dealer should be aware of such deterioration, and act accordingly. He (the witness) said he should not absolutely prohibit the sale of these cheap drugs. With regard to scammony, a good deal of inferior quality was used; and when a dose was taken, and it had not the desired effect, adulteration was the cause. In the case of a mustard plaster not having any effect, that was due to flour being largely used in the manufacture. The witness further stated that, generally speaking, medicines could be purchased all over the country of equal strength; and it was of course necessary that prescriptions made up in different parts should have the same effect. Any one making up inferior preparations should be liable to punishment.—Mr. Bartlett, Ph.D., F.C.S., who also gave evidence, said that the Adulteration Act had unquestionably done great good; but, with regard to drugs, he feared this improvement had not been so great. If, however, the Act were suspended, or ceased, he was of opinion that harm would be the result.

CASUALTY OUT-PATIENTS.

MR. NELSON HARDY sends us an interesting statement on this subject.

At a time when every medical man, who asks for even the most moderate reform of the present out-patient system, is liable to be sharply interrogated as to his personal experience of the evils of the system, it may be useful to put on record the following cases, as specimens of many which are constantly coming under my notice at the City of London and East London Dispensary. These cases were treated in the surgery of St. Bartholomew's Hospital by unqualified students, without, as far as I can learn, any attempt at supervision being exercised over them by any qualified medical man. While such a system continues in vogue, it can hardly be considered surprising that similar cases should be continually cropping up.

CASE I. *Fracture of Radius treated with Resulting Angular Deformity at St. Bartholomew's Hospital: Reset under Chloroform by Mr. Gay, at the Great Northern Hospital.**—Henry H., aged 5, fell against a wall, on March 7th, 1874, fracturing the radius of his right arm about its middle. He was taken, within an hour of the occurrence, to St. Bartholomew's Hospital, where he was seen by one of the dressers, who placed his arm in splints and bandages. He was brought to this dresser regularly each week, until the beginning of April, when the splints and bandages were taken off, and his parents were told they need not bring him any more. On April 7th, he was brought to me at the City of London and East London Dispensary, when considerable angular deformity was noticed in the radius of the injured arm. Thinking it likely that this would interfere very materially with the use of his arm as he grew up, I recommended an operation for resetting the bone, and took him to my friend Mr. John Gay, who confirmed my opinion as to the necessity for an operation, and kindly performed it himself, at the Great Northern Hospital, on the following day, the little patient being under chloroform. The arm was then put in splints, and the result has been excellent, some thickening of bone only remaining to show where the angular deformity was.

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* Shown at the Medical Society of London, April 27th, 1874.

CASE II. *Irritable Stricture of Urethra treated, with resulting Profuse Hæmorrhage, at St. Bartholomew's Hospital: Recovery under ordinary Methods of Treatment.*—Stephen M., aged 29, came under my care at the City of London and East London Dispensary, on March 18th, 1873, suffering from stricture of the urethra, accompanied by incontinence of urine, so that he was unable to hold it for more than half an hour at a time. He stated that he had been attending as an out-patient at St. Bartholomew's Hospital for about twelve months, and during the last eight weeks of his attendance had been seen by six or seven different students, some of whom used large and some small instruments. On most of these occasions, the hæmorrhage that followed the students' attempts to pass catheters had been so great that he had been supplied with ice, and told to stand with his penis laid on it for half an hour at a time. At his last visit to the hospital, ten days before he came to me, the ice was omitted, and the bleeding continued for two days.

On examination, I found a stricture in the bulbous portion of the urethra (which, however, admitted a No. 6 elastic catheter), also several false passages. On withdrawing the catheter, a few drops of blood followed, and this was also the case on one or two subsequent occasions. No ice was ever found necessary, however, nor did any bleeding take place at home. He was ordered twenty minims of muriated tincture of iron three times a day, and the size of the elastic bougie passed was gradually increased, until No. 12 was reached. He can now hold his water for three hours at a time, and only has the bougie passed once a fortnight. Except on the first few occasions, there has been no further hæmorrhage whatever.

Instances such as these, of careless or unskilful treatment by students at St. Bartholomew's, are continually coming under my observation, and instances of mistake in diagnosis not a few; such as congenital hydrocele being pronounced to be hernia, and tonsillitis, with inflammation of the Eustachian tube, being set down as polypus of the ear.

It would, however, in my opinion, be most unfair to blame the students, who probably do the best they can under the circumstances; but the system, which permits poor persons, suffering under injuries or diseases more or less serious, to be treated, in one of our most famous metropolitan hospitals, by any other than properly qualified surgeons, is surely very much to blame.

On a recent visit to the hospital, I heard the porter in the surgery call out to the assembled patients the name of a dresser, in order that those who, at their first visit, had received tickets with that dresser's name on them, might come forward to be treated by him. Many came forward accordingly, and, during the few minutes I remained, I witnessed the treatment of several cases by unqualified dressers, the medicine that was required for them being very appropriately made up by an old woman, who looked like a superannuated nurse.

In one of the most striking passages in his *History of England*, Lord Macaulay states, that "every bricklayer who falls from a scaffold, every sweeper of a crossing who is run over by a carriage, may now have his wounds dressed, and his limbs set, with a skill such as, one hundred and sixty years ago, all the wealth of a great lord like Ormond, or of a merchant prince like Clayton, could not have purchased". It is true he may have the benefit of such skill if, perchance, his injury have been sufficiently severe to cause him to be admitted as an in-patient; but otherwise he may, unfortunately, as the above cases show, become the victim of such carelessness and unskilfulness as, we may reasonably hope, was not common even two hundred years ago.

PROVIDENCE AND IMPROVIDENCE.

A FESTIVAL dinner was held on the 10th inst. on behalf of the Public Dispensary, Clare Market. The advertisement announcing the dinner says: "As an interval of four years has elapsed since a festival in aid of the charity has been held, the kind support of its friends is earnestly solicited to recruit its exhausted funds." The public dispensary was established in 1782, and for at least half a century must have done good service. But it may be fairly asked whether it is needed at the present day, seeing that a large and commodious hospital, with an out-patient department which last year relieved over 30,000 cases, has arisen in its immediate neighbourhood. Dr. Guy has shown by statistics that a very large proportion of the residents in the adjoining parishes avail themselves of the out-patient relief offered by King's College Hospital. Can it then be said that the public dispensary is also required as a free charity? Would it not be well if the managers adopted the suggestions of the Council of the Hospital Sunday Fund, and put the institution upon the provident footing? Whatever need there may be for free dispensaries in outlying parts of the metropolis, it is difficult to see any reason for their existence in central districts which are well supplied with hospitals; and it is no wonder that their funds fall off accordingly. But there is an absolute dearth of provident medical institutions to meet the wants of the well-to-do poor. If the Public Dispensary were to adopt the provident principle, we have no doubt the funds would soon be recruited by the payments of the members, while a positive good would be done to the *morale* of the neighbourhood. And, further, if King's College Hospital were to enter into a friendly alliance with the Dispensary, such as has lately been made between the Westminster Hospital and the Western Dispensary (Broadway), Clare Market might afford another model for the rest of London of the way in which medical relief should be administered in order to suit the various grades of the lower middle class.

THE REGISTRATION OF BIRTHS AND DEATHS BILL.

WE trust that Mr. Sclater-Booth's attention will be directed to a very interesting series of facts elicited at an inquiry this week in the north. He will learn from it that the omissions which have been pointed out in his Bill, and which will be partly remedied by Dr. Lyon Playfair's amendments, afford every facility for child-murder, where foul play is intended. The facts came to light at an inquest held at Halifax upon the body of a child which a midwife had certified as still born, but which Dr. Dolan, a practitioner of the place, had certified to have been alive at the time of birth. It appeared, from the evidence, that it is a very common practice among the lower classes in Halifax to employ midwives, who are, as a rule, ignorant of the most ordinary rules of the avocation they profess to follow. In the present case, the certificate of death was signed by a grocer who knew nothing of the circumstances which caused it. Two women, who were present at the birth, gave evidence that the child breathed, and that they pointed out this fact to the midwife, as the child lay upon the floor, but she paid no attention to their representation. Dr. Dolan, in his evidence, stated that the child had been born alive. He made a *post mortem* examination, and found that it was well formed and fully matured. There were no marks on the body, except one on the chest, about one inch and a half long and an inch broad, which had probably been done in delivering the woman. He had found it to be a very common practice in Halifax, in the case of girls who were unmarried, and who wanted to get rid of their children, that no attention was paid to the infants, who were taken from them and put on one side, until they died. Dr. Dolan expressed his belief that it would be a great improvement if there were a higher class of midwives in the town, and he had offered, some time since, to instruct women, if they would attend for that purpose at the workhouse, as he considered that it would be a sensible advantage to the poor, who could not afford to pay a properly qualified practitioner. The midwife (Mrs. Puckles) was called, and gave her evidence, and the matter ended by the jury ignoring Dr. Dolan's evidence, and returning a verdict to the effect that the evidence was not sufficiently conclusive to show whether the child was born alive or not; and that no blame was attached to anybody, not even to the grocer who wrote a certificate, on a matter as to which he was perfectly incompetent to judge.

MEDICAL INSPECTION OF SEAMEN.

THE last annual report of the Supervising Surgeon of the Marine Hospital Service of the United States refers specially to this subject, and it is found that, amongst the most constant inmates of the marine hospitals of that country are many who obviously "have never been physically fit for the duties, the exposure, the hardships and privations of a seafaring life". That clause of the Merchant Shipping Act of 1867, relating to the medical inspection, has been, up to the present time, a dead letter, because it is permissive, and not obligatory, and many ship captains believe that the safety of their vessels is frequently imperilled on account of the unseaworthiness of the men who man them. The report above quoted refers to these opinions, and, as a remedy for the existing evil, it is suggested "to forbid by statute hospital relief at the expense of the marine fund, in any case where it is evident that the applicant was physically unfit when shipped". This would, as a matter of course, bring about a systematic medical examination of all seamen before signing articles.

NEW BATHS.

DURING the past fortnight, a great addition has been made to the public baths of London. A new swimming-bath has been added by the Commissioners of St. Marylebone Vestry to the bathing establishment already existing in that parish. The bath-room is highly ornamented with variously designed representations of birds, fishes, and water-fowl. The bath is 73 feet long by 26 feet broad, and the depth of the water ranges from 4½ to 6 feet. Two diving-boards are provided. The bottom and sides of the bath are covered with glazed tiles of different patterns. The water is run off every evening after the hour of closing, and is renewed, after the bath has been cleansed, every morning before six o'clock. Gentlemen to whom clean water is a desideratum should, therefore, bathe early in the day. An entirely new bathing establishment for the parish of Paddington was last week opened by the Lord Mayor in Queen's Road, Bayswater. It contains no fewer than four swimming-baths—three for men, first, second, and third class, and one for ladies. The best swimming-bath for men is a magnificent structure, and holds 120,000 gallons of water. All the baths are lined with tiles, and are provided every morning with fresh water. We anticipate that, during the hot months, ladies and gentlemen will largely patronise these establishments. New wash-houses have been constructed in the rear of the Paddington baths, and seem to contain all the most recent improvements. They will be a great boon to the poor and to the lodging-house keepers of the locality. The charge made is three halfpence per hour; each woman bringing also soap and soda for her own use. A steaming and washing tub, with a plentiful supply of hot and cold water, a steam wringing-machine, a hot drying-closet, and mangling and ironing apparatus, are provided. In fact, nothing has been neglected which can induce the poor to cease from inflicting the miseries inseparable from "washing at home" upon their own households.

IRELAND.

THE DROGHEDA ELECTION PETITION.

THIS petition, which was instituted to unseat the present member, Dr. O'Leary of Dublin, was lately tried before the Judges of the Common Pleas, who were divided in their opinions; and the case has now been finally decided by Judge Barry, who has declared that Dr. O'Leary has been properly elected, and has condemned each party to pay its own costs.

SMALL-POX AT QUEENSTOWN.

THE Norwegian bark *Vesta* arrived last week with six cases of small-pox on board; and, as no representation was made to the proper authorities for quarantine, an investigation will take place concerning the circumstance. We understand that the vessel has now left, and hope that the men who are at present suffering from this disorder, and have been brought to Cork, may not cause a spreading of the disease, as occurred on a former occasion.

PUBLIC HEALTH BILL.

THE guardians of the South Dublin Union have unanimously adopted a resolution advocating several changes in this proposed measure; one being, that the providing of hospital accommodation for epidemics shall not be undertaken by the Local Government Board; and it was also objected that the dispensary medical officers should be officers of health, those gentlemen having, it was stated, already more work than they could get through in a satisfactory manner. A petition embodying these suggestions will be presented to the House of Commons by Sir A. Guinness, and by Lord O'Hagan to the House of Lords.

ADULTERATION OF FOOD.

DR. CAMERON, City Analyst, delivered on Monday last, at the Molesworth Hall, Dublin, an interesting lecture on the Adulteration of Food, Drugs, etc. He alluded to the Adulteration Act which a Committee of the House of Commons were at present investigating, and stated that he was to give evidence before it this week. Dr. Cameron observed that, during the past year, penalties to the amount of £400 had been obtained for the adulteration of milk, and that, during the past few years, upwards of £1000 had been handed over to the local exchequer. He believed that the supply of milk to the various public institutions in the country was of an inferior description, and mentioned that the milk lately supplied to Mountmellick Workhouse contained 67 per cent. of water, and the result was that several children in that union suffered from rickets and other affections. Coffee was adulterated with chicory, burnt sugar, and burned biscuits; mustard with turmeric, flour, and red pepper; tea with foreign leaves, iron filings, and exhausted tea-leaves; bread with alum and rice-flour; rice-flour with white clay; confections with clay, plaster of Paris, and coloured poisonous pigments. Whiskey was often sold when quite fresh and mixed with fusel oil, a most deleterious compound; and he thought that the authorities ought to require whiskey to be in bond for two years before being sold, as by that time the fusel oil would be harmless.

THE REGISTRATION OF BIRTHS AND DEATHS BILL.

DEPUTATION TO THE PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

A LARGE deputation from three Associations—the British Medical, the Social Science, and the Statistical—waited upon the President of the Local Government Board, on Friday last, to call his attention to what the Associations regarded as necessary amendments in the Government Bill for the Registration of Births and Deaths. The Parliamentary Bills Committee of the British Medical Association was represented by its Chairman, Mr. Ernest Hart, Dr. Sibson, F.R.S., Dr. A. P. Stewart, and Mr. Francis Fowke, the General Secretary; the Social Science Association by Mr. George Hastings, Mr. Rowland Hamilton, Mr. W. Acton, Dr. J. Edmunds, Mr. G. Godwin, F.R.S., Dr. Wm. Hardwicke; and the Statistical Society by Dr. Guy (President), Dr. Wm. Farr, F.R.S. (Vice-President), Mr. Seymour Teulon, Mr. James Marshall, Mr. James Lewin, Mr. W. Taylor, Mr. H. Hearder Lack, etc.

Mr. GEORGE HASTINGS introduced the deputation.

Dr. GUY, on behalf of the Statistical Society and the Health Department of the Social Science Association, presented the President with suggested amendments drawn up by each Body independently. The paper drawn up by the Statistical Society touched upon most of the points given by the Social Science Association, and included some others. It was as follows.

"1. The period of forty-two days allowed for an informant to give notice of a birth to the Registrar is unnecessarily long. In the Registration Bill submitted to Parliament by Her Majesty's Government in 1872, but withdrawn, it was proposed to make this limit *one month*, which is sufficient for all practical purposes.

"2. Provision should be made for giving an increased value to the Registration Certificate of Birth, by enacting that when the information of a birth is accompanied with the production of a certificate of attendance at birth supplied by a qualified medical practitioner, or by a recognised midwife, the Registrar should be instructed to add the words 'Certified by ——', after the name and address of the informant in the eighth column of the Register.

"3. It is essential for the purposes of the mortality returns that every death should be registered as promptly as possible, and, therefore, the proposal to allow the Registrars a maximum limit of *one month* within which to complete or require the completion of a death-registration, will most seriously affect the sanitary statistics of the country, to which the Public Health Act of 1872 gave increased importance.

"4. No burial should be permitted without the production to the officiating minister at the interment of a Registrar's certificate that the death has been duly registered, or that notice of the death has been received by the Registrar from the proper informant; in inquest cases, a Coroner's order for burial will suffice.

"5. Clause 18 interposes no proper safeguard against the burial of live-born children as still-born. Under the Clause (as under the existing law) still-born children may be buried without the cognisance of the Registrar. In the Bill of 1872 (Clause 19) it was proposed to enact that no still-born child should be buried without a Registrar's order for burial, to be issued under certain conditions. This Clause is much to be preferred to the Clause 18 in the present Bill. There should be, however, a provision that the Registrar shall enter in a separate Register Book the particulars of every still-birth in respect of which he issues a burial order.

"6. As it is proposed to render the certification of causes of death obligatory upon the medical profession, it should be enacted in Clause 19, that medical men should be legally entitled to charge the families of their deceased patients for such certificates as for other medical services rendered. At present, it is doubtful if such legal right of charge exists.

"7. As regards deaths where there is no medical attendant to certify the cause and no inquest is held, the medical officer of health should be required either by himself, or by the Poor-law medical officer as his deputy, to visit the body, and either to certify the causes of death according to the appearances of the body and the evidence of the persons about the deceased, or to call for a Coroner's inquest. The discretion given by Clause 20 to the Registrar in respect of medically uncertified causes of death is objectionable. Clause 18 of the Bill of 1872, though defective as not requiring medical evidence, was more satisfactory than the present Clause, for it at least required the joint statement of two informants where no medical evidence was forthcoming.

"8. The Bill contains provisions for the registration of all births and deaths occurring in British ships *at sea*, but it does not provide for the registration of deaths in the army and navy *abroad*. This is a defect which should be remedied by a Clause requiring the War Office and the Admiralty to supply the Registrar-General periodically with an authentic list of all the deaths in the army and navy *abroad*, comprising the several particulars required in the case of Englishmen dying at home.

"9. In the Registration Bills of 1872 and 1873 the omission of informants to give notice of births or deaths to the Registrars was specifically made punishable by a fine, and this is essential to the efficient working of a compulsory registration law. In the present Bill no penalty is prescribed for the omission of the notice on the part of the informant. Furthermore, the maximum penalty of 40s. for refusing to give information when applied for by the Registrar is too small."

The speaker said that all whom the deputation represented were acquainted with the benefit and the advantages derived by the country from even the present system of registration of births and deaths, and desired to see these advantages increased. The information derived from the Registrar-General became daily of more importance, and one fact testified to this—that, by this information, the public had been made aware that disease was communicated through drinking-water—information which had thus been the means of preventing the spread of disease.

The PRESIDENT said that the statements laid before him were very clear, and he could assure the deputation that the matters thus conveyed should have his most careful attention; and he regarded the deputation as giving the greatest weight to those statements. Some of the points touched upon had been considered, and those not in the Bill should be considered again.

A member of the deputation remarked, that giving a lengthened time to register did harm; and he gave an instance in which a man was going to register, thinking it had to be done in three days; but, finding he could go for a month, he put it off altogether.

Dr. A. P. STEWART said his Association attached very much importance to the matter of registration of still-born children, because, under that name, a great number of infanticides occurred, and the Bill did not appear to have clauses sufficiently stringent to prevent this terrible practice from continuing. The burial of still-born children should not be allowed without the certificate of the medical officer of health, so that an effective obstacle should be placed in the way of nefarious practices. The deputation desired to press this matter particularly upon the attention of the Local Government Board and upon the attention of Parliament, and to provide against the continuance of the failure of justice which occurred at present.

Mr. ERNEST HART said that, since the Joint Committee of these Associations had been formed, the British Medical Association had sent a deputation to Mr. Stansfeld, and had urged this particular matter upon his attention, so that it was no new thing. Another point to which it was necessary the President's attention should be called was one, in relation to which Dr. Lush had placed a notice of motion on the paper of the House of Commons. The Bill required every medical man to give a certificate, to be used for the purposes of the State, and which from the offices of the State might be copied for all sorts of private purposes—as evidence in a court of law, for instance—and every one who wanted a copy would have to pay a fee for it; but the writer of it, from whom it was to be obtained, was not provided for at all in regard to payment. The Parliamentary Bills Committee of the British Medical Association proposed, not that the State should pay for the certificate, but that the medical man should be entitled to recover for it as for an ordinary medical service rendered to his patient. This was the first time that it was proposed, in an Act of Parliament, to call upon the medical man to give a certificate, and, therefore, it was necessary that, at the same time, provision should be made for paying for the service.

The PRESIDENT said he would consider this question also; but he thought that, practically, the medical men were paid for giving a certificate, as they included a charge for it in their general service.

Mr. HART said that the practice was extremely various, and nothing had been established upon the subject; but now the Government proposed to make a law upon the subject to compel the medical man to give a certificate; and the Association said that, while the Government made the giving of a certificate compulsory, the medical man ought to have the power of recovering a fee, as for a medical service, for giving it. On the subject of still-births, it was necessary that the President should have his attention called to the fact, that a woman could go to an undertaker and say she had a still-born child, and the child would be buried—this, too, without there being any power on the part of anyone to initiate an inquiry whether the child was still-born or not. A committee of the House of Commons, last year, came to the opinion that there should be this power of inquiry, and that a certificate should be required for the protection of infant life; and that, in any future Bill for the amendment of the registration of births and deaths, some clause should be inserted requiring the registration of still-births; and the Government, then, were prepared to introduce such a clause. It was also said that any woman who took more than one child should have her house registered, and that was left out of the measure then before the House with the intention that, when the Registration Bill was brought in, provision should be made to meet these wants.

The PRESIDENT rejoined that these were very difficult matters to legislate for; but the Government would consider the points with the others.

The deputation thanked the President, and withdrew.

THE NAVAL MEDICAL SERVICE.

DEPUTATION TO THE FIRST LORD OF THE ADMIRALTY.

ON Wednesday last, a deputation from the Parliamentary Bills Committee of the British Medical Association waited upon the First Lord of the Admiralty at Whitehall, to call his attention to the needs of the Royal Naval Service in regard to medical officers.

Sir WILLIAM FERGUSSON, President of the Association, introduced the deputation, which was formed of Mr. Ernest Hart (the Chairman of the Parliamentary Bills Committee), Mr. Heckstall Smith, Dr. G. Johnson, F.R.S., Dr. Paul, Mr. Lord, Dr. W. Dickson, R.N., Dr. Farquharson, Mr. Harvey, R.N., Mr. Arthur Durham, Dr. Ramsay, Dr. Rogers-Harrison, Dr. A. P. Stewart, and Mr. Francis Fowke (the General Secretary).

Mr. ERNEST HART, addressing the First Lord, said: I shall keep to the business details of the subject upon which the deputation has come, and only bring before you the general questions connected with it. We feel that your interest is quite as deep, if not a deeper one than our own, in the efficiency of the Naval Medical Service; and that you are disposed to restore it to increased efficiency. We have laid before you a written document of suggestions; and I will now venture to go through the grievances of which the Naval Medical Service complains, and the proposals for their removal. The first has relation to the proposal that surgeons shall rank with lieutenants under eight years' seniority. There is a strong feeling upon this point, for it is one of the causes which affect the navy at the present time. The officers feel that, when they are qualified surgeons, having worked in their profession, and being of an average age of twenty-four years, they could not enter a service where their position would be so inferior; for the naval instructors, from the date of their entry, rank as lieutenants with eight years' seniority; and it is desired that the naval medical officer should be upon the same footing as the naval instructor. The second point has reference to the title of staff-surgeon; and it is asked that this should be altered to the title of surgeon-major, as the present title gives no meaning of the superior grade which it confers. The third is, that the title of "second-class surgeon" should be abolished, and that of staff-surgeon substituted. The term "second class" is held to be most objectionable, carrying with it a sort of professional inferiority—implying, in the term second class, relative professional incapacity. A simpler nomenclature could be adopted, and would remove grievances which at present cause much discontent. The fourth point asked is, that the inspectorial grades should rank with their correlatives according to the dates of their respective commissions, in lieu of after a particular number of years' service. This clause is regarded as a simple act of justice; and the same argument applies to the fifth—that a step of rank should be conferred on medical officers below-inspector-general, on their retirement after twenty years' full-pay service, at the discretion of the Admiralty; such rank to carry with it the widow's pension and compassionate allowances. But they do not ask for any other pecuniary advantages. A step has now been given; but it is simply honorary in the case of medical officers, whereas, as regarded all other classes of naval officers, where superior rank is awarded on their retirement, it is substantive, in that it carries with it the advantage of increased widow's pension. For example, taking one class alone, there are forty or fifty paymasters-in-chief, whose widows would be entitled to £90 a year; while, out of the same number of deputy-inspectors, there is but one whose widow would be entitled to a similar amount. The period is fixed at twenty years' full-pay service, because to make it longer would practically shut out almost every medical officer from any benefit. The sixth point is with reference to the promotion of surgeons to the rank of staff-surgeon on the completion of ten years' seniority, provided their qualifications and conduct shall have been satisfactory. In relation to this, promotion from this lower rank has come to a dead-lock; the senior surgeons being of thirteen years' seniority, and some of them nearly forty years of age. So long as this state of things continues, it will be impossible to get any men to enter the navy. We fix the limit of ten years' seniority, because the officer would then be thirty-one to thirty-five years of age, and tired and discontented with his inferior position. This practice, too, is acted on in the Indian service, where the attractions of pay and rank are far greater than can be expected in the Royal Navy. The seventh suggestion is, that the rank of surgeon-major, to be obtained at present for distinguished service, should be obtained in other cases at a less period of full-pay service than twenty years, so as to equalise with the army for loss of time on half-pay. This principle has been accorded in the adjustment of full pay in the Admiralty Circular No. 4, February 8th, 1867. The eighth suggestion asks for a completely distinctive uniform to mark the position of the staff-surgeons (at present second-class surgeons); for at present they are the only class in the navy without a distinctive uniform. The reason for this requisition is obvious; for, if you go on board one of Her Majesty's ships, you would not be able to say, from his uniform, what the surgeon is. In No. 9 we touch upon a great question—a retirement question. We ask that there shall be a retirement-scheme for inspectors and deputy inspectors-general; the minimum to be fixed at £800 and £650 *per annum* respectively, after thirty years' service; the principle of the scheme to be based on an Order in Council of February 22nd, 1870; and the age for compulsory retirement to remain as at present. I will ask you to go more fully into that, as with that question others are bound up. These are the only officers in the Royal Navy who have no retirement-scheme. We would take the present scale of retirement as a basis for these officers, adding to it £25 a year for each year served in the inspectorial ranks; and, while we say that the maximum should not exceed £800 or £650 a year respectively, we think the minimum should not be less than £650 and £500 respectively. The maximum retiring amount for a surgeon-major, as now fixed, is too little, and contrasts most unfavourably with that of all other classes of officers with whom the surgeon-majors relatively rank in regard to full-pay and half-pay. It is, therefore, necessary that the retirement scheme for the lower grades than the inspectorial should be revised and adjusted in a more equitable proportion to their pay, as accorded to all other classes of officers in the navy. Then we ask that all medical officers shall be allowed the option of retiring after twenty years' service on the half-pay earned; and this is one of the strongest desires of the young medical officers and of those who would be candidates. The amount it would cost would be very small—it is impossible to say what it would be—and it cannot be estimated how many would take advantage of it when the time came; but this much is certain—it would satisfy them in the interval, and would be one of the greatest inducements for young men to enter the service. It is to be remembered that Mr. Childers's scheme denied to some officers advantages which were given to others, and the Government of the day had to grant £100,000 to those officers who had been in some way wronged by Mr. Childers's scheme, and this £100,000 was taken as an improvement on that scheme. Now, in this case, there is a similar readjustment required for the medical officers, and especially to open up advantages which would induce young men to join. The necessity for this is to be seen in the fact, that there is a deficiency in the junior ranks of 40 on a moderate establishment of 250; and one of the strongest causes in keeping young men from joining is the present impossibility of leaving after twenty years' service. The twelfth suggestion deals with the question of an improved adjustment of pay with regard to its increase in some grades. The pay is now considered on all hands to be quite inadequate after the surgeon has passed into the rank of staff-surgeon. We ask that, in the case of these officers, the pay should graduate from 18s. to 24s. a day; from 25s. to 33s. for surgeon-major; deputy-inspectors from 35s. to 42s; and inspectors-general from 45s. to 55s. The next question has relation to "charge pay". We ask that all medical officers in charge of hospitals at home and abroad should be paid a certain sum *per diem* in addition to full-pay, and present allowances as "charge-money" to be reckoned according to the relative rank with other naval officers, as per Circular No. 4, clause 6. We analysed this suggestion, and we found that executive officers had "charge-money" when in charge of stores; and there were all sorts of reasons for the money, as there were sure to be losses, for which the officers in charge were responsible; and, as medical officers rendered these services and had these responsibilities, it was only fair they should have the additional money. The next suggestion asks that a surgeon-major, being the senior medical officer of a ship bearing the flag of a flag-officer or the broad pendant of a commodore, in charge of a squadron or station not under the command of a superior flag-officer, should be allowed 5s. a day extra, and a staff-surgeon similarly placed to be allowed 3s. a day extra. This would apply to only thirteen officers, so the cost would be but little, while the satisfaction would be great. Of the thirteen to whom the point would apply, five have the allowance at present, and those who do not get it are the surgeon-majors of the flagships at Portsmouth, Devonport, the Nore, Queenstown, the Channel Fleet, the Detached Squadron, Australia, and the West Coast of Africa, all of whom, except, perhaps, at Queenstown and Australia, have a great deal of very important extra duty devolving on them. The expense of this would be only about £650 *per annum*, and would cure an anomaly which is looked on now as a grievance. Then it is asked that there should be the appointment of a deputy inspector-general, instead of a surgeon-major, to all ships flying the flag of a commander-in-chief on a foreign station, to perform the medical duties of the ship as well as the inspectorial duties of the squadron. It has been the general wish of the medical department of the service that this appointment should be made, and the desire for it was strongly expressed by all the medical officers who were examined before the Commission of 1865-6. This, it will be observed, would make employment for a larger number of the superior rank; but I do not for myself know how this would square with the general exigencies of the service. Then, it is asked that there should be the appointment of additional inspectorial officers to the larger hospitals in England, where at present junior officers are performing the duties which used to be performed by the seniors. It would be seen from this that there has not only been a paring down of the salaries in the service and the position, but actually the higher class work has been thrust upon the junior officers. The next point asks for the restoration of the appointment of surgeon-majors to foreign hospitals, to Melville Hospital, to the Plymouth division of marines, and to all other home appointments connected with the navy. It is felt as a grievance that these essentially naval posts should be held by other than naval medical men; and especially the appointment of civilian medical men to the Greenwich Hospital and to the Naval Prison at Lewes, in place of naval medical men. The appointment at Greenwich cannot be defended, as others sometimes were, on the score of economy, and it is felt as a slur on the whole service. The origin of this appointment being taken from the navy is involved in obscurity, and it should be returned to the service. No appointments, then, it is asked, should be held for an unlimited period.

The FIRST LORD asked Lord Gilford if they were so held.

Lord GILFORD replied that he took this to mean that, when the period for an appointment had expired, it should not be renewed.

Mr. ERNEST HART said it was not consistent with the nature of a half-pay service that any of its officers should be retained in office for an unlimited period, as was now practically the case in some instances, and this manifestly operated to the discouragement and injury of other able and deserving officers, as a steady flow of promotion and equal chances of employment were thus prevented. The deputation asked that the staff employments should be of equal tenure, and fixed at five years; as three years, as at present, was too little to give the officer a chance of recouping himself the expense incurred in taking up such an appointment. Then, too, it was asked that all appointments of surgeons and agents of sick quarters should be, as far as possible, conferred on retired medical officers, as only fair to that class. It was finally asked that surgeon-majors should be entitled to a cabin on the main deck in all ships where there were such. At present, they did not have these, even when they were senior to other officers who had them. This was necessary not only in maintenance of rank, but because the profession was one which required a good light, and it should be only under exceptional circumstances that the medical officer should be deprived of it. We have (Mr. Hart said) submitted this long list in the earnest desire to assist your department, and our medical brethren of the service, to arrive at a satisfactory alteration of a position which debars the service from being popular, and has caused a disinclination to spring up in our medical schools to enter the navy under the present circumstances.

Mr. HARVEY, who spoke as having had much experience in the service, from which he had retired, dwelt upon the points given by Mr. Ernest Hart, and he contrasted the position of the medical officer of the rank of surgeon-major with the relative executive rank, on the question of retirement, and said that the other officers had vastly superior advantages to the medical officer. He handed in tables in evidence of the fact. He claimed what had been asked for not only as a matter of policy, but as justice, and only in accordance with what had been done in the sister service.

Dr. DICKSON, who had also had great experience in the Royal Navy, urged the necessity of these points being accepted, and these grievances being redressed, so as to remove the unpopularity with which the naval service was regarded. He also contrasted the treatment of the naval medical officer serving in the tropics with that of the army medical officer, and said the latter received four times as much pay as his naval medical brother, while the latter often had the more arduous duty. He illustrated this by reference to the late expedition to Ashantee, and by his own experience in China, and he took that opportunity of thanking the First Lord for his prompt recognition of the services of medical officers in that expedition.

Mr. ARTHUR DURHAM, of Guy's Hospital, testified to the complaints of the naval service which reached him from the largest medical school, and so prevented men from seeking to join the service. Of some 1700 or 1800 young men who had left the schools, he could only find that about three or four had joined the service; and, at their gatherings, he had heard it jocosely said that "Guy's" men were found everywhere but in the Royal Naval Service, and it was to be hoped they would not be found there until the terms of the service were altered, for even those who had their services looked down upon them, as having no other means of practising their profession, such was the tendency of the regulations at present.

Dr. GEORGE JOHNSON confirmed this statement.

The FIRST LORD said that he had great pleasure in listening to all that had been advanced, and he could assure the deputation that their views would receive full consideration. The subject was one which was at the present receiving consideration at the Admiralty; and even without the kind assistance of the British Medical Association it was the intention of the Department to have gone into the question with great care. Lord Gilford was giving his special attention to the subject, and no doubt the expression of views by the deputation would be of material assistance. He would be much obliged if Mr. Hart would forward in writing the representations which had just been made, in order that they might be deliberately considered.

The deputation then thanked the Lords and retired.

STATE MEDICINE.

A MEETING of the Joint Committee of the British Medical and Social Science Associations on State Medicine was held on June 9th. Present: Dr. Baylis (in the chair), Dr. A. P. Stewart, Mr. Clode, Mr. S. Brown, Mr. Liddle, Dr. Shrimpton, Mr. Ryalls, Dr. Joseph Rogers, Mr. E. Hart, Mr. Thurleston, Dr. Webster, etc.

Moved by Dr. STEWART, and seconded by Mr. CLODE, "That Drs. Shrimpton and Lush be added to this Committee."

Mr. CLODE read the following memorandum from Dr. Rumsey, and moved that the letter be entered on the minutes. This was seconded by Dr. STEWART.

"It is earnestly hoped by several members of the Joint Committee, who may be unable to attend this meeting, that, in again considering sanitary organisation and the boundary question, the Committee may adhere to the principles laid down in their previous reports (especially that of August, 1871), and in their memorial of April, 1872; and that they will do their utmost to prevent the threatened multiplication of sanitary enactments, respecting details of management, until more suitable authorities shall have been constituted in more convenient areas, with properly adjusted boundaries.

"Recent failures and irregularities in administration show that it is of the highest importance to organise a complete, efficient, and uniform class of local sanitary authorities, as administrative units, in whom should be vested (as proposed in 1872) not only all the duties now committed to urban and rural sanitary authorities, but also all powers relating to the provision of medical relief, the establishment and maintenance of district dispensaries, public vaccination, and other measures of disease prevention, now vested exclusively in boards of guardians.

"It is obvious that such combination of objects and duties would simplify and economise local administration; and that fresh legislation is required to *unify* and consolidate the separate authorities now existing in each district or place, by the joint appointment of sanitary committees, so that all matters affecting the health and sickness of the masses, the vigour and longevity of the community, may be, in the first instance, referred to a single order of authorities, *everywhere* in action.

"But, in order to effect this important reform, it is essential that the areas of different jurisdictions should be corrected and mutually adjusted; so that statistical inquiry and record (registration), medical service, curative and preventive, sanitary inspection and action may be directed in the same or corresponding districts.

"It also appears that some combination of the proposed 'administrative units' is required; and, therefore, that such units of area and authority should be united, at the discretion of the central authority, for the establishment of superior authorities, in districts corresponding, either singly or collectively, with the old counties of England—the combined districts being, as far as possible, multiples or aggregates of the units, so as to provide not only for wider objects, such as river conservancy and other matters requiring administration in larger areas, but also for the constitution of boards, for purposes of superintendence and conference in matters of general interest respecting the sanitary state and management of the included districts, as well as for the appointment of superior officers—legal, medical, and engineering—whose entire time and attention should be devoted to their public duties.

"It is submitted, lastly, that the experience of the present system shows the necessity of better regulation of districts and authorities, as essentially preliminary to more stringent and extensive measures of sanitary reform, and that an adjustment of overlapping areas and conflicting boundaries should precede the reconstruction of authorities."

After a full statement by Dr. A. P. STEWART, which was discussed, it was moved by Mr. HART, and seconded by Mr. LIDDLE, "That it is desirable to ask the Government to receive a deputation on the subject of the working of the Public Health Act, 1872, and that for this purpose a subcommittee be appointed to prepare and issue to the medical officers of health under that Act schedules of questions relating thereto, and that the Secretaries of this Committee, and Dr. Rumsey, Dr. Bond, and Mr. Hart, with power to add to their number, be appointed such subcommittee."

CONTRACTILITY OF ANIMAL AND VEGETABLE TISSUES.

ON Friday evening last, Dr. Burdon Sanderson, F.R.S., gave a lecture at the Royal Institution on the Mechanism of the Leaf of Dionæa Muscipula, and on the Electrical Phenomena which accompany its Contraction. After introductory observations on the application of the experimental method in the study of physiology, the speaker proceeded to divide his subject into two parts. In the first, he proposed to describe and illustrate the general characters of the plant; in the second, to discuss the property of contractility possessed by the leaf, and to demonstrate its complete similarity to that of the contractile tissues of animals, by a series of experiments. Of the descriptive part of the lecture, we reproduce so much as relates to the mechanism of the leaf.

The leaf is of a very peculiar form. Its blade consists of two nearly semicircular lobes, joined together along their straight borders by a strong midrib. On to this midrib the two lobes, when the leaf is open, are set nearly at right angles to each other. The curved outer edge of each lobe is strengthened by a hem, from which some twenty spikes spring on either side, which are directed towards the concavity of the leaf. The under surface of the leaf is bright green, smooth and glistening, and is marked with parallel streaks which run outwards from the midrib; but the upper surface is pink, owing this colour to its being beset with little red bosses, too small to be seen by the naked eye, which are called glands. In addition to these glands, there are on each lobe three delicate hair-like spines or filaments, which are always arranged as if at the corners of a triangular space, about the middle of the upper surface. The petiole, or leaf-stalk, is of the shape of the handle of a teaspoon, the only difference being that its upper surface is channeled along the middle instead of being flat. By its broad end, it is united to the leaf by a narrow isthmus of about half a line in breadth.

Whenever an insect, or any other object, touches however lightly any of the six filaments above mentioned, the lobes close sharply upon it, just as a rat-trap closes on the animal caught; the closure is at first, however, only partial. When the leaf is thus half closed, it is easy to see what is the significance of the two sets of prongs along its edges. They are observed to be set alternately along the borders of the two lobes, so as to fit into each other as the teeth of a rat-trap do. The reason why the leaf does not at once close firmly on its prey—at first sight not very apparent—Mr. Darwin has been able to explain by observing what happens when an insect finds itself caught and attempts to escape. If it be small, it easily makes its way through the grating formed by the crossing of the teeth, and, in this case, the leaf expands again very gradually, and is then ready for another victim. If it be large, all its efforts to regain its liberty are futile. Repelled by its prison-bars, it is driven back upon the sensitive filaments, which project into the interior of its cell, and again irritates them. By doing so, it occasions a second and more vigorous contraction of the lobes. The result is, that the creature is this time not only captured, but crushed, to be eventually digested.

The leaf, having thus closed, remains for a week or more in the same state. At first, the two lobes are so flatly pressed against each other, that the insect between them forms a bulging projection on each side. But soon a quantity of juice is secreted by the internal surface of the leaf, which as it collects distends the space occupied by the insect, which after a time becomes diffluent, and is eventually absorbed. This process of gradual liquefaction and absorption Mr. Darwin has shown by numerous experiments to be of the same nature as that by which food is digested in the stomach of the higher animals.

Dr. Sanderson began the experimental part of his lecture by stating that he would make the experiments comparative, his object being to show that the contractility of the leaf of Dionæa corresponds in all important respects with that of the contractile tissues of animals. He would take, as the best example of animal contractility, that of voluntary muscle—the best, not only because it exhibits the property of contracting in answer to excitation in perfection, but it has been so perfectly investigated by physicists, that the conditions under which the property manifests itself are very exactly known. Having first drawn attention to the change of form which muscle undergoes in contraction (which was illustrated experimentally), and to the relation between the chemical changes which go on in the muscular tissue when in the living state, and the work done and heat produced in the discharge of its function, he proceeded to dwell more particularly on the fact that, in muscle, as in all other irritable and contractile tissues in animals, the manifestation of electro-motive force is inseparably connected with the special function of the tissue; viz., with contraction. So long as the muscle lives, its electro-motive force is found to be, on the whole, proportional to its vigour. As it gradually loses its vitality, its power of contracting and its electro-motive force decline *pari passu*. When it contracts, the manifestation of electro-motive force diminishes in proportion to the degree of contraction, and ceases when the contraction is complete.

As our readers are aware, Dr. Sanderson has discovered that the same relation between the manifestation of electro-motive force and contraction which has been long known to exist in muscle is also to be observed in the contraction of Dionæa. Several months ago, a series of experiments were communicated to the Royal Society by him, some of the most striking of which were repeated at the lecture. As it is probable that many of our readers may not have had the opportunity of seeing the brief summary which appeared in the Society's proceedings, we reproduce it.

1. When the opposite ends of a living leaf of *Dionæa* are placed on non-polarisable electrodes in metallic connection with each other, and a Thomson's reflecting galvanometer of high resistance is introduced into the circuit thus formed, a deflexion is observed which indicates the existence of a current from the proximal to the distal end of the leaf. This current I call the normal leaf-current. If, instead of the leaf, the leaf-stalk be placed on the electrodes (the leaf remaining united to it) in such a way that the extreme end of the stalk rests on one electrode and a part of the stalk at a certain distance from the leaf on the other, a current is indicated which is opposed to that in the leaf. This I call the stalk-current. To demonstrate these two currents, it is not necessary to expose any cut surface to the electrodes.

2. In a leaf with the petiole attached, the strength of the current is determined by the length of the petiole cut off with the leaf, in such a way that the shorter the petiole the greater is the deflexion. Thus, in a leaf with a petiole an inch long, I observed a deflexion of 40. I then cut off half, then half the remainder, and so on. After these successive amputations, the deflexions were respectively 50, 65, 90, 120. If in this experiment, instead of completely severing the leaf at each time, it is merely all but divided with a sharp knife, the cut surfaces remaining in accurate apposition, the result is exactly the same as if the severance were complete; no further effect is obtained on separating the parts.

3. *Effect of Constant Current directed through the Petiole on the Leaf-Current.*—If the leaf be placed on the galvanometer electrodes as before, and the petiole introduced into the circuit of a small Daniell's battery a commutator being interposed, it is found that, on directing the battery-current down the petiole (*i. e.*, from the leaf), the normal deflexion is increased; on directing the current towards the leaf, the deflexion is diminished.

4. *Negative Variation.*—*a.* If, the leaf being so placed on the electrodes that the normal leaf-current is indicated by a deflexion leftwards, a fly be allowed to creep into it, it is observed that the moment the fly reaches the interior (so as to touch the sensitive hairs on the upper surface of the lamina), the needle swings to the right, the left at the same time closing on the fly.

b. The fly having been caught does not remain quiet in the leaf; each time it moves, the needle again swings to the right, always coming to rest in a position somewhat further to the left than before, and then slowly resuming its previous position.

c. The same series of phenomena present themselves if the sensitive hairs of a still expanded leaf be touched with a camel-hair pencil.

d. If the closed leaf be gently pinched with a pair of forceps with cork points, the effect is the same.

e. If the leaf-stalk be placed on the electrodes, as before, with the leaf attached to it, the deflexion of the needle due to the stalk-current is increased whenever the leaf is irritated in any of the ways above described.

f. If half the lamina be cut off, and the remainder placed on the electrodes, and that part of the concave surface at which the sensitive hairs are situated be touched with a camel-hair pencil, the needle swings to the right as before.

g. If, the open leaf having been placed on the galvanometer electrodes as in *a*, one of the concave surfaces be pierced with a pair of pointed platinum electrodes, in connection with the opposite ends of the secondary coil of a Du Bois-Reymond's induction apparatus, it is observed that, each time that the secondary circuit is closed, the needle swings to the right, at once resuming its former position in the same manner as after mechanical irritation. No difference in the effect is observable when the direction of the induced currents is reversed. The observation may be repeated any number of times; but no effect is produced unless an interval of from ten to twenty seconds has elapsed since the preceding irritation.

h. If the part of the concave surface of the leaf which is nearest the petiole be excited, whether electrically or mechanically, the swing to the right (negative variation) is always preceded by a momentary jerk of the needle to the left, *i. e.*, in the direction of the deflexion due to the normal leaf-current; if any other part of the concave surface be irritated, this does not take place.

i. Whether the leaf is excited mechanically or electrically, an interval of from a quarter to a third of a second intervenes between the act of irritation and the negative variation.

The physiological reader will readily see that these experiments have an importance beyond that which they possess as a contribution to vegetable physiology. They are certain, especially when more fully investigated, to contribute largely to the clearing up of several very difficult points in vital electricity. For example, it is a matter of great moment, in a scientific point of view, that we have here an organ in which the electrical phenomena can be investigated without inflicting the slightest injury on the tissue; for Dr. Sanderson has found that the leaf-current and its negative variation can be demonstrated in a leaf which is still attached to the parent plant. Another point is that, in consequence of the length of time that the leaf can be kept under observation without change, the difficulties which arise in muscle and nerve, from the rapid decline of vital activity, are got rid of. This applies particularly to the interesting phenomena which correspond respectively to those of "electrotonic variation" of nerve, and the "period of latent stimulation" of muscle.

A NEW PLEASURE.—The following appeared this week in the *Times.* "Should this meet the eye of the lady who got into the 12.30 Train at New Cross Station, on Friday, May 15th, with two boys, one of whom was evidently just recovering from an illness, she may be pleased to learn that three of the four young ladies who were in the carriage are very ill with the measles, and the health of the fourth is far from what her relations could desire."

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Carrère on Uterine Cancer.—Children in Factories and Workshops.

DR. CARRÈRE, a pupil of Dr. Demarquay, has lately obtained his degree of Doctor of Medicine of the Faculty of Paris. He selected for his thesis "Le Cancer Uterin", a subject with which he would be well acquainted, as he was attached for some time to the "Maison Municipale de Santé", where M. Demarquay has the reputation of having adopted the treatment of this class of affections as a sort of specialty.

As the subject of cancer was only lately discussed at the Pathological Society of London, it may not be out of place to submit to your readers a few extracts from Dr. Carrère's thesis, which fairly represents the opinions of the French Faculty as to the nature and treatment of that intractable affection. M. Carrère does not profess to throw much light on the subject; but, as he says, he has published the results of his observations taken at the bedside, in order that others who may take special interest in this class of affections may compare notes, and reject or adopt whatever may be objectionable or useful.

After giving a brief description of the anatomy and physiology of the uterus, our author enters into the morbid anatomy of cancer; but he refrains from venturing into its histology, as he says the opinions of the most celebrated micrographers of the day are too contradictory to enable one to assign to the disease anything like a nosological position. The etiology, or rather, the pathogeny, of the affection is as obscure as its pathology. Cancer of the uterus is said to be most frequently met with between the ages of 40 and 50; but, according to our author, it has also been found under 20 and up to 70 years of age.

M. Carrère looks upon heredity as one of the most powerful predisposing causes of cancer. An individual born of cancerous parents carries in him or in her the predisposition for the development of cancer; that is to say, he or she inherits the cancerous diathesis, which, like scrofula and the other diatheses, only requires a determining cause to produce local manifestation. The slightest wound in a scrofulous patient ends in intractable inflammation and suppuration; and, in cancerous subjects, every morbid act is transformed into a manifestation of the diathesis.

Regarding the known or supposed causes of uterine cancer, a remarkable statement, attributed to Dr. E. Martin of Berlin, is quoted by M. Carrère, to the effect that uterine cancer, particularly that which appears at an early age, may be, and frequently is, the result of venereal disease communicated by the husband to the wife, and that widows are particularly affected with cancer of the uterus when, during connection, their husbands have been the subjects of the *sequelæ* of venereal diseases, such as stricture of the urethra, etc. But Dr. Carrère asks, "If such be the case, how many cancerous women shall we meet with, and what will be the future prospects of the civilised world?" Dr. Carrère lays great stress on, and has great faith in, the surgical or, as he terms it, the curative, treatment of the disease, which consists of completely removing the diseased tissue. Should, however, the disease extend beyond the vaginal portion of the neck of the womb, an operation would be useless, although some surgeons would follow up the disease with the knife even to removing the entire organ. There is, however, one class of cases in which ablation may be usefully practised, and that is, when the disease is confined to the anterior lip of the os uteri.

Having criticised the various operative methods that have been employed from time to time, M. Carrère gives the preference to the galvano-caustic wire, which, according to the experience he had acquired at the Maison Municipale de Santé, is the most expeditious, and attended with the least danger. When ablation of the diseased tissue is contraindicated, M. Carrère resorts to caustics, which he employs as simple palliatives. He condemns the stronger caustics, and finds in the chloride of zinc, diluted in different proportions, all that is necessary for the purpose. He prefers using this latter in the solid form mixed up with flour-paste, in the proportion of one to two, three, or four parts of the latter, which is cut into triangular bits and allowed to dry by a slow fire. These are the *flèches* or darts to which Maisonneuve has given his name, though, at the Maison de Santé, they are not employed in the same way as practised by this eminent surgeon. M. Demarquay, whose practice is chiefly alluded to in the thesis under notice, thrusts one of these darts, about half an inch long, into the diseased tissue, and there leaves it until it disappears. He renews them once in two, three, or four weeks, according to circumstances; and, when employed in this manner, they not only act as a mild caustic, but as a strong hæmostatic or styptic. The application of these darts is confined to the uterine neck, and, when the disease extends beyond this, M. Demarquay employs liquid substances, varying in strength according to the indications of the case, not as injections, but as lotions. But, besides these properties, the chloride of zinc is a powerful disinfectant, and I have always noticed, in going through the rooms of cancerous patients in the above-named hospital, the entire absence of any bad smell, which M. Demarquay attributed to the use of this precious remedy in the above form. Of all the disinfectants employed in these affections, M. Demarquay prefers the chloride of zinc, as being more stable than the permanganate of potass, and not so offensive as carbolic acid and other odorous substances, which simply have the effect of substituting one bad smell for another. This, however, cannot be said of the eucalyptus globulus, which, besides its agreeable odour, is a real disinfectant, and, owing to its aromatic nature, seems to have the property of increasing the appetite and procuring sleep. The author dismisses in a few lines the general or constitutional treatment of uterine cancer, which consists principally of prophylactic measures, and considers the usually vaunted remedies as utterly useless when once the disease becomes manifest. From this, it may evidently be inferred that the French School do not recognise the local origin of cancer. It may not be out of place to reproduce here the author's conclusions as to the character, prognosis, and treatment of this painful affection.

1. Although cancer of the uterus is looked upon as incurable, yet, in certain cases, by judicious treatment, results nearly equivalent to a cure may be obtained. 2. When the disease is limited to the external os, excision of the neck of the womb should be performed without delay; relapses may thus be put off to an indefinite period. 3. Extirpation of the entire organ is at all times a most dangerous operation; in cases where the whole organ is affected with cancerous degeneration, the operation is not only useless, but it must hasten the patient's death. 4. When removal of the tumour becomes impracticable, the life of the patient may be prolonged for a certain time by destroying the morbid tissues either by the galvano-caustic wire or by caustics. 5. When the disease is beyond the reach of art, nothing more can be done than to have recourse to simple palliative measures, and thus relieve the sufferings of the unfortunate patient.

As in our own and other countries of the civilised world, the successive governments of France have ever evinced a deep interest in the well-being of children and youths, in order to prevent their being overworked or put too early to the "yoke"; but, when political economists are required to legislate on the subject, they generally find themselves greatly embarrassed, as they have to reconcile the interests of all parties concerned. Thus the National Assembly at Versailles have for a long time been studying the question. Law after law had been passed and broken; and now, for the twentieth time, a new law has been passed, regulating the extent of work *per diem*, according to the ages of the children. Thus no child or youth is allowed to enter into any manufactory or workshop before the age of 12, except for certain trades, which they may enter at the age of 10, in which case the number of hours they may be so employed is fixed at six during the day. From 12 years of age, children cannot be employed more than twelve hours a day; but the article is not sufficiently explicit in limiting the age of youths destined for such work. No girl who is a minor, or under 21, will be allowed to do night-work, and inspectors will be appointed to see that this law is strictly attended to. This is certainly a move in the right direction; and it is to be hoped that the law which has just been passed at Versailles is only the first step to further reform so much needed on behalf of young men and young women, who are, after all, but children of older growth, and many of whom are compelled to work for eighteen or twenty hours out of the twenty-four.

GLASGOW.

[FROM OUR OWN CORRESPONDENT.]

New Clinical Professors.—Vacancies in Anderson's University.—New Method of Canvassing.—Vacancy in Gartnavel Asylum.

IN our last letter, we referred to the probable appointment of two well known medical men in Glasgow to clinical chairs about to be instituted in connection with Glasgow University. This appointment has now been made; Dr. George Buchanan is now Professor of Clinical Surgery, and Dr. McCall Anderson of Clinical Medicine. It is well known that these two gentlemen, by the industry with which they have wrought in their particular subjects, have well earned the distinction which they have now attained to.

These appointments have caused two vacancies in Anderson's University, and the profession, and indeed we may say the entire population of Glasgow, is in the thick of a canvass for the vacant honours. For the information of any who, in future, may contemplate applying for a chair in Anderson's University, it may here be stated that the appointment is vested in no fewer than eighty-one patrons, each of whom has a vote (by ballot). Moreover, the eighty-one trustees are of the most heterogeneous description. According to the will of the founder of the institution, they are divided into nine classes, with nine members in each class. These classes are, tradesmen, agriculturists, artists, manufacturers or merchants, mediciners ("an old Scotch word, which comprehends doctors of medicine, surgeons, apothecaries, and druggists"), lawyers, divines, natural philosophers, and kinsmen or namesakes. Each of these groups of nine fills up any vacancies which may occur in its own numbers, and in this respect, therefore, the groups remain isolated. When a canvass has to be made among a heterogeneous mass such as this, it is no wonder that somewhat unusual methods are sometimes employed. The following is the copy of a circular letter which has been sent in a lithographed form by one of the candidates to his patients and admirers. The letter is nearly as wonderful for its treatment of the English language as for the cool assumption of transcendent and undoubted fitness for the appointment which it presents. Although it begins "My dear sir", we have it on undoubted authority that the female as well as the male admirers of the candidate have been called upon to lend their aid. The letter is as follows.

"My dear sir,—The chair of practice of medicine in Anderson's University will soon be at the disposal of the enclosed list of gentlemen, and I am very anxious to secure the appointment. The number of trustees is so great, however, and I am personally acquainted with so few of them, that I cannot hope to be successful without I have (*sic*) the *hearty* co-operation of my friends. I earnestly ask if you will give me all the aid you can. You will still further oblige me if you will let me know the names of the trustees whom you think you can influence in my favour. If possible, get them to promise to vote for *me*. If you succeed, perhaps you will not think I am tasking your friendship too much in asking you to get them to promise likewise to go to the poll, as I am quite sure, on a previous occasion, I lost a chair by some of those who promised to vote for me not going forward to record their votes. I am exceedingly anxious to secure this appointment, and your help will be most thankfully received and appreciated by yours most sincerely."

Besides the author of this, who is undoubtedly the popular candidate, there are two others in the field for the chair of practice of medicine; but, of their respective merits, it is not for us to speak here. There are also three candidates for the chair of anatomy vacated by Dr. George Buchanan, all of them accomplished anatomists, who have had considerable experience in teaching.

Anyone who has ever spent any time in Glasgow or its neighbourhood must have heard of Gartnavel Lunatic Asylum, and has probably also learnt something of its venerable physician and superintendent, Dr. Mackintosh. This gentleman, after a long course of service, in which he has distinguished himself for his keen insight and practical shrewdness, has resigned, and so we have another important appointment vacant. Dr. Alexander Robertson, at present physician and superintendent of the Town's Hospital, is one of the candidates, and, from all we can learn, is likely to be successful. He has, at any rate, the good wishes of the great bulk of the profession in Glasgow.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A meeting of the Committee of Council will be held at the Freemasons' Tavern, Great Queen Street, London, on Thursday, the 2nd day of July next, at 3 o'clock in the afternoon.

Francis Fowke, *General Secretary.*

37, Great Queen Street, London, June 11th, 1874.

SOUTH MIDLAND BRANCH.

The annual meeting of this Branch will be held at the Town Hall, Buckingham, on Thursday, the 25th June, at 2 p.m.—Dr. Bryan, President; Robert De'Ath, Esq., President-elect.

Refreshments kindly provided from 1 p.m. to 1.30 p.m. previously, by Robert De'Ath, Esq., at his residence.

Dinner, at the White Hart Hotel, at 5 p.m. Tickets, 6s. each, including waiters.

Gentlemen intending to furnish papers and cases, are requested to send the titles of same at once to Dr. Bryan, or to

W. Moxon, *Honorary Secretary.*

Northampton, May 27th, 1874.

BRITISH MEDICAL ASSOCIATION:

FORTY-SECOND ANNUAL MEETING.

The Annual Meeting of the British Medical Association will be held at Norwich, on Tuesday, Wednesday, Thursday, and Friday, August 11th, 12th, 13th, and 14th, 1874.

President—Sir William Fergusson, Bart., F.R.S., Surgeon to King's College Hospital, London.

President-elect—Edward Copeman, M.D., Senior Physician to the Norfolk and Norwich Hospital.

The business of the Association will be transacted in four Sections, viz.:—

Section A. Medicine.—*President:* Dr. Eade, Norwich. *Vice-Presidents:* Dr. Sydney Ringer, London; Dr. Durrant, Ipswich. *Secretaries:* Dr. Bradbury, Cambridge; Dr. Lowe, Lynn.

Section B. Surgery.—*President:* Sir James Paget, Bart., F.R.S., London. *Vice-Presidents:* T. W. Crosse, Esq., Norwich; Dr. Macnamara, Dublin. *Secretaries:* F. Worthington, Esq., Lowestoft; Reginald Harrison, Esq., Liverpool.

Section C. Obstetric Medicine.—*President:* Dr. Churchill, Dublin. *Vice-Presidents:* Dr. W. S. Playfair, London; Dr. Steele, Liverpool. *Secretaries:* Dr. Edis, London; F. Image, Esq., Bury St. Edmunds.

Section D. Public Medicine.—*President:* W. H. Michael, Esq., London; *Vice-Presidents:* Dr. Bateman, Norwich; Dr. Ransome, Bowden. *Secretaries:* Dr. Bond, Gloucester; Dr. Leech, Manchester.

The Honorary Local Secretaries are:

Dr. J. B. Pitt, Norwich.
H. S. Robinson, Esq., Norwich.
Dr. Beverley, Norwich.

Tuesday, *August 11th.*

10.30 a.m.—Cathedral Service.
1 p.m.—Meeting of Committee of Council.
3 p.m.—Meeting of the Council, 1873-74.
8. p.m.—General Meeting—President's Address, Annual Report of Council, and other business.

Wednesday, *August 12th.*

9.30 a.m.—Meeting of Council, 1874-75.
11.30 a.m.—Second General Meeting.
11.30 a.m.—Address in Medicine, by Dr. Russell Reynolds, F.R.S.
2 to 5 p.m.—Sectional Meetings.
9 p.m.—Soirée at St. Andrew's Hall.

Thursday, *August 13th.*

9 a.m.—Meeting of the Committee of Council.
10 a.m.—Third General Meeting—Reports of Committees.
11 a.m.—Address in Surgery, by William Cadge, Esq.
2 to 5 p.m.—Sectional Meetings.
6.30 p.m.—Public Dinner.

Friday, *August 14th.*

10 a.m.—Address in Obstetric Medicine, by Dr. Matthews Duncan.
11 a.m.—Sectional Meetings.
1.30 p.m.—Concluding General Meeting.

Excursions.—The Excursion Committee will make arrangements for the convenience of members and their friends wishing to visit the factories and places of interest in the city and neighbourhood during the meeting, and for parties of ladies and gentlemen to do so on Friday afternoon.

On Saturday, there will be excursions to geological and botanical stations and places of antiquarian and general interest in Norfolk and Suffolk.

The Honorary Secretary will endeavour to arrange for gentlemen well acquainted with the locality to accompany the parties on Friday and Saturday.

Any information will be given by Mr. H. B. Francis, St. Clement's, Norwich, Honorary Secretary to the Excursion Committee.

Members of the Association will receive cards for the above proceedings, evening meetings, etc., at the Reception Room, Assembly Rooms, Norwich.

ANNUAL MUSEUM.

The seventh annual Museum of the British Medical Association will be held at the Assembly Rooms, and will be open daily from 10 a.m. till 6 p.m., on August 11th, 12th, 13th, and 14th, for the exhibition of the following objects.

1. Latest inventions in medical and surgical instruments and appliances of all kinds.

2. New chemicals and apparatus; new drugs and their preparations; and new articles of diet for invalids.

3. General pathological specimens; with photographic models, drawings, etc., illustrating disease.

4. Urinary calculi; with drawings or diagrams of urinary disease, and of operations on the urinary organs. Also instruments with diagrams, etc., illustrating the history of the operation of lithotomy from the earliest periods up to the present day.

5. Drawings, diagrams, or models illustrating the ventilation of hospitals and private dwellings.

6. Microscopic pathological specimens.

The following is a list of the Museum Committee; to any member of which communications, etc., may be addressed—Mr. William Cadge, *Chairman*, 24, St. Giles' Street, Norwich; Mr. Francis Sutton, London Street, Norwich; Mr. Jonathan Hutchinson, 4, Finsbury Circus, London, E.C.; Mr. Joseph Allen, Tombland, Norwich; Mr. Francis Fowke, 37, Great Queen Street, London, W.C.; Mr. Chas. Williams, 9, Prince of Wales' Road, Norwich; Mr. J. R. Baumgartner, Norfolk and Norwich Hospital; Mr. Charles Firth, *Hon. Sec.*, 65, St. Giles' Street, Norwich.

NOTICE TO EXHIBITORS.—Application to be made as soon as possible, at the same time giving a list of objects, and mentioning the space required. Each object to be accompanied by a printed or written description, or reference, for insertion in the Catalogue; and it is important that these descriptions should be sent *as early as possible*—viz., not later than July 28th.

All parcels to be delivered on or before August 4th, and to be removed within three days after August 14th. They must be addressed "British Medical Association, care of C. Firth, Esq., Assembly Rooms, Norwich". All expenses of carriage and all risk to be borne by the exhibitors. A card bearing the name and address of the exhibitor to be enclosed in each package, ready to be fixed on the outside.

N.B.—Specimens of disease and calculi which have been exhibited at former meetings cannot be received on this occasion.

Communications to be addressed to CHARLES FIRTH, Esq., St. Giles' Street, Norwich, the Secretary for the Museum Department.

LANCASHIRE AND CHESHIRE BRANCH.

THE annual meeting will be held in the Town Hall, Blackburn, on Wednesday, June 17th, at 1 P.M.—CHARLES WHITE, Esq., President; JOHN SKAIFE, Esq., President-elect.

The following papers have been promised.

1. Remarks on Pleuritic Effusions, and their Treatment. By Dr. Waters (Liverpool).
2. On the Treatment of the Bites of Dogs by Lunar Caustic, as being unsound in theory, injurious and unsuccessful in practice. By Dr. Haddon.
3. Retropharyngeal Abscess in the Child. By Dr. Oxley.
4. Specimens of rarer forms of Contracted Pelvis. By Dr. D. Lloyd Roberts.
5. Some of the Uses of Chloral-Hydrate in Labour. By Dr. Wallace.
6. On the Action of Stimulants. By Dr. Ross.
7. Remarks on the Position of the Heart's Impulse, based upon Chest-rule Measurements made by Mr. Patchett. By Dr. Ransome.
8. On Mazoitis (apud Lactantes): its Course, Result, and Management. Also, the exhibition of various articles of interest. By Dr. Garstang, Blackburn.
9. Brain and Lung, from a case of Tubercular Meningitis. By Dr. Oxley.
10. Morbid Growths removed from the Uterus. By Dr. Steele.

The Honorary Secretary of the Branch will briefly call attention to the proposed erection of a County Convalescent Hospital with the surplus of the "Cotton Famine Relief Fund".

The dinner will take place at the Town Hall at 4.30 P.M. precisely. Tickets, 7s. 6d. each, exclusive of wine.

A. B. STEELE, *Honorary Secretary.*
54, Rodney Street, Liverpool, June 3rd, 1874.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Midland Hotel, New Street, Birmingham, on Tuesday, June 23rd, at 3 P.M.; when an address will be delivered by the President, W. C. GARMAN, Esq.

The annual dinner will also be held at the Midland Hotel, at 5 P.M. precisely. Dinner tickets (exclusive of wine), 7s. 6d.

T. H. BARTLEET.
BALTHAZAR W. FOSTER, M.D. } *Honorary Secretaries.*
Birmingham, May 26th, 1874.

SOUTH-WESTERN BRANCH.

THE annual meeting of this Branch will be held at the Museum, Torquay, on Tuesday, June 23rd, at 1.30 P.M.; J. KEMPTHORNE, F.R.C.S., President; SPENCER THOMSON, M.D., President-elect.

After the meeting, a visit will be paid to Kent's Cavern, under the guidance of E. Vivian and W. Pengelly, Esqs. (Superintendents of the Exploration), who have kindly offered to accompany the party.

The dinner will be at the Torbay Hotel, at 5.30 P.M. Tickets, 7s. 6d., exclusive of wine.

The South Devon and Cornwall Railway Companies will grant (on production of dinner-ticket) return tickets at single fares.

Gentlemen intending to read papers or exhibit cases are requested to communicate at once with JOHN WOODMAN, F.R.C.S.,
Exeter, June 6th, 1874. *Honorary Secretary.*

SOUTH-EASTERN BRANCH.

THE thirtieth annual meeting of the South-Eastern Branch will be held in the Royal Pavilion, Brighton, on Thursday, the 25th June, at two o'clock; G. F. HODGSON, Esq., President-elect.

Dinner punctually at half-past five. Tickets, 8s. each.

Dover, June 1874. CHARLES PARSONS, M.D., *Hon. Sec.*

MIDLAND BRANCH.

THE annual meeting of this Branch will be held at the Guildhall, in the city of Lincoln, on Thursday, June 25th.

Members wishing to read papers are requested to communicate at once with C. HARRISON, *Honorary Local Secretary.*
Lincoln, May 25th, 1874.

METROPOLITAN COUNTIES BRANCH.

AN ordinary meeting of this Branch will be held at the rooms of the Medical Society of London, on Tuesday, June 30th, at 8 P.M., when a paper will read by W. Eassie, Esq., C.E., on "Cremation in its Sanitary Aspect".

A. P. STEWART, M.D.,
ALEXANDER HENRY, M.D., } *Hon. Secs.*
London, June 4th, 1874.

NORTHERN BRANCH.

THE annual meeting of this Branch will be held in the Town Hall, South Shields, on Tuesday, June 30th, at 1.30 P.M.: President, 1873-74, G. Y. HEATH, M.D.; President-elect, 1874-75, A. LEGAT, M.D.

The following resolution will be proposed by Dr. Eastwood:—That the title of the Branch be "The North of England Branch", in place of "The Northern Branch".

G. H. PHILIPSON, M.D., *Honorary Secretary.*
Newcastle-upon-Tyne, June 10th, 1874.

NORTH WALES BRANCH.

THE annual meeting of this Branch will be held at the Royal Oak Hotel, Bettws-y-coed, on Tuesday, July 7th, at 1 P.M.; T. EVANS JONES, Esq., President.

Luncheon will be kindly provided by the President at the Hotel, from 12 to 1 P.M.

The dinner will be ready at 4 P.M. precisely. Tickets, 10s. 6d. each, including a pint of wine.

Gentlemen who may wish to communicate papers or cases, and who intend dining, will please to give early intimation to the Secretary.

D. KENT JONES, *Honorary Secretary.*
Beaumaris, June 3rd, 1874.

SOUTHERN BRANCH: HAMPSHIRE, DORSET, SOUTH WILTSHIRE, AND THE ISLE OF WIGHT.

THE first annual meeting of the above Branch will be held on Thursday, July 9th, 1874, at the Pier Hotel, Southsea, at 3.30 P.M., when the President, Inspector-General SMART, M.D., C.B., will deliver an address.

The business of the meeting will be to receive the report of the Provisional Council, to elect the officers of the Branch, and the representatives to the General Council for the ensuing year.

The dinner will take place punctually at a quarter past six. Tickets, 10s. each. (Wines at moderate charges.)

The Dinner Committee particularly request that those members who intend to be present at the dinner will send in their names before Saturday, July 4th, in order that the necessary arrangements may be completed. J. WARD COUSINS, *Hon. Sec.*
Southsea, June 11th, 1874.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE sixth ordinary meeting of this Branch was held at the College Green Hotel, Bristol, on May 28th, at 7 P.M.; Dr. E. L. FOX, President, in the Chair. There were present thirty-six members and two visitors.

Communications.—1. Mr. ORMEROD read a case of Gall-Stone.

2. Mr. BOARD read a case of Imperforate Anus successfully treated, and Messrs. Fowler, Collins, and Lansdown made some remarks.

3. Dr. INMAN gave an address on Malaria. A very interesting discussion ensued, in which Drs. E. L. Fox, Brittan, and Messrs. D. Davies and Stone took part. Valuable experience gained in foreign countries was also given by Drs. Fyffe and J. Caddy, R.N., and Mr. T. H. Taylor, R.N.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of the above Branch was held in the Corn Exchange, St. Ives, on Wednesday, May 27th, under the presidency of W. R. GROVE, M.D. There were twenty members present and a few visitors.

Previously to the meeting, the members were entertained at an elegant luncheon by the Chairman.

The PRESIDENT read a short and very interesting introductory address, giving a sketch of the history of St. Ives.

New Members.—The following new members were elected:—T. H. Garland, L.R.C.P.Ed., and Henry F. L. White, L.K.Q.C.P.Ireland.

Next Place of Meeting.—It was resolved to hold the next annual meeting at Cambridge in June 1875, in conjunction with the East Anglian and South Midland Branches, and under the presidency of Professor Humphry, M.D., F.R.S.

Representatives in the General Council.—The following gentlemen were re-elected:—D. B. Balding, Esq.; W. R. Grove, M.D.; and G. M. Humphry, M.D., F.R.S. Job Watson, Esq., was elected the representative of the Branch on the Parliamentary Bills Committee.

Papers.—The following papers were read. 1. By J. M. WILSON, M.B., on Enteric Fever, more particularly its origin. This was an able and very interesting paper, and provoked a long discussion, in which Messrs. Watson, Anningson, Roper, Ennals, Garland, Balding, Beckitt, and Drs. Latham, Bradbury, and Sergeant took part.

2. By H. F. BANHAM, Esq., M.A., on the Influence of Alcohol on the Temperature of the Body in Health and Disease.

For want of time, a paper by J. B. BRADBURY, M.D., entitled Practical Remarks on the Treatment of Heart-Disease, was not read.

The PRESIDENT exhibited a specimen of Hydatidiform Mole; and B. ANNINGSON, M.A., M.B., two specimens of Spina Bifida.

Dinner.—The dinner took place at the Lion Hotel; the President in the chair, and Dr. Bradbury acting as vice-chairman. About twenty-five sat down to dinner, the Vicar of St. Ives being among the visitors.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT MEETING.

THE fifty-second annual meeting was held at Canterbury on Thursday, May 28th; H. G. SADLER, Esq., in the chair. Twenty-five members and their friends were present.

Business.—Mr. Thurston was thanked for his services, and unanimously re-elected to the office of Honorary Secretary.

The Places of Meeting for the ensuing year were fixed for Ramsgate in September, Canterbury in November and May, and Dover in March.

Mr. Thomson was elected chairman of the Ramsgate meeting.

Communications.—1. Mr. LONG read a case of General Paralysis after Injury to the Head. This was an interesting case where the four extremities were gradually affected, till paralysis became complete; they ultimately entirely recovered their power in reverse order to that in which they were attacked. The treatment consisted of mercury carried on till the system was affected, combined with blistering at the back of the neck and purging.

2. Dr. BRAXTON HICKS brought forward a method of Paracentesis Abdominis in Ascites complicated by Tympanites or a Tumour. It consisted in carrying the usual incision down to the peritoneum and just puncturing it, when a female catheter or a similar instrument might be pushed through the small opening and the fluid drawn off. By this method all chance of injury to the bowel or tumour by the ordinary trocar would be avoided.

3. Dr. BRAXTON HICKS read an interesting and valuable paper on the Local Treatment of Cystitis in Women.

4. Mr. RIGDEN again introduced the subject of the use of the Obstetric Forceps in some cases in which they are not considered absolutely necessary, and brought forward the following statistics to prove the value of their use. He divided a practice of thirty-seven years into two divisions: in the first, extending over twenty-two years, he attended 2,365 cases; in the second, extending over fifteen years, 2,395. In the former, he entertained a prejudice against the use of the forceps, and they were used only fifteen times, or once in 150 cases; in the latter, he used them 156 times, or once in 16; in the former, there were 118 stillborn children, or 5 per cent., in the latter, 95, or 4 per cent.; in the former, 5 maternal deaths, in the latter, 4. The 15 forceps cases in the first division resulted in 13 stillborn children, principally due to delay; the 156 cases in the second division resulted in only *three* stillborn children, one of which was hydrocephalic. One of the maternal deaths in the first division was a forceps case; no maternal death occurred in the second division in the forceps cases. Mr. Rigden also considered his freedom from serious *post partum* hæmorrhage during the last fifteen years to be, to a great extent, due to the timely use of the forceps. He did not contend but that some, probably several, of the 156 cases would have terminated safely by the natural efforts; but why should a mother suffer prolonged agony, when she might be safely delivered in comparatively a short time?

Dinner.—The members afterwards dined together at the Fleur-de-lis.

The Next Meeting will be held at Ramsgate on September 24th.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT MEETING.

THE fourth meeting of the seventeenth session, 1873-4, was held at Gravesend on May 29th; ALFRED SHEWEN, M.D.Lond., in the chair.

Secretary.—Dr. F. J. Brown was re-elected Honorary Secretary.

Next Place of Meeting.—It was decided to hold the next meeting at Rochester, in September or October; Adam Rae Martin, Esq., to occupy the chair.

New Member.—Francis McEvoy, Esq., of Devonshire Villas, Bexley Heath, was elected.

Communications.—1. A discussion on the use of Perchloride of Iron in *Post Partum* Hæmorrhage.

2. Mr. C. J. W. PINCHING read a Case of Empyema opening into the bronchial tubes, with pointing externally. The abscess was lanced, with recovery.—Paracentesis thoracis was warmly advocated by Mr. J. M. Burton as the proper mode of treating empyema, and cases favourable to this view were narrated by Mr. Charles J. Pinching and by Dr. Burns.

3. A Case of Hydatidiform Mole was related by ALFRED SHEWEN, M.D.—In the discussion on this paper, it was stated by Dr. Armstrong that, in his own experience, the subjects of this disease never subsequently gave birth to live children.—Dr. Crook, however, gave testimony conversely.

4. Mr. J. CHRISTOPHER ARMSTRONG exhibited a Monster, wanting the greater portion of the head.

Dinner.—The members and visitors dined at the Old Falcon Inn.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of the above district was held at the Castle Hotel, Hastings, on Wednesday, May 27th; Dr. HALL of St. Leonard's was nominated to fill the chair, in the absence of Dr. Turner through severe illness.

Communications.—1. Mr. PENHALL of St. Leonard's showed an Arm which he had Amputated at the middle of the humerus on account of a very large Tumour of the Forearm. It consisted of a large blood-cyst containing some two pints of blood, and having in its walls fatty looking patches presenting in the fresh state the characters of round-celled sarcoma, but no stroma could be recognised. The ulna below the coronoid process was stripped of periosteum, roughened, and excavated. It was believed that the blood came from the medullary cavity, distending and forming a sac from the muscles. The subject of the case was a sallow cachectic middle-aged man. The swelling was of about three months' date when first seen. At the end of a week, it was about the size of a flattened hen's egg. It had been tapped by the aspirator, only dark blood being drawn off. There was no definite history of strain or injury, but the man's occupation was to draw a heavy hand-cart. Pulsation was perfect in both vessels at the wrist.

2. Mr. PENHALL made some practical remarks on the use of the Plaster Splint, describing minutely the mode of application of the plaster of Paris and the bandages, and illustrating its use by the history of several cases, comprising simple, compound, and comminuted fractures

sprains, diseases of joints in children, with cases of advanced disease of ankle-joint in a case of phthisis, treated by the fenestrated plaster splint, with the effect of giving great relief to all the painful symptoms.

3. Mr. PENHALL brought forward a young woman in whom he had performed Resection of both Elbow-joints to remedy Ankylosis, the result of Acute Rheumatism. The resections were performed at an interval of five months, and resulted in signal benefit. A considerable amount of movement being restored. On the last occasion, the wound united by first intention.

4. Mr. E. SMITH of Battle read the following case, illustrating the use of the Cold Bath in Typhoid Fever. C. F., aged 7, had a severe attack of typhoid. The temperature ranged from 103.5 deg. in the morning to 105 deg. in the evening. On the morning of the twenty-second day, she became unconscious; temperature, 106 deg.; pulse, over 200, and respirations 72 per minute. She was put into a full length bath at 85 deg., and the water was allowed to cool gradually. She remained in the bath twenty-five minutes. The temperature in the rectum had then fallen to 102.6. Consciousness soon returned. In the evening, the temperature in the axilla was 103 deg.; but next morning it was normal, and from that time her recovery was steady.

5. Dr. BAGSHAWE of St. Leonard's brought forward a patient, married, but childless, who was attacked with Periuterine Cellulitis and Ovaritis, two years and a half previously. An enormous abscess formed, which, at the end of four months, opened at the umbilicus. In January of the present year, for the first time, the discharge became bloody, and continued so for four days, accompanied by the usual pains of menstruation. Each month since that time the discharge has contained more or less blood. She had not menstruated *per vaginam* since her first seizure.

Dinner.—The members and their friends subsequently dined together at the Castle, under the presidency of Dr. Hall.

New Member.—Dr. David Davis of St. Leonard's was nominated as a member of the Association and of this Branch.

The Next Meeting is to be held at Uckfield, in the month of September. Mr. Henry Holman, sen., of East Hoathly, to be invited to take the chair.

CORRESPONDENCE.

DISINFECTION BY HEAT.

SIR,—In the recently published *Manual of Public Health*, edited by Mr. Ernest Hart, is a chapter on disinfection, upon which I ask you to insert the following comments.

At page 369, the writer says: "Given a bundle of clothes from a small-pox patient, there is only one safe and practicable course to be taken, that is, to burn it. We might, it is true, destroy it with corrosive chemicals, but that would only be a more difficult and a more costly way of destroying it; and unless we pushed the action of the chemicals, so far as to destroy the fibre of the fabric, we could have no security."

At page 370, again, he says: "All clothes which are tainted with the specific infecting matters, such as the matter from small-pox, scarlet fever, etc., ought to be burnt. When plague breaks out in a crowded part of a town, there is much to be said in favour of burning down the houses where it has been rife."

"Failing so extreme a measure (which, however, he would most seriously commend to the attention of the authorities of a plague-stricken town), they should be for a while dismantled, and freely exposed to the rain and to the wind."

Again, on the same page, he said: "In place of burning clothes and bedding, there is a custom of baking them; and the practice is defended on the ground that the small-pox poison is destroyed by a heat approaching to the boiling point of water. Granting, however, that the subjection of the poison to such a temperature will destroy it, there is always room for very reasonable doubts whether a mass of bedding, for instance, is raised throughout its entire substance to the required temperature; and, in the present state of our knowledge on the subject, we should discourage the substitution of baking for burning outright."

The *Manual of Public Health* is intended as a guide to practical men, and there can be little doubt that, seeing the reputation of the authors, it will be much read, and its teachings relied upon by many Medical Officers of Health, and by some lay members of the Board of Health.

What will be the practical effect of its teaching? It will result in nothing being done, except to destroy; and this means, that only such things as are almost valueless will be destroyed, and the bulk of infected materials will remain untouched. Who does not know the careful economy, at least in these matters, of boards elected by the ratepayers, the majority of whom are needy? Who expects that the infected bedding and clothing of the retail traders, or of more wealthy people, will be burned at their own cost? The value of these things is very often large in proportion to the wealth of the owners. I venture to say that, unless under the influence of panic, nothing will be burned, either at the cost of the owner or of the Sanitary Authority, except almost worthless articles.

The writer of the chapter on disinfection not only recommends a proceeding which cannot, in practice, be followed upon a scale sufficiently large to do much good, but so depreciates all other recognised methods of disinfecting, as to afford an apparent justification for the inaction of the Local Boards of Health.

Yet there is one method of disinfecting clothes and bedding, viz., that, by heat, of which even he does not venture to deny the efficiency, although he throws doubt upon the efficiency of the practical methods by which it is applied, saying, "there is always room for very reasonable doubt whether a mass of bedding, for instance, is raised throughout its entire substance to the required temperature". In reply to this assertion, I beg to state that, in a disinfecting stove now at work at the General Hospital in this town, there is no reasonable ground for doubting that the required temperature penetrates to the centre of a bed in about eight hours. There are, in short, no sufficient grounds for so depreciating this mode of disinfecting. The mechanical arrangements are simple and satisfactory, are automatic, are not costly, and present a reasonable amount of certainty that the object sought to be attained is really reached.

If by disinfection we mean, as practical medical men should do, the rendering harmless such things as were previously potent for the spreading of infectious diseases, we must absolutely separate the idea of disinfection from that of antiseptic action. We should follow in the steps of the late Dr. Henry of Manchester, and ascertain what are the conditions which render inert the infecting agent. From him we know that clothing, infected with scarlet fever virus, heated in dry air to a temperature of about 205 deg. Fahr. for one hour becomes harmless, that vaccine virus heated to 140 Fahr. loses its activity, and that to make heat penetrate we want time. We have, unfortunately, but few experiments and observations of a similar kind to those made by Dr. Henry, but there are analogous arguments sufficient to convince us that heat may be tried as a disinfectant, with great probability of its succeeding.

Experiments as to the effect of heat upon the virus of the infectious diseases of animals would be of value by increasing the importance of the argument from analogy, and it is much to be regretted that such an inquiry has not long since been set on foot by the Medical Department of the Privy Council.

The writer of the chapter here under discussion appears to have had in view something more than mere disinfection, as here defined and limited, and to have seen the question mainly from the chemist's point of view. The outcome of his reasoning appears to be that, in order to disinfect you must destroy, that is, resolve into stable, simple, binary compounds, the unstable, complex, organic bodies, supposed to be the infecting agents, and with them everything with which they had been recently in connection.

It is to be hoped that some intermediate course may be found, and that no acts of Parliament will be passed which are conceived in this spirit. I, at least, do not doubt that a careful study of this question of experiment upon the lower animals, will help us to means of rendering harmless the infected clothing and bedding from all the known infectious maladies with as much certainty as now, in my opinion, heat may be applied to disinfect the clothing and bedding from small-pox and scarlet fever patients.

One more quotation, and I have done. The writer says (see p. 371), "There is perhaps no other subject which has been so overlaid with absurdities and deformities." I can cordially assent to this statement of opinion.

The above comments had been drafted some weeks ago, but had been laid aside uncorrected in consequence of the pressure of other avocations, when my attention was called to the fact that the present Government has proposed to give to the metropolitan sanitary authorities power to order the destruction of infected clothing and to give compensation. This is not very alarming. The same power has long been enjoyed by less august bodies, and has not been largely exercised, for reasons which do not need to be restated. It would be a more hopeful sign were the local boards of health to turn their attention to disinfection without destruction, both because it would be cheaper and more widely beneficial. There is, however, but little ground for expectation that those bodies will move in this matter with the vigour which it requires, although I entertain a strong conviction that a long continued habitual disinfection, properly carried out, would, in a few years, largely diminish the sickness and the death-rate from the spreading diseases.

I am, etc., W. H. RANSOM.

P.S.—The mechanical appliances at present employed by local boards of health for disinfecting by heat are, it must be admitted, quite sufficiently unsatisfactory to justify the want of confidence in them which the author of the chapter on disinfection exhibits.

METALLIC IMPURITIES IN AERATED WATERS.

SIR,—The general results of Dr. Attfield's examination of the metallic impurities in aërated waters having appeared as an editorial article in the *Chemist and Druggist*, I have sent a reply to that journal. The insertion of Dr. Attfield's report in your current number enables me more clearly to see and comment on the points of difference between us.

The waters I examined were brought to me in the first instance by a physician who suspected something wrong in them. I afterwards obtained a number of specimens in the ordinary and private way, from both the wholesale and retail trades. Since I have heard that Dr. Attfield had questioned my results, I have gone very carefully over the analyses on a more extended scale, and I am fully convinced my results were correct.

I agree with Dr. Attfield that the proportions of metallic impurity were minute, for I had to concentrate a large quantity of aërated waters to obtain sufficient lead for gravimetrical estimation. I, however, obtained metal, purified and reduced it to the metallic state, dissolved it in nitric acid, and tested it. It was undoubtedly lead, and I have it as sulphide still.

I have also examined metallic syphons of various shapes. Some of them were branded with the name of a foreign firm, and others without name; but I have not seen the name of Messrs. Hayward, Taylor, and Co., on any I have examined. I cannot, therefore, speak definitely as regards their syphon-taps, without communicating with them, which I consider objectionable. Metallic syphons also differ in composition. Some of them contained only a small quantity of tin, and considerable marks of corrosion were found on the surfaces exposed to the action of the aërated fluids.

I have also noticed and specially examined the white coating on the inside of several taps (chiefly of soda and lithia waters). I found it was composed chiefly of the carbonates of lime and lead, associated also with a little alkaline salt and oxide of zinc. These incrustations or corrosions were partly detached and washed out of the syphons by the force of the fluid, and fresh alkaline oxidation of the moistened tap allowed to commence.

That tin is acted upon by aërated waters, I do not dispute. Any one who makes aërated waters, or uses tinned stills, etc., knows how that metal is stripped off, sometimes as a spongy black powder of metal or black oxide of tin. The first of Dr. Attfield's experiments I think, therefore, unimportant.

The second series of experiments—with taps, presumably pewter ones—is rather obscure. If Dr. Attfield mean to say that aërated water will not dissolve pewter or lead when in contact with it, I must entirely disagree with him, as my experiments show exactly the reverse. Into three bottles of soda-water, containing sixteen grains of acid carbonate of sodium per pint, were placed weighed globules of pure lead, tin, and tin and lead, respectively. After macerating a week (a shorter time than many syphons are kept), these globules were taken out of the fluids, and were found to have lost weight or become coated; and the soda-water in which the lead-globule had been placed, showed traces of lead to chemical tests.

Soda-waters containing different proportions of alkali were examined; but lead was attacked by all of them, when under pressure of carbonic acid gas; the water in some instances becoming slightly opalescent, from the formation of a somewhat soluble hydrocarbonate of lead.

If pure tin (which, by the bye, is a scarce article) or silvered syphons were used, of course no lead could be found in the waters. The appearance of the metallic syphon itself is a very good guide. A dull-looking corroded syphon is almost certain to contain lead in a soluble condition, from the action of either the gas, alkali, or electrical action of the metals, or perhaps all three combined—it matters not which—if the metal become corroded or dissolved.

The results of Dr. Attfield are also in opposition to those obtained recently by the French chemists who have examined the solvent action of water. * Thus, Balard says aërated water attacks lead. Marais adds, that water containing bicarbonates saturated with carbon dioxide (carbonic acid), under pressure, dissolved lead to the extent of .012 grain per *litre*, and deposited lead carbonate; and Fordos, remarking on the supposed calcareous deposition in lead pipes, says he found it to consist of lime, lead, and carbon dioxide; and this is confirmed by Bobierre (see *Comptes Rendus*, lxxvii, 1055-1529).

That lead is slightly soluble in solution of alkaline carbonates, has been noticed in this country; and that carbonic acid water is a solvent of lead, is recorded in most text-books of chemistry, as Miller, Taylor, and Watts.

Whether lead in small quantities is cumulative and hurtful, or harmless, may be a debatable point, and I leave it to the medical profession, to whose province it rightly belongs.

I am, etc., GEORGE BROWNEN, F.C.S.

143, New Bond Street, June 9th, 1874.

MILITARY AND NAVAL MEDICAL SERVICES.

THE *Pall Mall Gazette* says: The Duke of Cambridge and Lord Cardwell, during the debate the other day in the House of Lords, maintained that, in point of quality, the recruits now obtained are satisfactory. They have little grounds for satisfaction, to judge from the following fact. A batch of between twenty and thirty recruits joined the headquarters of a certain regiment within the last few weeks. Of these, six were reported unfit by the medical officer of the regiment, six of them being under the minimum chest-measurement of thirty-three inches. Of the number, two measured only thirty-one inches and a half round the chest.

DEATH OF SURGEON-GENERAL BEATSON.

INTELLIGENCE was received on Monday, by telegram from Simla, of the death there of Surgeon-General G. S. Beatson, C.B., Principal Medical Officer of Her Majesty's British Forces in India, and Honorary Physician to the Queen. Dr. Beatson entered the army in 1838, and served through the Burmese war of 1852-53, and subsequently during the Crimean war at Scutari and Smyrna. As an administrative officer, Dr. Beatson served at the head of the medical department of the army in the Ionian Islands and Madras; and at the time of his death, which took place on Sunday, was for the second time occupying the important post of principal medical officer of the army in India. In the course of a career extending over thirty-six years, Dr. Beatson had earned the reputation of being one of the ablest medical officers in the British army. By his premature death, the Army Medical Department has sustained a very severe loss.

THE NAVAL MEDICAL SERVICE.

SIR,—At the present crisis in naval medical affairs, it seems to me a matter of the greatest importance that the voice of the profession should be heard through the press. I would, therefore, ask permission to draw attention to some of the existing grievances which medical officers hope soon to have remedied. Amongst them, is that of the old staff-surgeons being compelled to go to sea at advanced age, when they had always been led to expect that certain harbour appointments were entirely reserved for them. Until lately, this has invariably been the rule; now, they are filled indiscriminately by men of any service. Another very important change for the worse has lately taken place. Appointments for officers of this class existed in the various home and foreign hospitals. These were shaved off by the economical scythe of the late administration; consequently, at a foreign hospital, should the deputy-inspector fall sick, the treatment of the most serious cases falls into the hands of a young surgeon. At Plymouth, a whole division of marines, with its appendages of women and children, rarely falling below 1600 souls, was deprived of its appointment of a staff-surgeon by the economical Admiralty. Another appointment, which of all others one would suppose would have been retained for naval surgeons—Greenwich Hospital—has been conferred on a civilian. With regard to choice of cabins, medical officers were to have had them by seniority, but that arrangement has been undermined. Staff-surgeons were to have been placed on an equality with commanders in having a right to engage their own servants, but it is not so; they have no choice but simply to select one of the marine domestics. They were promised 5s. a-day when serving in flagships, but exceptions were soon established in the flagships of the channel and flying squadrons. One unfortunate man was called upon to refund about £150, which had been paid to him on the authority of the circular. Naval medical officers complain that their employment is temporary in lieu of being continuous. An army medical officer can, as a rule, put in twenty years' full pay time at one run, while a naval one can scarcely do so within twenty-five years, owing to the frequent interruptions of half-pay time. Staff-surgeons complain that they only receive £400 *per annum* on retirement at fifty-five years of age, losing their precious right to retire after twenty years' service, while secretaries, chaplains, naval instructors, and paymasters are awarded £450. The Admiralty changed the naval medical titles, and have given us inferior military designations. Observe the differences: a staff-surgeon in the navy is an old officer, who must have served twenty years on full pay, and is conceded the rank of lieutenant-colonel; a staff-surgeon in the army may be a young surgeon who has just joined Her Majesty's service, and is not yet doing duty with a regiment. Why do not medical officers receive the allowances accorded to their relative rank and conceded by circulars? It is absolute glaring injustice to deny them. Why is it that an inspector-general of hospitals is not placed on an equal footing with a colonel commandant of marines, in the matter of furnishing official quarters? An inspector-general, ranking with a rear-admiral, is placed on the same footing as a lieutenant of the navy, and is limited to a paltry sum; while the colonel of marines may have any amount of furniture that he may think fit to order, and the expenses will be defrayed by the Admiralty. Do not these things call for reform? Is it to be wondered at, that an exodus of young surgeons is going on, as the true nature of the position they have selected gradually breaks on them?

I am, etc., A STAFF-SURGEON.

THE FUTURE OF THE ARMY MEDICAL DEPARTMENT.

SIR,—While agreeing generally with your well-grounded remarks on the state of our department, in the JOURNAL of February 28th, I beg to point out, that the evils you deplore were introduced and established by that very Warrant of 1858, which, in many respects, merits the title you give it, of our Magna Charta.

By its provisions, all vested rights of medical officers were utterly abrogated; and, consequently, the War Office has, ever since, never scrupled to deal with them as they please, cancelling without ceremony the very regulations which may have induced young men to join the service, and then turning round, as you tell us Mr. Cardwell has done, with the excuse that all has been done at the very recommendation of the department itself.

The older medical officers were dealt with, in 1858, by the advice of the then newly created Director-General Alexander, in a way that would never have been even attempted with any other class of commissioned officers. Men of the highest character and ability were deprived of their hardly earned promotion (bestowed on others many years their juniors), and then told that, as they had reached 55 years of age, they must depart into poverty and obscurity, though the regulations under which they had entered the service secured them the enjoyment of their commissions, "aut vitam aut culpam". A long list of promotions came out, arranged apparently on the principle of the first being last, and the last first; and then the principle of seniority, up to that moment altogether ignored, was declared paramount for the future, so as to secure the rapid elevation to the highest grades of those so kindly provided for. From the issue of that Warrant may be dated the disunion and declension of the Department. The selections for "merit" included many excellent officers, but also some unworthy. The unhappy author of the Warrant (who, himself, told the writer that he bitterly regretted the day he ever accepted his position), was fiercely assailed by many of the superseded, while others never condescended to seek an interview. The shifts to which he was put to justify his conduct, afforded the most perfect condemnation of it. The general excuse made was, "No field service"; yet Mr. Cowen, who had gone through all the hard work of the first Chinese War, in the 18th Royal Irish; who was one of the very few men never a day absent from duty during it; who was next man to Major Sargent, when the latter lost his arm by a shot from the walls of Canton; who escaladed the ramparts of Chinkangfoo with his men, and who afterwards gained the Punjab medal; this deserving, hard-working officer, of stainless character, was passed over, in favour of men eight years his junior, "because he had never served in the Crimea", forsooth; and then, to get rid of him, he was ordered out to the West Indies, after twenty years nearly of the East, and so driven out of the service. Moreover, men who had not "merit" enough for promotion in December 1858, were found possessed of that indispensable qualification in January and July 1859, but had to pay for their tardy acquisition of it, by standing far below men six and seven years their juniors in the service.

This was quite a new reading of "Sic vos non vobis". Just fancy the attempt being made to treat, let us say, the Royal Artillery officers, as the doctors were dealt with. Fancy the senior captain passed over, for a regimental lieutenant-colonelcy, in favour of a man seven years his junior, on the plea that the latter had served in the Crimea, while the former had only been sweating in command of his battery in Jamaica! How would such an attempt have been met? How would the War Minister have been questioned in the House about it? The very enunciation of such an absurdity is enough; but with the unfortunate, ill-used, and superseded doctors, there was neither sympathy nor hope of redress. All the attempts made, since 1858, to tinker up the Department, have disgracefully failed, and yet the proper principles of administration, that should be applied to it, are not far to seek. A world of confusion and trouble, in both the Medical and the Control Departments, would have been spared, had Government had the sense to follow the sensible lead of the American War Office, and gazette the officers of both corps under the ordinary military designations which everybody understands. As we have an Army Hospital Corps, with lieutenants and captains of orderlies, why not have majors and colonels of them as well? Why not a brigadier of doctors, as well as one of engineers, only, like a joint-stock company, "limited"? "Uncle Sam" is no fool, and he has never had any trouble about "relative rank", with his medicos organised on that system. But putting aside such heretical notions, and looking at the Department with English, and not Yankee eyes, its system is plainly altogether erroneous, and such as cannot recommend itself to sober, steady men, such as it is most desirable we should recruit, but who are slow to see the advantage of sacrificing all their prospects of a quiet home, in civil life, to knock about in West or East Africa, and "elsewhere", for twenty-five years, and then be shelved for life, on the handsome pension of £1 a day! Had I the honour of being War Minister, I should organise the Department as follows. Retaining the recent improvement of its being regarded as one corps, like the Royal Engineers, I should make the gradual advancement of its members a certainty, regulated chiefly, though not wholly, by length of service. Entering with relative rank as lieutenant, the surgeon should, after six years' service, rank as captain, and after twelve as major, with the designation of surgeon-major; after twenty years' service, as lieutenant-colonel; and after five years' service in that rank, as colonel. I would do away with the absurdity of such promotions as that of Surgeon-Major Edge, putting a man over the heads of hundreds of seniors, with substantive rank, for merely defending his own life. Give men what decorations you please for "field service", but do not, unless under *very special* circumstances, supersede, in their favour, their brethren who, be it remembered, are always in the field, on service against the great conqueror Death, and, therefore, quite differently situated from their military comrades. Which was the most desirable and most dangerous position—a doctor in charge of a regiment in the Crimea, or in charge of one at Peshawur, with his hospital full of cholera, or fever, and sweating and toiling, day and night, for months, in the atmosphere of an oven? He who does his duty well and truly, wherever it is assigned to him, should never see juniors put over his head, in our Department, from the mere accident of their lot having been differently ordered. I would also do away with the present substantive ranks of surgeon-general and deputy, and make these coveted positions staff-appointments, tenable only for five years, like those in the Adjutant and Quartermaster-General's Departments. On no other plan can the great body of surgeon-majors ever have a chance of realising any small competence. Their way to it is completely blocked by comparatively young men monopolising, at present, the superior ranks. We have lately seen one of these fortunate men sent out to enjoy a second tour of the best appointment in the service—£300 a month—earned, for the most part, in the glorious climate of the Himalayas. There is nothing, in point of age or health, to hinder him from serving on till a third such tour offer itself for acceptance. Now, each of these means, to a prudent man, a return to England, with the best part of £10,000 at his credit; and the whole service would be animated with a new hope and energy, if the senior surgeon-majors could look, in turn, for such a chance of fortune. All the minor principal medical officerships could be assigned to surgeon-majors ranking as colonels. The officers detailed for the higher posts should be gazetted just as the adjutant-generals now are; and those who had satisfactorily discharged the duties of such appointments should, *on retirement*, receive the permanent rank and present retiring pay assigned to them respectively. In this way, every medical officer would be available for hospital duty, instead of a large body of the best paid men acting precisely as pneumatic despatch tubes, for what more are the great proportion of so-called "administrative officers"?

The hospital is the proper ground for the display of true professional ability, in military life, as it is in civil society; and he is the best medical officer, in my opinion, who cures the largest percentage of patients. On our present system, the object of everybody is to shirk hospital work as much as possible, seeing that "it does not pay". Did an officer display the talent of a Fergusson or a Gull, it would not advance his interest a whit in "the office"; while, if he availed himself of an opportunity to stalk over a battle-field, knife in hand, like an embodied Azrael, dismembering hip-joints, or, avoiding his own duties, got himself employed as a volunteer aide-de-camp, and, therefore, "mentioned in despatches", his way is clear to a C.B. promotion, and "distinguished service" pension.

It is to be hoped that our new War Minister may deign to turn his attention to our present grievous condition of hopelessness and disgust. In your valuable JOURNAL, and other such publications, he may learn something of the real state of the Department, which, no doubt, appears all that is desirable to those seated *in excelsis*, but something very different to those who see fifty-five years of age and £1 a day, *pour tout potage*, looming ominously near. How extraordinary is the difference, in official vigour, between a combatant and a medical officer! One is fit to command a division at seventy, the other unfit to doctor a single regiment at fifty-five! "Sic vos non vobis," again.

I am, etc., A SURGEON-MAJOR.

OBITUARY.

JAMES BIRD, M.R.C.S.ENG.

MR. JAMES BIRD died at his house, No. 80, Seymour Street, Portman Square, on the 6th instant.

Mr. Bird was educated at St. Bartholomew's Hospital. He became a Member of the Royal College of Surgeons of England in 1825, and a Licentiate of the Apothecaries' Society in 1821. He commenced practice at Cardiff, where he became Surgeon to the Royal Glamorgan L. I. Regiment Militia, and to the Cardiff Dispensary. After a few years, he came to London, and settled in Oxford Street, but soon afterwards removed to Orchard Street, Portman Square, where for many years he carried on a considerable practice. For several years before the passing of the Medical Act, he took an active part on behalf of the general practitioners in the conferences between the authorities of the College of Physicians, the College of Surgeons, and the Society of Apothecaries; and, in conjunction with the late Mr. Henry Ancell, was Secretary to the British Medical Institution, with the late Mr. Pennington as Chairman.

About eighteen years ago, Mr. Bird retired from the active duties of the profession, and, after a time spent in the country, returned to London, and resided in Seymour Street, where he continued to see some of his old patients.

No more affectionate husband, no more tender parent, no kinder or more generous friend, no more intellectual and genial companion, than James Bird ever belonged to the medical or any other profession. He was fond of literary pursuits; and, although for these last three years he spent most of his nights in his chair, he constantly occupied his days in writing on scientific subjects for the medical and other periodicals. He suffered much from asthma and heart-disease, and at last dropsy supervened. His mind continued clear almost to the last, and he was cheered and comforted by the untiring and affectionate watchfulness of his two daughters; and he died full of Christian hope.

JAMES H. SIMPSON, M.B., M.R.C.P., PONTEFRACT.

DR. SIMPSON of Pontefract died on June 2nd. On May 23rd, he cut the palm of his hand slightly with a piece of glass while drawing a cork; but the wound appeared to be healing slowly though satisfactorily. A few days afterwards, however, inflammation set in, and it is supposed that the injured part must have been poisoned whilst he was attending to the wounds of patients upon whom he had operated, or whilst engaged on a *post mortem* examination. On May 27th, it became evident that pyæmia had set in. The patient gradually grew worse, and died on June 2nd.

The late Dr. Simpson was the second son of the Rev. James and Mary Simpson, of Whitgift, near Howden, and was born in 1813. He studied at Caius College, Cambridge; and, after graduating in 1839, he entered the Infirmary at Newcastle-on-Tyne as a student. Thence, after twelve months, he went to London, and joined St. Thomas's Hospital, remaining there upwards of two years. In the year 1841, the Cambridge degree of Bachelor of Medicine was conferred upon him; and in the following year he was admitted a Licentiate of Medicine of his University, and a Member of the Royal College of Physicians. He went to Pontefract and commenced practising as a physician in 1843. In addition to his private practice, Dr. Simpson held at different times various public offices, the principal being that of West Riding Coroner for the Honour of Pontefract. He was also Medical Officer of Health for the Districts of Castleford and Whitford, and in April last year was appointed to a similar post for the No. 2 District of the Pontefract Poor-law Union. He was also Surgeon to the 4th Administrative Battalion of West York Rifle Volunteers.

SAMUEL DAWSON DOWNING, L.R.C.P.LOND., M.R.C.S.

THE death of Mr. Downing took place at his residence on May 28th. He was educated at Trinity College, Dublin, and, shortly after he qualified, settled down to provincial practice in Birkenhead, where his skill and kindness soon gained him a widespread reputation. He was Honorary Physician to the Lying-in Hospital; Medical Officer of No. 2 District, Birkenhead Union, and of the new workhouse; Hospital-Surgeon to H.M. Reformatory Ship *Clarence*; and consulting-surgeon to several assurance societies. His untiring zeal for the welfare of his humblest patients made him a special favourite with the poor, and his straightforward genial disposition won the hearts of all who knew him. At a time when he might fairly have looked forward to reaping the rewards of a long career of usefulness, symptoms of heart-disease manifested themselves. Though his disease occasioned him much pain, he bore it with patience, and rarely allowed it to interfere with his daily duties. A cold, however, which he caught during the past winter, which was followed by pleurisy, confined him to his house till his death.

Mr. Downing died at the early age of 55, and leaves a widow and young family to mourn his loss. His remains were followed to the grave in the cemetery at Flaybrick Hill by many of his professional brethren.

JOHN W. ALLIN, M.R.C.S.ENG.

ON February 20th, 1874, died at his residence in Ecucha, Victoria, Australia, Mr. John Wesley Allin, in the 29th year of his age. The deceased gentleman was educated at New Kingswood School, matriculated at the London University, and obtained his professional education at Charing Cross Hospital. He settled at Ecucha, where his assiduous attention to the discharge of his professional duties, and his amiable disposition, endeared him to a large circle of professional and private friends.

EDWARD CHINERY, M.D., LYMINGTON.

DR. EDWARD CHINERY, who died at Lymington, on April 1st, was born in 1815, at Assington, in Suffolk. He studied at Guy's Hospital and the Rotunda, Dublin, and qualified in 1838. Proceeding to Paris, he attended the classes of Laennec and Ricord; and went a short tour in Germany and Switzerland, returning to England in November 1839. Shortly afterwards he entered into partnership with the late Dr. Fluder of Lymington, and from first to last was recognised by the medical men of the neighbourhood, as an honourable practitioner, and was ever considered by his patients to be a kind, skilful, and gentle attendant in sickness, and a sincere friend at all times. He partially retired from practice in 1868, when Dr. Hill, who had become his partner and son-in-law some few years previously, was joined by the eldest son of Dr. Chinery. For the last six or seven years his health had been failing. The most prominent symptoms throughout his illness, especially so at first, were pulmonary, for the relief of which he was persuaded to winter abroad, and in the autumn of 1870 he went to Ceylon, and in the following year to Australia, returning to Lymington in the summer of 1872. Latterly it became evident that his illness was complicated with kidney degeneration. Although he had been confined to the house for some months, and to his bedroom for many weeks, his death was at last sudden from pulmonary hæmorrhage. Partially closed shops, and the drawn blinds of the private houses of Lymington, on the day of his funeral, and the number of sorrowing faces gathered round his grave, gave evidence of the loss to the town and neighbourhood of a valued friend and inhabitant.

CHARLES JAMES FOX, M.D.

THE late Dr. Fox was the son of Dr. Joseph Fox, formerly Physician to the London Hospital. He was born in London, on January 25th, 1799, and studied and took his degree at the University of Edinburgh. He subsequently became a member of the Royal College of Physicians in London. He married, in 1828, the daughter of Captain Grieves, R.N.; and in the same year commenced practice at Margate, but shortly removed to Billiter Street in London. In 1839, he removed to New Broad Street, where he practised successfully for twenty-six years. The encroachments of the railways, and the consequent changes in the neighbourhood, necessitated his subsequent removal, first to Finsbury Circus, and then to Finsbury Square, where he practised till suddenly stricken with paralysis in the midst of his work. He may be truly said to have died in harness; for, though he subsequently rallied, he never again left his room, and at last calmly sank to rest on May

12th, 1874. Although Dr. Fox was not known as a medical writer, he was a gentleman of great powers of observation; and his accumulated experience, gentle kindly ways, and unvarying urbanity to his colleagues and those of his brethren who met him in consultation, endeared him to a large circle of patients and friends. He held the appointments of Consulting Physician to the Royal Hospital for Diseases of the Chest, to St. Elizabeth Hospital, to the Jews' Hospital, the Tower Hamlets Dispensary, and the Metropolitan Assurance Company. He was much sought after by members of the Jewish faith, by whom he was greatly esteemed; and in his own (the Roman Catholic) church, he was held in such high regard, that of their own accord he was buried by his clergy with all the honours of a pontifical high mass of requiem.

JOHN AUGUSTUS LLOYD, M.D., BATH.

THE death of Dr. J. A. Lloyd took place at his residence, Bennett Street, Bath, on April 29th, after a protracted illness. He was the second son of the late Lieut.-Colonel Herbert Lloyd of Chelsea. He established himself as a medical practitioner in Bath more than forty years since, having passed his examination at the College of Surgeons in the year 1829. In 1854, he took his degree of M.D. at Aberdeen; he was also F.R.C.S.Eng., and at various times held medical appointments. He was Physician to the Institution for Diseases of the Chest, Cancer, etc., in Bath. In 1870, he was appointed upon the Commission of the Peace for the city and borough of Bath.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following members of the College, having undergone the necessary examinations for the Fellowship at meetings on the 28th, 29th, and 30th ultimo, were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and, at a meeting of the Council on the 11th instant, were admitted Fellows of the College.

Adams, Josiah Oake, L.S.A., Clapton: diploma of membership dated April 26th, 1865.
Bird, Cuthbert Hilton Golding, M.B. and B.A.Lond., and L.R.C.P.Lond., Elgin Crescent, Kensington: April 16th, 1872.
Cant, William Edmund, L.R.C.P.Lond., Colchester: May 9th, 1867.
Rose, William, L.S.A., High Wycombe: April 18th, 1871.
Smith, George Francis Kirby, L.S.A., Northampton: July 22nd, 1872.
Yate, Edward, M.B.Lond., Godalming: November 16th, 1871.

Out of the nineteen candidates examined, one retired, and twelve having failed to acquit themselves to the satisfaction of the Court, were referred to their professional studies for one year.

ERRATUM.—In the lists of gentlemen who recently passed the Fellowship Examination of the Royal College of Surgeons, given in the JOURNAL of May 30th, p. 729, Halsham, William Johnson, should be Walsham, William Johnson.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 4th, 1874.

Cree, William Edward, St. John's Park, Upper Holloway
Rees, Charles, Cape Town
Rygate, Brougham Robert, St. George's East
Stevens, Alfred Felix, Stoke Newington Green

The following gentlemen also on the same day passed their primary professional examination.

Bedolfe, Peyton Davenport, St. Thomas's Hospital
Sykes, John Frederick Joshua, Guy's Hospital

MEDICAL VACANCIES.

THE following vacancies are announced:—

ALNWICK RURAL SANITARY DISTRICT—Medical Officer of Health: £80 for twelve months.

ANDERSON UNIVERSITY, Glasgow—Professor of the Practice of Medicine; Professor of Anatomy.

ARMY MEDICAL DEPARTMENT—Surgeons. Applications, 10th August, to Sir W. M. Muir, Director-General.

ASYLUM FOR IDIOTS, Earlswood—Assistant Medical Officer: £150 per annum, board, and apartments. Applications, 29th instant, to the Secretary, 36, King William Street.

BANBURY URBAN SANITARY DISTRICT—Medical Officer of Health for three years. Applications, 15th instant, to Thomas Pain, Clerk.

BARONY PARISH NEW LUNATIC FARM ASYLUM, Woodlie, Glasgow—Medical Superintendent: £500 per annum, house, etc. Applications, 1st July, to Peter Beattie, Inspector of Poor.

BEAUMARIS URBAN SANITARY DISTRICT—Medical Officer of Health: Applications, 15th instant, to the Town Clerk.

BIRKENHEAD LADIES' CHARITABLE INSTITUTION and LYING-IN HOSPITAL—Medical Officer.

BIRKENHEAD UNION—Medical Officer for District No. 2, and the Workhouse: £170 per annum.

BRIGHTON, Parish of—Medical Officers for the Eastern and Central Districts; £125 per annum each.

BRIGHTON AND HOVE PROVIDENT DISPENSARY—Acting Medical Officer.

CHARD UNION, Somersetshire—Medical Officer and Public Vaccinator for No. 1 District, and the Workhouse: £68:3:4 per annum, and fees. Applications, 15th instant, to T. B. Gould, Clerk.

CHARING CROSS HOSPITAL—Assistant Physician. Applications, 23rd inst., to Henry Woolcott, Secretary.

ENNISCORTHY UNION, co. Wexford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ferns Dispensary District: £90 per annum, and fees. Applications, 24th instant, to Richard Dockrill, Honorary Secretary, Bayview, Camolin.

FISHERTON HOUSE ASYLUM, Salisbury—Assistant Medical Officer. Applitions to Dr. Finch.

GALWAY UNION—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Spiddal Dispensary District: £100 per annum, and fees. Applications, 15th instant, to George Morris, Honorary Secretary, Wellpark, Galway.

GENERAL HOSPITAL, Birmingham—Resident Surgical Officer: £100 per annum, board, and residence. Applications, 29th instant, to W. T. Grant, House Governor.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff—House-Surgeon and Secretary: £100 a year, board, washing, and furnished apartments. Applications, 20th inst., to the Committee.

GREENOCK AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Medical Officer. Applications, 25th instant, to John White, 1, Bellville Street, Greenock.

INDIAN MEDICAL SERVICE—Fourteen Surgeons. Applications, to T. P. Pears, Major-General, Military Secretary.

INFIRMARY FOR CONSUMPTION, etc., Margaret Street—Visiting Physician. Applications, 16th instant, to Francis Baily, Secretary.

NORTHAMPTON GENERAL INFIRMARY—Physician. Applications, 1st July, to S. P. Bennett, Secretary.

OLDCASTLE UNION, co. Meath—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Crossakeel Dispensary District: £100 per annum, and fees. Applications, 16th instant, to M. T. Rotheram, Belview, Crossakiel

PONTEFRACT RURAL SANITARY DISTRICT—Medical Officer of Health for the No. 2 Subdistrict: £50 per annum.

ROYAL COLLEGE OF SURGEONS, Ireland—Two Examiners in General Education.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician. Applications, 14th July, to C. L. Kemp, Secretary.

ROYAL NAVAL MEDICAL SERVICE—Surgeons. Applications, 6th August, to A. Armstrong, Director-General.

ST. GEORGE'S HOSPITAL—Resident Medical Officer: £250 per annum, increasing to £300, furnished rooms, and board. Applications, 30th instant, to C. L. Todd, Secretary.

ST. PANCRAS and NORTHERN DISPENSARY—Resident Medical Officer: £100 per annum, residence, and allowance for servant. Applications to S. S. Wigg, Honorary Secretary, 33, Gordon Street, Gordon Square.

SEAMEN'S HOSPITAL, Greenwich—House-Surgeon: £100 per annum, and furnished rooms. Applications, 23rd instant, to Kemball Cook, House Governor and Secretary.

STOURBRIDGE DISPENSARY—House-Surgeon and Secretary: £120 per annum, with furnished rooms, coals, and gas, and occasional extras. Applications to J. B. Shepherd, Esq., Honorary Secretary, at the Dispensary.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, Newcastle-upon-Tyne—Lecturer on Physiology. Applications, 16th instant, to the Secretary.

WELLINGBOROUGH—Certifying Factory Surgeon.

WELLINGBOROUGH UNION—Medical Officer for the Earl's Barton District: £40 per annum.

WEST BROMWICH DISTRICT HOSPITAL—House-Surgeon: £80 per ann., board, residence, etc. Applications, 15th instant, to F. D. Bennett, Hon. Sec.

WESTERN INFIRMARY, Glasgow—Superintendent: £250 per annum, with board and lodging. Applications, 15th instant, to W. H. Hill, Honorary Secretary, 106, Ingram Street, Glasgow.

WHITWOOD URBAN SANITARY DISTRICT—Medical Officer of Health: £15 per annum.

MEDICAL APPOINTMENT.

Names marked with an asterisk are those of Members of the Association.

SINCLAIR, Alexander J., M.D., appointed Physician to the Royal Dispensary, Edinburgh.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

MARRIAGE.

PAGE—CAPNER.—On June 3rd, at the Parish Church, Handsworth, Staffordshire, by the Rev. W. Randall, M.A., Rector, assisted by the Rev. J. B. George (brother-in-law of the bride) and the Rev. E. S. Page, B.A. (cousin of the bridegroom), Herbert Markant Page, M.R.C.S.Eng., L.S.A.Lond., of Redditch, Worcestershire, to Mary Morgan, youngest daughter of the late William Capner, Esq., of Lozells Villa, Lozells, Birmingham. No cards.

DEATHS.

*BIRD, James, Esq., at 80, Seymour Street, Connaught Square, aged 72, on June 6th.

*GOODWORTH, W. H., Esq., Surgeon, at Hatfield, Yorkshire, after a long and painful illness, aged 66, on June 5th.

LOCK, William, Esq., of Lansdowne House, Tenby, South Wales, Solicitor, aged 77, at Broad Walk, Buxton, on May 26th.

*RYAN, William Burke, M.D., F.R.C.S., of Bayswater, at New Ross, Ireland, after a few days' illness, aged 64, on June 4th. R. I. P.

WEBB, Henry J., Esq., Surgeon, at Bank Street, Cheadle, Staffordshire, aged 46, on May 25th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY	Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.
TUESDAY	Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.
WEDNESDAY ..	St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M—Royal Westminster Ophthalmic, 1.30 P.M.
THURSDAY	St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.
FRIDAY.........	Royal Westminster Ophthalmic, 1.30 P.M. — Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.
SATURDAY	St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

MR. FREDERICK WALLACE (Hackney).—The matter at issue had better be referred to the Council of the Metropolitan Counties Branch.

NOTWITHSTANDING that nearly every number of the BRITISH MEDICAL JOURNAL published this year has included a supplement of eight pages, and that one-third more of original matter has been published this year in the BRITISH MEDICAL JOURNAL up to the present date than in any former year, we have still a considerable accumulation of manuscripts from town and country contributors. We would therefore especially ask our correspondents to compress, as much as possible, any communications with which they may favour us, with a view to their publication with the least possible delay.

AN APPEAL.

AN appeal is earnestly made on behalf of a medical man, Mr. S. Orby Carey, who is suffering from paralysis. Obliged. after years of laborious work in South Australia, to give up his practice ere he could make provision for a time of need, and return to England for treatment, he now lies in humble lodgings, suffering much both mentally and physically, and wholly dependent on charity. He has no relatives able to assist him, or even to offer him a home, and, from years of absence, but few friends. His family—a wife and three children—are temporarily provided for; he therefore only asks that assistance may be given that he may be enabled to continue treatment.

This further appeal is made with the desire that he may be able to decide whether he can arrange for another year's treatment; failing which, he will be obliged to accept an offer now made of a free passage back to the colony, when he feels all chance of recovery would be lost, and no ultimate prospect remain but that of ending his days in the destitute asylum there.

Reference permitted to B. E. Brodhurst, F.R.C.S., 20, Grosvenor Street, W., and to F. J. Toulmin, F.R.C.S., 36, Thurloe Square, S.W.; and subscriptions received by Calvert Toulmin, Esq., 69, Inverness Terrace, Hyde Park, W.; Dr. Gelston, Limerick; Dr. Hobart, Cork; or by Mr. Carey himself, 12, Sheldon Street, Paddington, W.

Amounts already Received.

British Medical Benevolent Fund..	£20	0	0
Irish ,, ,, ,, ...	15	0	0
Anonymously and otherwise (acknowledged)	17	17	0

QUININE PILLS.

SIR,—I find that some pills supplied to me as "one-grain quinine" do not give any precipitate upon adding excess of liquor potassæ to a filtered solution, obtained by triturating the pills in a small mortar with water, acidulated with sulphuric acid. May I ask, if quinine existed in the pills, whether it would not be precipitated under the circumstances?

I am, etc.,
WALTER LATTEY, L.R.C.P. Lond., etc.

*** A solution such as is here described ought to give a precipitate of quinine on the addition of potash solution in excess, provided the solution be not too dilute, for it must be remembered that quinine is soluble in about 500 parts of water. The determination of quinine is a matter requiring considerable manipulative skill.

NOTICES of Births, Deaths, Marriages, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

MEDICAL ETIQUETTE.

SIR,—Your correspondent "Bona Fides", writing upon the case of Mr. H. L. Heath, as stated by Mr. G. R. Thomas of Midhurst, asks what is the law upon the relation between a principal and a *locum tenens*. So far as the law is concerned, there is nothing to prevent an assistant or *locum tenens* from practising in the locality where he has been engaged, unless there be a special contract to the contrary. In the case of an assistant, I always recommend a prohibitory agreement, which is adapted to the special circumstances. In the case of a *locum tenens*, the circumstances are somewhat different, and what would be considered reasonable conditions in the former, would not be held to be legal in the latter instance. To meet this requirement, all the gentlemen who form my *locum tenens* "staff" sign a contract-book with me, each on a separate stamp, and by this prohibit themselves, under damages of £50 a month, from opposing those who engage their services, so that any gentleman engaging a *locum tenens* through my agency has the guarantee which your correspondent considers necessary.

With reference to Mr. Heath himself, I beg to state that, as soon as I heard what he proposed to do, I wrote and explained to him the gravity of the mistake he would commit if he commenced practice amongst the patients to whom he had been introduced as an assistant. A subsequent interview with Mr. Heath satisfied me that he had acted in error, through inexperience; and he himself, being then convinced that he was wrong, promptly and in the most honourable manner agreed to withdraw from Midhurst immediately, and in the most public way possible to announce his withdrawal. I believe that every man of good feeling will consider that Mr. Heath in thus acting has made amends for his error.

I am, etc., J. BAXTER LANGLEY.
50, Lincoln's Inn Fields, W.C., June 5th, 1874.

DR. DOBELL'S PARTY.

WE had occasion recently to express objection to the issue of cards to a *soirée* at the house of a medical man at Birmingham, to which reporters of the medical press were invited. The feeling of the medical profession was unmistakably in accordance with our objection to converting a private entertainment into an occasion for press notices. We regret to see that, on the occasion of a party at the house of a London physician last week, a breach of professional propriety has been perpetrated by the introduction into two journals—the *Pharmaceutical* and the *Medical Press and Circular*—of long notices of the instruments shown, etc. We expect and believe that Dr. Dobell is not a party to this proceeding, which calls for energetic protest on the part of those who wish to retain a due standard of professional decorum. *Soirées* at the societies and public institutions are fit subjects for press notice—the private entertainments of a physician at his private house are not. And it must be hoped that Dr. Dobell will be able to state that he did not intend or expect that any such breach of professional propriety should occur in connection with the party at his house, and that he disapproves of it.

ERRATUM.—In the last line but one of Mr. L. Kesteven's paper on Hæmatoma Auris (JOURNAL, June 6, page 742, col. 2), read, " .. as there was *no* history".

ETIQUETTE AT THE BRIDGNORTH UNION WORKHOUSE.

SIR,—There is an old saying, "All on one side, like Bridgnorth election": and the case referred to, at page 700 of the BRITISH MEDICAL JOURNAL, bears this out once more. Dr. Roe, medical officer of that workhouse, considers that he has a grievance, when the medical officer of one of the districts outside comes into the workhouse premises and signs a certificate concerning a lunatic inmate which the latter had thought proper to allow to leave the district for safer care of the workhouse. Mr. Reynolds, Clerk of the Board of Guardians, *ex cathedrâ*, says that he has not, and comes to the defence of the other party instead of expounding the law. This question, which has been raised by Dr. Roe, is one of great importance to medical officers of workhouses, and cannot be settled by special pleading, or excuses of convenience or expediency. In the first place, it was irregular for the lunatic to be removed to the workhouse for examination. The proper place is the police-office; and, if he be not able to be removed, then at the patient's house. In the present instance the lunatic was taken to the union, and from the moment that he was lodged there became, *ipso facto*, a person under the care and treatment of Dr. Roe, whose opinion ought to have been taken; and had he declared that the patient was not in a fit state to be removed, or not a proper person requiring the restraint of an asylum, a complete stopper might have been put upon the whole proceeding. Mr. Reynolds' declaration, that it was more convenient for the magistrate to sign at the workhouse, is unsatisfactory. It forms a precedent, and has the tendency to lead outsiders to consider ordinary cases of lunacy as something to be dealt with by personal predilections instead of by rule. Mr. Bethell ought to have certified to his patient outside. The case has been decided to the prejudice of the medical officer of the workhouse. It will crop up again elsewhere. The officer of the workhouse is the proper person to originate all proceedings relative to pauper lunatics without reference to any previous medical attendant, and is the sole person responsible when once the pauper has been admitted. Thanks are due to Dr. Roe for defending his position.

I am, etc.,
Bridgnorth, May 26th, 1874. AMICUS CURIÆ.

A SATISFACTORY MEETING.

THE *St. Louis Medical and Surgical Journal* says: "The Linton District Medical Society convened according to notice on the 7th of April, at Louisiana. There was a large attendance of earnest, sensible men. Neither egotism, pomposity, nor toadyism; no medical ethics, no fee bills, no medical education hobbies, no constitutional amendments or bye-laws, to waste time in discussing; no rings, cliques, or schools, to push this or that man's preferment. But one spirit seemed to animate the assembly, and that was their mutual improvement in medical science. It is truly a rest to attend such a meeting. The plan adopted by this Society, of visiting each of the counties in the district *seriatim*, is admirably calculated to promote a revival of interest in the discussion of medical subjects, and the result is, that many men join the Society and become working contributors, thereby attaining higher culture in the profession themselves, while they add something to the general stock of medical knowledge."

Notice to Advertisers.—Advertisements for insertion in the British Medical Journal, should be forwarded direct to the Printing Office, 37, Great Queen Street, W.C., addressed to Mr. Fowke, not later than *Thursday*, twelve o'clock.

The Late Dr. F. C. Webb.

Sir,—I hope you will allow me a space in your columns to very sincerely thank you, and all those who have so kindly and so effectively helped to secure the election of my son Hugh C. Webb to a foundation scholarship of the Royal Epsom College. It is a great gain to him to have thus been successful in his first application, and to us to have been spared the delay, anxiety, and expense of a longer canvass. I am very grateful for this, as also for many other proofs of the high regard and esteem in which my dear husband was held. I am, etc.,

22, Woburn Place, June 6th, 1874. Sarah S. Webb.

The Hospital for Women.

An advertisement which appears in to-day's *Times* requires some explanation.

"*The Hospital for Women, Soho Square.*—The Committee have much pleasure in acknowledging the receipt of ten guineas from a Grateful Patient, who, having recently derived great benefit from treatment at the hospital, desires to assist in extending similar benefits to others by contributing towards the heavy expenditure of the charity.—Edward D. Stead, Secretary.—June 6th, 1874."

May I ask how it is that the Hospital for Women affords relief to patients who can pay their ten guineas to its funds. Is it an arrangement between the Committee and the patient, by which the medical officers of the hospital are cheated of their services? Such an arrangement was recently very commonly entered into at one of our ophthalmic hospitals, until the medical staff protested against it. I hope the secretary of the Women's Hospital will be able to offer some explanation, as on the face of it there seems to be a flagrant abuse of charity.

I am quite unconnected with the hospital in question, and, therefore, can have no motive in calling attention to this matter, beyond the desire to remove, if possible, the abuses of hospitals, that seem to be at present as rife as ever in certain quarters. I am, etc., W. Spencer Watson.

Henrietta Street, Cavendish Square, June 6th, 1874.

General Paralysis and Fragilitas Ossium.

Sir,—In the Journal of April 25th is a report, by Dr. Mercer of the East Riding Asylum, of a case of partial fragilitas ossium in a patient the subject of general paralysis. The existence, in not a few instances of the general paralysis of the insane, of a brittle condition of the bones, is truly pretty well known. The fact is, as Dr. Mercer implies, of much importance in a medico-legal point of view; but the fact, it is well to bear in mind, has been, and is to this hour, to a large extent, ignored, with the view of fastening the charge of violence and cruelty on attendants on the insane inmates of both public and private asylums. In the cause of justice, as well as in the interests of medical science, will you allow me to add that so long ago as 1842, at which time I was the medical superintendent of the female department of the Hanwell Lunatic Asylum, I contributed to the *Medical Times* (No. 170, vol. vii, pp. 195 and 197) a highly interesting example of the same morbid condition of parts of the skeleton as that put now on record by Dr. Mercer in an imbecile patient, an inmate of the said asylum. Not one only, but six spontaneous fractures of the long bones were found on dissection—viz., two of the left femur, one of the right femur, one of the left clavicle, one of the left humerus, and one of the right radius! The dark red spongy material, or the oleosanguineous fluid, named by Dr. Mercer as seen in the broken sternum of his patient, was also present in my own case. Such was described by me as entering into the formation of certain of the bones, and possessing the colour and consistence of black currant jelly. Furthermore, the brittle exterior periosteal shell found in the sixth rib in Dr. Mercer's patient belonged also to my own case, and is alluded to in these words—viz., "By embracing portions of certain of the long bones between the finger and thumb, such yielded easily to the pressure, so very thin and brittle were they, imparting the sensation of breaking a soft-shelled walnut." It was the occurrence of the above case of mental disease, so strangely complicated with fragilitas ossium, that prompted me to look in the dead-house of the asylum for the conjunction of abnormal conditions of the brain (insanity) with such of the skeleton. At page 265 of *The Ganglionic Nervous System*, published by me in 1858, and this at a period much anterior to the time when the "asylum catastrophes", or the sensational and garbled accounts of the same, alluded to by Dr. Mercer, were pressed on the attention of the profession and the public, it is recorded, as the result of such investigation, that osteomalacia, as complicated with insanity, or, to write more closely to the point, with general paralysis, was detected, in 1843 and 1844, on five or six different occasions. The pathological inferences to be drawn from this circumstance are, doubtless, of much importance, and these I have discussed at some length in the book named, from p. 260 to p. 265 inclusive.

That younger inquirers after truth have, within these few years, confirmed my experience of thirty years ago, is in no small degree satisfactory.

I am, etc., Jas. Geo. Davey, M.D., M.R.C.P.

Northwoods, near Bristol, May 3rd, 1874.

Does Syphilis Descend to the Grandchildren?

Sir,—I should gladly know the experience of medical men as to whether men or women affected with inherited syphilis are likely to propagate syphilitic offspring. My own slight experience leads me to say not. The following case, for instance, is an example of non-transmission. I have had others.

Maria C., aged 25, was seen by me on the 20th April, 1874, having been a patient of mine at the Metropolitan Free Hospital for several years. She was a most typical case of inherited syphilis, having the central upper incisor teeth convergent, pegged, and notched, with scars around the mouth, as well as marks of extensive interstitial corneitis of both eyes. The poor young woman also suffered from an abscess of the lacrymal sac, for which she was most skilfully treated by Mr. Couper, at the Moorfields Eye Hospital. The patient married four years ago, and, a year after this, gave birth to a child, which was born quite healthy, but died at a month old, from a swelling on the right arm and inflammation, which spread over the body. The mother states distinctly that this infant had no eruption on any part of the body, and that it had not suffered from any snuffling or obstruction of the nostrils. "It gradually pined away." The second child was aged twelve months on the 20th April. It had been suckled by its mother, and had been well all its lifetime. It looked well nourished, and did not exhibit any symptom of specific disease.

Neither of these children, I think, were syphilitic in any way; and, as far as it goes, it seems to me that this case shows that syphilis does not descend to the grandchildren. I am, etc,

Chas. R. Drysdale, M.D., M.R.C.P.L., F.R.C.S.E.

May 19th, 1874.

The Webb Fund.

The following contributions have been received by Mr. Augustus Churchill, the Treasurer, to the 10th instant.

J. N.	£5	0	0
Mr. W. H. Grimston	10	10	0
Dr. Richard Quain	10	10	0
Mr. Prescott Hewett	10	10	0
Dr. Meadows	2	2	0
Rev. Thomas William Webb	100	0	0
Mrs. Harpur	0	10	0
Professor Flower	3	3	0
Dr. W. E. Wright, Madras	5	0	0
Mr. H. H. Massey	1	1	0
Mr. Lloyd Bullock	1	1	0
Dr. F. R. Hogg	1	1	0
	150	8	0
Amount previously acknowledged	1879	1	6
	£2029	9	6

*** This fund will be closed on the 27th instant.

Medical Puzzledom—Elatine.

Sir,—Your correspondent, Alpha Beta, deserves the grateful thanks of the profession for his able and pungent criticism of the practice adopted by some well-meaning old ladies and gentlemen of coining outlandish or nonsensical names for the drugs which they so disinterestedly patronise. The evil is on the increase: but I see no prospect of a remedy unless medical men, as a rule, will resolve to discountenance quackery in every shape, and to prescribe no medicines except those sanctioned by the proper authorities.

This habit of manufacturing puzzling names in medicines has its comic side; and my brother Alpha will not object to my adding one more to the bewildering list which he has noticed so effectively. I had lately an opportunity of seeing a prescription (written by a physician in this city, who would appear to have rather a *penchant* for unlicensed nostrums) to the following effect: "R. Elatine [Jones] ℥xvj; half a wineglassful three times a day." (The bracketed name represents the proprietor, at whose shop alone the article is to be had.)

Elatine! what could the word mean? At the first blush the name was suggestive of something horribly drastic. Could it be the active principle of elaterium? No; that was hardly probable, considering the heroic magnitude of the dose. Then, what could it be? My perplexity was extreme. At last I plucked up courage and wrote to the inventor, begging for information on three points—viz., 1. The composition of elatine; 2. Its therapeutical properties; and 3. *Unde derivatur?* Two of my queries were fairly answered; the third was left unanswered. Elatine was declared to be "a concentrated aqueous solution of fir tar"; in pharmacopœial Latin, *liquor picis liquidæ fortis*; in plain English, *strong tar water*. (Shade of the immortal Berkeley, hear and rejoice!) As to the medicinal value of elatine, it was certified to be "a most wonderful appetiser". All this was eminently satisfactory, so far as it went; but I was as remote as ever from solving the etymological difficulty, though I was firmly resolved to master it, if possible. Suddenly it occurred to me that "elatine" had somewhat of a Greek twang about it. I flew to my Liddell and Scott, and there, to my exquisite relief, I discovered that ἐλάτη means "the pine", and ἐλάτινος "of the pine or fir". And thus the mystery attached to the pretty name "elatine" was at last cleared up. It turned out to have a real substantial classical foundation; and this is more than can be alleged in favour of chlorodyne, which, in the vernacular, can only be resolved into *green pain*. I am, etc., Epsilon Beta.

Dublin, April 30th, 1874.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Birmingham Daily Gazette, June 8th; The Carlisle Patriot, June 6th; The Macclesfield Advertiser; The Shield; The Glasgow News; The Manchester Guardian; The Cork Examiner; The Hastings and St. Leonard's Chronicle; The Paris Journal; The Lancaster Daily Courier; The Leeds Weekly Express; The Liverpool Daily Courier; The Brighton Daily News; The Berkshire Chronicle; The Northwich and Wingsford Guardian; The Huddersfield Weekly News; The Alston Herald; The Halifax Times; The Northampton Herald; The Kensington News; The Alnwick Mercury; The Cork Examiner; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. G. W. Callender, London; Dr. R. Shingleton Smith, Bristol; Dr. George Johnson, London; Mr. Smith, St. Helier's; Mr. J. B. Shepherd, Stourbridge; A Poor-Law Medical Officer; Dr. A. Riant, Paris; Dr. Prior, Bedford; Dr. Evory Kennedy, Dublin; Dr. Maclean, Southampton; Mr. A. B. Squire, London; Our Glasgow Correspondent; Dr. A. W. Edis, London; Dr. J. L. Nichols, Malvern; Mr. G. C. Coles, London; Dr. Richard Johnston, West Bromwich; Dr. Walter Lattey, Southam; Mr. Woodman, Exeter; Mr. Biddle, Merthyr Tydfil; Our Dublin Correspondent; Dr. T. Claye Shawe, Leavesden; Dr. Malins, Birmingham; Mr. Cross, Petersfield; Mr. Temple Wright, Lahore; Mr. W. Spencer Watson, London; Mr. Henry Davey, London; Dr. Strange, Worcester; The Secretary of the Clinical Society; Mr. C. H. Taylor, Bradford; Dr. J. Braxton Hicks, London; Dr. E. W. Thurston, Ashford; Mr. Duthort, Huddersfield; An Associate; Dr. Campbell Black, Glasgow; Mr. J. M. Marfield, Pontefract; Our Paris Correspondent; Dr. J. W. Moore, Dublin; Dr. D. Toler T. Maunsell, Dublin; Mr. Baxter Langley, London; M.D.Ed.; Mr. H. G. Harper, London; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; A. B.; Dr. Farquharson, London: Dr. C. Theodore Williams, London; Dr. McKeown, Belfast; Mr. G. Brownen, London; The Secretary of the Pathological Society; Mr. Aveling, London; Mr. T. Eyton Jones, Wrexham; E. M.; Dr. Armstrong, Newcastle-upon Tyne; Dr. J. Burdon Sanderson, London; Mr. E. Stephens, Ilminster; Dr. Jervis, London; Mr. W. Fairlie Clarke, London; Mr. Kesteven, Earlswood; Dr. A. Ransome, Bowdon; Mr. Eastes, London: Dr. Rutherford, London; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. T. M. Stone, London; The Honorary Secretary of the Liverpool Ladies' Charity; Mr. John Liddle, London; Dr. Whitmore, London; Mr. Richard Davy, London; Mr. J. E. Adams, London; etc.

LECTURES
ON
THE FORMATION AND EARLY GROWTH OF THE BRAIN OF MAN.

Delivered at the Royal College of Surgeons of England.

By GEORGE W. CALLENDER, F.R.S.,
Lecturer on Anatomy and Physiology in the College; Surgeon to St. Bartholomew's Hospital; etc.

LECTURE III.

THE right mantle on its inner surface has a broad ridge, external to the optic thalamus (Fig. XV, S), raised toward the middle line—the corpus striatum—thicker and more distinct anteriorly, and gradually fining down towards the hinder portion of the mantle. A deep groove separates it from the corresponding thalamus; and between the two, and partially concealed in the groove, a band of tissue curves round the outer surface of the thalamus, the fornix of the adult brain. Above the first ridge is a second, narrow and irregularly waved, traced in front to the olfactory lobe, and behind gradually shelving to the general surface of the mantle. In front of this, and on a more external plane, a ridge ascends, nearly vertically, and from it (Fig. XV, *a*) there branches off a narrow ridge, which curves backwards and upwards, and a second ridge, which is marginal, cresting the mantle above as a thick lip, and ending behind in a junction with the other branch.

The left mantle outside the thalamus is marked with a broad plateau (Fig. XVI, S), the lower portion of which represents the corpus striatum; and on this side also the fornix is visible, as a band between this and the thalamus. Posteriorly the plateau ends in four tapering ridges, gradually shelving until lost in the level mantle-tissue (Fig. XVI, S to *a*). In front of the thalamus a thick ridge rises and ends in a club-shaped mass, connected in front with the ridge ascending from the olfactory lobe, and through this by a curved band with the ridge in front of the olfactory lobe. The original bands then follow the margin of the mantle (Fig. XVI, *b*) to the terminal point of the highest of the four ridges passing back from the plateau; but on this side the marginal bands overhang cornice-like, and, thus bending inwards, curve towards the upper border of the thickened tissue forming the plateau.

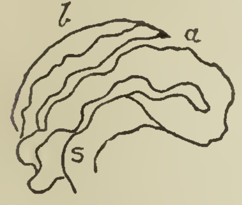

Fig. 15.

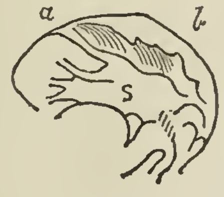

Fig. 16.

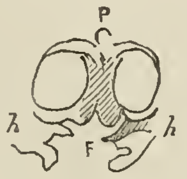

Fig. 17.

From these dissections it may be gathered that the mantles are thus early marked by distinct fissures on the outer surface, the direction of the groove which indicates the future Sylvian fissure being vertical. On the inner surface, the folding over of the mantle, with its club-shaped masses separated by fissures, to form the shell of the hemisphere, and the consolidating of the anterior convolutions, are distinctly indicated. The fornix and the optic thalamus of either side are well marked structures.

In a fœtus 1.8 inches long, the optic thalami, when widely separated, have between them the tissue of the tracks diverging into the hemispheres, but united along the entire middle line (except at the infundibulum), and each one marked in front by a nearly vertical groove (Fig. XVII, F). In front of this, again, a thick ridge of tissue ascends, curving round the anterior border of the thalamus (the portion marked at *h* in Fig. XVII); whilst in front of this the olfactory lobe tapers forward and inwards, and is continued by its base into the first ascending ridge, and joins with the other anterior convolutions. Above the optic thalami the crura of the pineal centre are well marked, and at this point of junction a slight elevation indicates the centre from which the membranes have been detached by dissection (Fig. XVII, P). Below and somewhat posterior to the basal vertical groove is the site of the pituitary centre. In Fig. XVII, the tissue uniting the diverging tracks has been torn through, completely so in front of the vertical groove, and nearly so behind that structure, to show the relations of the anterior ridges which grow up from them. At this period the great bulk of the tissue here accumulated, as contrasted with the size of the optic thalami and mantles, is remarkably at variance with the delicate grey commissure, the tuber cinereum and lamina cinerea, which represents these basal structures in the adult brain.

In the fœtus four inches long, the mantles have grown so as to cover the corpora quadrigemina and the cerebellum, the latter having made but little progress in development. The right hemisphere (and the appearances presented by the left now closely correspond) has greatly altered its relations. The Sylvian fissure (Fig. XVIII, Sf) is no longer vertical, but approaches the horizontal direction, although its vertical limb is well marked. In front and below, the olfactory lobes are no longer conspicuous, being hidden by the great growth of the anterior lobes. The anterior portion of either mantle is marked by five single gyri, separated by fissures; then a double gyrus, marked off by two long fissures; then a single gyrus, followed by another, the eighth in order from the front, which branches in three chief divisions. Beyond this, which completes the structures above and in front of a deep notch—internal parieto-occipital fissure (Fig. XVIII, P O)—a number of convolutions, separated by fissures, seem crowded together, and tucked in, as it were, under the root of the Sylvian fissure. The change in the arrangement of these gyri and fissures has been brought about by the gradual unfolding of the mantle backwards, and by the gathering in of the hinder folds as the anterior and middle portions expand outwards. We have to examine these structures at a much earlier period of their development to understand the provision which is made to determine this arrangement of the folds of the mantle.

A vertical section from before backwards through the middle line (Fig. XIX) shows the plan of development by which the mantle or shell becomes converted into the solid hemisphere. In Fig. XIX, the optic thalamus and the peduncles, with part of the corpus striatum, have been removed. That portion of the track which grows out behind and mesially to the olfactory lobe, is fixed to the pituitary centre, and is united with its fellow, forming the anterior portion of the corpus callosum. Above this, and marked off from it by a groove, is the part of the anterior lobe formed by union with the preceding, and with the tissue in connection with the olfactory lobes. It has grown rapidly backwards (Figs XIX, XX, A L), consolidating with the ridge of the plateau above the corpus striatum (extraventricular portion), and ends in a thick rounded mass at L′. This represents the gyrus fornicatus of anatomists. As at C, Fig. XIX, in the first named track, fibres turn inwards to form a transverse commissure, so beneath this prolongation backwards of the second track fibres grow out and pass inwards to join from before backwards in the middle line, and thus eventually complete the union of tissue which constitutes the corpus callosum. Whilst these changes are going on in the anterior and mesial structures, the cornice-like fold of the margin (third track) has so grown as to join in its entire length with the great ridge with which, in a fœtus 1.6 inches long, it was only in connection at its posterior extremity; and along the entire lower border the fold (Figs. XIX, XX, M L) is now uniting (for the union is not yet complete) with the second track, forming the gyrus fornicatus. This fold incloses a great cavity, by some observers said to represent the lateral ventricle: it is formed by the folding over of the convolutions, and is bounded below by the prolongation backwards of the second track, by the consolidation of which with the third track it is shut off eventually from the parts under the corpus callosum. At its lower margin a shelf of white tissue is seen to pass into the second track, and no doubt extends under the gyrus fornicatus to assist in forming the corpus callosum. This structure is also joined by the fold of brain referred to as seventh in order, and behind this again by the unfolded portions of the larger branched gyrus (eighth fold), over which, except in the fissures at its posterior and lower margin, not a mark is to be seen. The fissure behind this is the internal parieto-occipital (Fig. XIX, P O), and below this is a long, nearly horizontal, and eventually deep fissure, the calcarine (Fig. XIX, C L). This is not one of the primary fissures, but is caused by the folding in of the lower and hinder portion of the brain on the inner aspect as the mantle

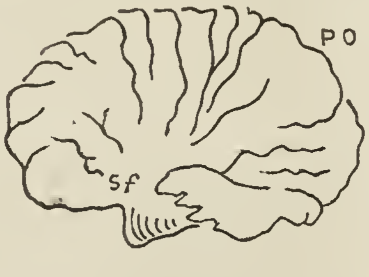

Fig. 18.

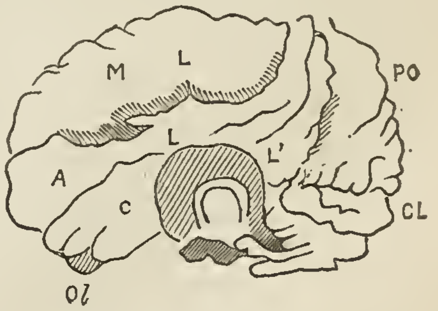

Fig. 19.

expands in an outward direction (Fig. XX, C L). This folding has been carried to such an extent that the lowest primitive gyrus is bent over on itself, being closely applied to the thalamus and peduncle, the gyrus hippocampi in the adult brain. It follows that to recognise its relations with the order of development of the convolutions, it must, in the adult brain, be turned over towards the inner side, when it resumes the position it originally had.

By the folding over of the lower and posterior gyri, a fissure is thus formed which originally includes the posterior horn of the lateral ventricle (so-called), but the white tissue which forms the corpus callosum grows back into this fissure above, and eventually ends by forming the base of a deep gyrus in the calcarine fissure about which the opposed gyri become adherent, and thus solidify the hinder part of the brain. As with the unfolding of the mantle, so also for the explanation of the bending over of the convolutions we have to look to a much earlier period of development.

Each hemisphere is formed, it thus appears, by a series of processes or gyri, which, under the name of the mantle, grow out from the lower part of the optic thalamus, unfold fan-like from before backwards, and also bend over towards the middle from above downwards. Further, as they increase in width, the lower and hinder folds, as they have now become, being fixed, as will be presently shown, at the base and to the middle line, become twisted inwards as the other parts grow outwards. This thickening and increase in breadth depends upon the consolidating of the mantles by the growing together of the anterior lobes, and by their growth backwards with great thickening of their tissue, and by the subsequent filling up by the same tissue of the cavity, which, for a time, exists enclosed by the superior folds. If one may venture to follow these folds, it may be said that those of the first track or first set end in front of the anterior bend of the corpus callosum by blending with the second set, which, in their turn, terminate by curving round the posterior extremity of the corpus callosum (Fig. XX, A L). A third set, separated from the others by the fissure which defines the gyrus fornicatus above, curve towards the back of the corpus callosum (Fig. XX, M L) behind the second set, and are limited behind by the internal parieto-occipital fissure. The fourth set come out below at the Sylvian fissure and curve round, the highest of them to the back of the corpus callosum, the remainder to the back of the thalamus and peduncle of the brain, ending by the side of the optic track and the infundibulum. It is these last named tracks which bend over to form, with the thalamus, the posterior horn, and also the calcarine fissure (Fig. XX, C L).

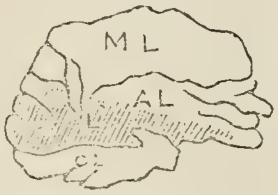

Fig. 20.

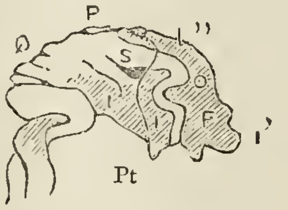

Fig. 21.

When, however, these tracks are referred to as ending, it will be seen, when some of the earlier stages of development are described, that each track consists of a bud, or loop if it consist of fibres, from the peduncular tissue; and thus the fibres, after passing to the apparent end of each track, revert to the peduncle. These buds are covered by a tissue, whiter than their own, and thus easily recognised, which forms the bulk of that which fills up the space left by the arching of the mantles, and forms also the corpus callosum.

I shall now consider the manner in which this growth of the hemispheres is provided for; and, although I hope to give the general plan with some exactness, yet it should be understood that no one can approach the examination of these details without being struck by the beauty and marvellous complexity of the structures which are unfolded, and then again close in, before a final unfolding, to form the brain of man, or without recognising the fact that, at the most, one can only offer an imperfect exposition of the minute relations of their various parts.

The following dissections have been made on the fœtus from 1.1 inches to 1.6 inches in length; and as the statement is to be made throughout that the convolutions are visible from a very early stage, and as this is at variance with the usual statements, I take the opportunity of showing these specimens—one of a fœtus 1.3 inches long, and a second of a fœtus 1.6 inches long—in which the outgrowths or convolutions are distinctly marked in all their details. The commonly received statement that these gyri begin to make their appearance about the fourth month, has arisen from the examination of the fœtus at a more advanced period than that to which I refer, for it is quite obvious that, by superficial growth, the convolutions are for a time obscured; and thus, for example, in this specimen of the fœtus six inches long, they seem to be only beginning to show themselves, but this is, in point of fact, their reappearance after a temporary veiling.

On dissecting the brain of a fœtus 1.3 inches long, the tracks of tissue forming, in addition to the passage through their upper third (Sylvian fissure), the future corpora quadrigemina consist of two parts—one superior, the other inferior (Fig. XXI, S I). The superior is of a white colour, whilst the inferior has a greyish tint (I speak merely of comparative shades); and in this way the two are distinguished, for the same difference of colour is observable throughout their course, more or less distinctly.

At the hinder part of the corpora quadrigemina (Fig. XXI, Q), the superior track forms a single layer with marks of a serrated suture on its upper surface; it surrounds the Sylvian fissure, and, further back, just above the upper border of the cerebellum, has received some of the crossed fibres, if the term fibres may for convenience be employed, of the inferior track. The main portion of the superior track is, however, continuous with that in which the cerebellum is formed, and ascends from the lateral and posterior portions of the spinal cord. In front of the corpora quadrigemina, this track is divided by a median fissure (the third ventricle) into two portions, which pass forwards, and these again into two other portions, marked off by a fissure, which pass to the upper and inner surfaces of the inferior tracks, and are distributed with them. The two portions which pass forward bend downwards and then forwards, as shown in Fig. XXI, S, O, F, to reach the pituitary centre. The further changes which occur to these tracks consist in the flexing of the upper portion upon itself so as to constitute the optic thalamus (Figs. XXI and XXII), which long retains the mark on its inner surface of this bend, and in the adapting of the lower part of the track (Figs. XXI and XXII, F) to the thick mass of the mantle which forms the corpus striatum, over which it is continued, curving round the posterior margin of the corpus striatum, but still retaining its connection with the pituitary centre. This is the fornix. On the inner surface of the section of the brain of a fœtus 1.6 inches long, carried from before backwards through the middle line, the flexures of the superior tracks are well marked (Fig. XXII), the fornix can be traced from the posterior flexure (the future corpus albicans) (Fig. XXII, Fa) to pass forward over the corpus striatum, whilst its terminal portion indents the inferior track in crossing over its upper and inner surfaces to reach the pituitary centre (Fig. XXII, Fa, Fig. XVII, F). It is my opinion that the tissue of opposite sides in the superior tracks is here continuous above the pituitary centre, and forms the anterior white commissure. A similar decussation of fibres exists below the pineal centre (posterior white commissure), at the superior limit of the anterior central vesicle.

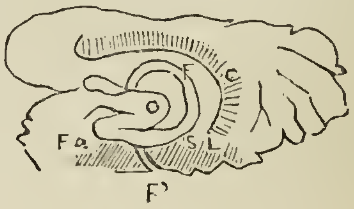

Fig. 22.

It thus appears that between the two fixed points, the pineal and the pituitary, the portion of the superior tracks we are now considering develope, on either side, a long and tortuous course, in which they form the optic thalami and the fornix. The inferior track is directly continuous with the columns representing the lateral and anterior portions of the spinal cord which have decussated, it seems probable, in the medulla oblongata. They are joined by a portion, on either side, of the superior track, and then the four united pass forward below and to the front of the curves of the superior track, already described, and end at the pituitary centre in relation with the superior tracks (Fig. XXI, Pt). They thus represent a growth from the superior (or anterior) extremity of the front columns of the cord, just as the superior represents a similar growth of the hind columns. But, like the superior, the inferior track of either side developes in a tortuous course, passing forward, then inwards and upwards, and lastly backwards and downwards, to the pituitary centre. In all this course the white layer of tissue from the superior tracks is on the mesial surface of the curves. From these the mantle of either side is developed; and, in a fœtus 1.1 inches long, it is of some size. Below, its tip is the part fixed to the pituitary centre (Fig. XXI, Pt); in front are two projecting portions (between Pt and I'), the anterior being the olfactory lobe, then a deep notch and a rounded mass, which ascends and is fixed at P by the membrane at the pineal centre (in the diagram it has been drawn a little forward from this connection), then a deep notch and a series of minute prominences, and so to the first-named point at Pt (following the line between 1″ and Pt in Fig. XXI).

Let us here consider the influence exercised upon the further growth of this mantle (Fig. XXIII, M) by its having the two fixed points which have been referred to. As it increases in bulk, and as the vault of the skull is raised to receive it, the attachment of its upper portion to the pineal centre (which centre is fixed by strong membrane-tissue to the base) causes it to bend over towards this point; and thus the tissue prolonged from this track forms an arch having the shape of the external superior and internal parts of the future hemisphere. Beneath the arch, there is at first a cavity (Fig. XXIII, V), the filling up of which takes place rather later; and all the tissue developed from the projections of this track thus forms a sort of shell (or mantle); and, supposing the inferior track to consist of fibres, these fibres would be traced through the shell to its furthest limit, and then back again to the track, as already mentioned; and this seems to be the plan of the fibre-arrangement, at all events of the continuity of parts in the more superficial portions of the hemispheres. By the attachment to the pituitary centre, the point of the mantle at Pt, Fig. XXIII, is held fast whilst the infolding of the mantle and its development by increase of bulk laterally is in progress; and this portion consequently becomes tucked in under the increasing parts above it. Hence, as seen in Fig. XX, and again in Fig. XIX, the lobed gyri, which lie at first on the surface, become covered over and closely applied to the root of the mantle, where they form the hippocampus major, with its pes and the adjacent convolutions; still in the adult retaining their close relations, as in the fœtus, with the fornix. The tucking in of these gyri forms the deep calcarine and other fissures on the inner aspect of the posterior portion of the adult hemispheres. Thus the one centre (pineal) determines chiefly the folding over of the anterior and middle portions; and the second centre (pituitary) provides for the folding in of the posterior part of either mantle.

Whilst the development of the inferior tracks forms the shell of the mantles, their consolidation, and the consequent formation of the hemispheres, seem chiefly due to the great development of that portion of the track derived from the divergence to it of the part of the superior track (Fig. XXI, below S), and which forms the *comparatively* distinguishable white layer on the upper and inner surface of the mantle. From this the corpus striatum seems to rise; and from it, too, appears to come that thickening of the front portions of the mantle which results in their sending back tracks of tissue which unite first the two anterior portions, then join these with the middle, and finally with the posterior folds, extending also within the shell in all its parts to close up its cavity. As these portions are prolonged backwards, they unite in the middle line, first anteriorly, as may be seen in a fœtus five inches long, to form the corpus callosum, which can thus be scarcely spoken of as growing from before backwards, but simply as uniting in that direction—just, for example, as the opposite plates of the palate join to complete that structure by uniting in a direction from the intermaxillary bones backwards to the uvula. In Fig. XXII, it is easy to see how the back growth of tissue (C) overlies the fornix (F).

In a fœtus 1.9 inches long, the great size of the inferior tracks, in comparison with other portions of the brain, can be seen; also their union in the middle line so far forward as the terminal bend of the superior tracks. Beyond this, they are separated for some distance, except at the base in front of the pituitary centre, then curve forward and upward, making way for the mass of the corpus callosum. This intermediate portion occupies a large space in the fœtal brain at this stage of its development (Fig. XXII, at S L), but forms in the adult the comparatively insignificant cavity of the septum lucidum.

The Third Ventricle.—In the progress of the development of the hemispheres, the optic thalami, separated by a fissure, and the adjacent portions of either corpus striatum, are roofed over by the corpus callosum, including under this name not merely the transverse commissural tissue, but also the extension of the tissue which lines the convolutions of the anterior and posterior arches of the mantle. The space included between these structures consists of the third and lateral ventricles, as commonly described. These form, however, one continuous cavity, which is crossed by the fornix on either side. The anterior and posterior horns are due to the mode of folding of the mantle; whilst the middle horn is merely the fissure between the optic thalamus and one of the posterior, eventually inferior, of the convolutions. To examine this ventricle, the corpus callosum should be divided along the middle line from before backwards, and the hemispheres should be separated posteriorly from each other. The relations of the ventricle will then be seen, with the exception of its central and deeper portion, from over which the membranous covering (velum interpositum) must be removed before it can be examined. In fact, although the space between the optic thalami is continuous with a fissure which is traced back to the cord, and is probably due, as usually considered, to the original formation of these structures from equal side-pieces, it is simply the fissure between the internal surfaces of the superior tracks, and its prolongations lie between parts which belong to the surface of the cerebrum, just as much as the convolutions do, which seem to enclose them. The ordinary method of examining these surfaces, added to the use of the terms lateral and third ventricles, tends to mislead the observer, first by suggesting that the hemispheres enclose a cavity or cavities within the cerebrum, whereas the apparent cavities are simply spaces between portions of the external surface of the brain; and secondly, by leading to the inference that the lateral ventricles, with their cornua, are distinct from the third ventricle, whereas they form but one space between continuous surfaces. Figs. XXIV, XXV, show how the folding of the mantles gives their direction to the anterior (XXIV) and posterior (XXV) horns.

The tænia semicircularis simply marks the line of union between the thalamus and the corpus striatum.

The Convolutions.—There is a certain order in the mode of development of the primary buds or gyri, which may assist in explaining the relations of the convolutions in the adult brain. If the mantles be examined in the fœtus 1.6 inches long (Fig. XXVI), there will be seen on the left outer surface, for example, a series of eight gyri. Of these, the first four unite together and form a band, which is continued backwards to the pineal centre; and it seems as if their extension is limited by the resistance offered at this point by the fixed membranes. The sixth gyrus is bifurcated, and the fissure corresponds with that of Rolando in the adult. The fifth, the sixth, and the seventh, fixed to the pineal centre, bend over as the brain expands within the cranium, and join along the greater portion of the upper border (the seventh forming a fold beyond it) of the track from the anterior gyri. The eighth gyrus consists of at least three primary divisions, and this likewise bends over as the brain heightens; and, as it developes backward, the gyrus forms fresh folds, always converging towards the pineal centre, passing deeply under cover of the parieto-occipital fissure. Beyond this is a well marked fissure (parieto-occipital, in the adult brain, Fig. XXVI, P O). Then succeed the divisions marked in the figure, and the lowest of which is notched; these are fixed to the pituitary centre, and, as development progresses, are folded over, and are applied to the back of the thalamus and peduncle, and constitute the uncinate process and the hippocampus major, bounding the fissure which leads to the surface of the thalamus (middle cornu of lateral ventricle). The gyri between this and the fissure are rolled over to form the lower portions of the cerebrum (temporo-sphenoidal lobe). The fissure itself is in a line with the horizontal Sylvian fissure, which at this date is nearly vertical in its direction, and then bends over to the mesial side.

The accompanying diagrams* are copied from Professor Turner with some slight modifications, and represent, I consider, very closely the ordinary markings seen at the surfaces of the adult hemispheres; and it is very interesting to trace by their help the resemblance to the arrangement observed during an early period of development, as compared with that of the adult brain. The better to distinguish them, the several regions have been coloured. On the outer surface, in front, are the portions which correspond with the first five gyri; next are the ascending frontal and ascending parietal gyri, with the fissure of Rolando between them; and we are at once reminded of the bifurcated gyrus in the fœtal brain (Fig. XXVI). Then a large district is occupied by a single convolution, as in the fœtal order; and with this, and spreading out to form the great portion of brain around the horizontal fissure of Sylvius, are the convolutions which may be presumed to coincide with the eighth gyrus, with its three branches; and, if the inner face of the hemisphere be examined, the deep internal parieto-occipital occupies, in relation to these convolutions, the position of the deep cleft behind the eighth gyrus.

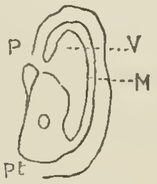

Fig. 23.

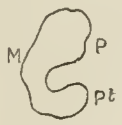

Fig. 24.

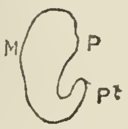

Fig. 25.

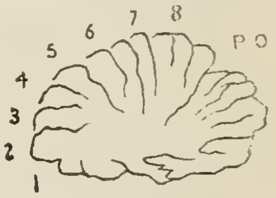

Fig. 26.

But on the inner face of the hemisphere is recognised the plan on which the gyri have been brought together. Here is the prolongation backwards of the anterior masses, and below them the commissural fibres. Above is the sulcus (calloso-marginal, Fig. XX, between M and A L) which indicates the line of junction between these and the succeeding arches, which further bend in to end at the pineal centre. If the parieto-occipital fissure be examined, we find in its depths the mesial fold of the eighth gyrus. Then follow the folds of the hinder part of the brain; the ninth arch lying behind the sulcus (parieto-occipital), and turning over to the pineal centre; and the remaining gyri arching to a line between this point and the pituitary centre—the calcarine fissure reminding us of the manner in which the mantle has folded over in the posterior portion of the cerebrum.

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* Coloured diagrams. Figs. XVIII to XX and Fig. XXVI, may be referred to in illustration of the relations of the convolutions.

This is the general plan of disposition of the chief parts of the cerebrum. Any one who has endeavoured to trace the complex outlines of the secondary or subsequent folds of the chief gyri, will shrink from the endeavour to follow out the course of these convolutions in the adult brain, or to endeavour to distinguish these structures by distinctive names. There are in all thirteen or fourteen primary gyri; and it seems sufficient to indicate their connections in a numerical order from before backwards, as in Fig. XXVI, and to retain this numbering for the adult brain, grouping the gyri as has been mentioned; for it is not possible with the anterior and posterior gyri to point to the position of each one separately.

During the early stages to which my dissections extend, there is nothing to notice respecting the medulla oblongata after that period at which it exhibits the decussation of fibres to which reference has been made. It has acquired its ordinary characters in a fœtus five inches long; but the changes which it undergoes are not of a character to bear upon the general question of the mode of formation of the brain.

In a fœtus four inches long, the cerebellum, covered by the mantle, although increased in size, differs little in appearance from that of the tissue which formed it at a much earlier period; but, after this date, it increases rapidly by budding from its side-pieces, so as to form lobes and folia. Its peduncles, which have been visible from an early period (ninth week), are the fibres of the superior tracks continued through on their way to the hemispheres and optic thalami. The cross fibres which form the middle peduncle are not distinguishable before the fourth month as any considerable mass; but, about the third month, tissue passes across between the tracks; and it is worth noticing that here, in connection with the hind-brain, in the mid-brain, and in the fore-brain, these primary commissural fibres unite portions of the superior tracks.

I would suggest that the best method for examining an adult brain, so as to obtain a view of the relations of its various parts, is by making an antero-posterior vertical section through the middle line. The several structures can then be readily inspected in their natural relations; and, although I do not now desire to advocate any new nomenclature, it is evident that the study of the brain would be much simplified if the names of its various parts were reconsidered, so as to enable us to give a more orderly description of them. Our present nomenclature has come to us pretty much by hazard; and nothing can be more unreal or perplexing than the dissection of a brain by sections of its tissues as usually practised.

I have to thank you, in conclusion, for the kindness with which you have listened to these details, and which, like most descriptions of complicated dissections, must, I feel, be difficult to follow as they are narrated. My excuse for bringing them before you is my wish to make clear, as I hope to some extent I have succeeded in doing, the relations to each other of the more important parts of the cerebrum during the early stages of their formation, so as to provide a basis for more exact clinical observations as to the functions of its several parts.

DEACONESSES' INSTITUTION AND TRAINING HOSPITAL.—The annual meeting of the Evangelical Protestant Deaconesses' Institution and Training Hospital was held on Saturday, at Tottenham, under the presidency of the Earl of Shaftesbury. The report stated that the hospital was now too small for its requirements. The number of in-patients last year was 305. Since the erection of the hospital in 1868, 1,796 had been admitted. The institution, it was regretted, was £1000 in debt. Mr. S. Morley, M.P., said that this institution had been of great service as a local hospital to Tottenham, and also to other parts of the country, for the training of deaconesses or nurses, whose services were in great requisition. The Hon. A. Kinnaird, M.P., thought that, in the matter of providing nurses for the public, this hospital could favourably compare with any other. Dr. Laseron stated that he had conceived a plan for the enlargement of the hospital, which would combine economy with simplicity, and give to the poor inmates every comfort, the estimated cost being from £18,000 to £20,000. Alluding to the work of the hospital, Lord Shaftesbury maintained that nurses should be as carefully and accurately trained as surgeons and physicians. In a great many instances, nurses were superior to the physicians in the treatment of the sick. Subscriptions to the amount of £1,200 were announced at the meeting.

THE HASTINGS PRIZE ESSAY,

1873.

ON THE PATHOLOGY AND TREATMENT OF OVARIAN DISEASES.

By LAWSON TAIT, F.R.C.S.,
Surgeon to the Birmingham and Midland Hospital for Women, etc.

IV.

MR. SPENCER WELLS has characterised the condition of the medical treatment of ovarian tumours as one of hopeless impotence; and, if we except the general treatment by chalybeates, tonics, hygiene, by which we guard against too rapid exhaustion, and at the same time prepare our patients against the great trial by which alone they can be cured, we may at once accept his statement. Sometimes we are the victims of singular coincidences, which seem to militate against the general experience in such matters, and, only within a few days, I have met with such an instance. More than a year ago, I was consulted by a woman with an enormous unilocular tumour, whose husband declined all operative proposals. Lately, she received from the hands of a physician some inert *placebo* in the shape of an ointment, and soon afterwards the cyst burst and its contents were absorbed. Possibly, she may be permanently cured, but more probably she is not; but, meantime, nature has apparently secured for medicine a triumph which it is only to be regretted is not more common.

The surgical treatment of ovarian tumours has now been simplified into two operations: the minor operation of tapping, which is palliative and, on some rare occasions, curative, and the major operation of ovariotomy, which is either curative or fatal. In the process of development through which the surgical treatment of ovarian tumours has passed, many various and injudiciously strong opinions have been expressed on one or other, or both, of these operations; but, during the last fourteen years, there has grown up an experience in the hands of one man, incomparable with anything else in the annals of surgery, and that experience has been so conscientiously detailed and so critically examined, and its conclusions have been so irresistibly drawn, that there is from it at present no appeal. In my own practice, I have found that, when I have differed from Mr. Spencer Wells, I have only exhibited my inexperience; for case after case has opened out for me the fact, that he had encountered everything before me; that he had previously tried what I have tried, and that there seems but little hope that anyone can surpass his magnificent results.

The operation of simple tapping was formerly regarded as much more serious than we now consider it, for no operation is at present more common in the hands of the ovariotomist. Generally, it is adopted either to gain time, in order that the patient's health may improve, or, paradoxical though it may seem, that the patient's robust condition may somewhat deteriorate; or it may be employed for diagnostic purposes. Sometimes it is curative—a fortunate result that I have met with twice in cases where I have tapped pelvic unilocular cysts through the vagina. It has sometimes happened, as noticed by Mr. Wells, that the tapping of large cysts through the abdominal walls has been followed by cure. It is more than probable that cases which have had a fortunate ending have been cysts of the broad ligament; for a truly unilocular tumour of the ovary—that is, a tumour of one cyst, with nothing else that would be likely to subsequently develope into another cyst, even if the first were cured—I have not yet met with.

Tapping by the vagina is not usually attended with good results in ovarian tumours. I have seen death result three times after it in the practice of others. Mr. Wells has found it better to keep the opening patent, and to encourage suppuration and discharge, than to allow the puncture to close. In the two cases to which I have referred, I fully exhausted the cyst by the aspirator, and to this, perhaps, may be attributed the fortunate result. In tapping through the abdominal walls, whether for the purpose of diagnosis or treatment, the point of puncture should be in the linea alba.

If the cyst be small, the ordinary aspirator will be found a most efficient instrument; but, if the cyst be large, the tapping will be best performed by Mr. Wells's small-sized syphon trocar.

Sometimes I have punctured above the umbilicus, but generally it is better to keep between the umbilicus and the pubes, going above the former spot only when there is some solid matter below, or some suspicious circumstances that may warrant the exception. I have always adopted Mr. Wells's plan of first puncturing the integuments with a lancet, and then introducing the trocar. In cases where ascitic fluid has to be removed, or where a cyst is tapped to help in the diagnosis, Mr. Wells's blunt trocar will be found of great use, for it will serve as a sound to explore the relations of the tumour. I never take any special precautions for tapping, beyond leaving the patient laid comfortably on her side with the abdomen hanging slightly over the edge of the bed. After having pressed the wound together with my fingers for a few minutes, I seal it with a piece of lint dipped in styptic colloid.

I have had no personal experience of such plans of treating ovarian cysts as injecting them with iodine or forming fistulous openings into them. The former I have seen several times fatal, years ago, in the practice of others. The great success of the radical cure by ovariotomy will soon, I think, entirely supersede any such methods, save in very exceptional cases.

The proper selection of cases for the performance of ovariotomy is one of the many difficulties we have to encounter in practice, and can alone be based on experience. The proper consideration of the various symptoms and signs of the tumour, the age and health of the patient, and, most of all, a careful watching of each case for some time, are one and all essential conditions for the success of the operation. Ovariotomy is an operation for the success of which it is not very easy to pick cases; that is, that a surgeon who selects some cases and rejects others, simply with a view to a good mortality bill, will, in all probability, find himself egregiously mistaken. In my opinion, there can be only two reasons for refusing to do ovariotomy in any case; and these are either that the case is not far enough advanced, or that the tumour, in all probability, could not be removed.

It is in my own experience, and I am glad to find it is also in that of Mr. Wells, that about the most unfavourable case for ovariotomy is to be found in a young healthy woman with a medium sized tumour. A woman past the middle age, or pulled down in health by the growth and the confinement necessarily incident to its later stages, has a far better chance of recovery than the other; and, in the case of the younger and healthier woman, it will be found advantageous to temporise by tapping or other advisable expedient. Indeed, as Mr. Spencer Wells has laid down, as long as the patient's visceral functions are not interfered with by the pressure of the growth, nor her life made uncomfortable by her unwieldy size, or by her disfigurement, or by pain, it is unwise to interfere with an ovarian tumour. In fact, the rule ought to be to delay an ovariotomy as long as is consistent with the patient's chances of recovery, bearing in mind that it is not the healthiest that recover best. On the other hand, the major operation must not be too long delayed; for, though Mr. Wells's statistics show that one or two tappings do not affect the mortality of subsequent ovariotomies, yet the results of multiplied evacuations of the cyst are far from favourable.

It is almost a matter of routine in the major operations of surgery, that it should be carefully ascertained that the patient is not suffering from organic or serious functional disease of any important organ, and this, for ovariotomy, must never be neglected. Especial care must be taken to examine the condition of the urine, for the condition of both kidneys and bladder are most important factors in its success.

Presupposing that a proper case has been selected, and that any defect discovered has been rectified, we come to discuss the stages of the operation, the precautions to be taken before and the treatment after it. First of all, there is the position of the patient—where shall she be? Experience answers that the more nearly her surroundings resemble those of a healthy private house the better; and the statistics show that the performance of ovariotomies in a large general hospital is altogether unjustifiable. There is no operation in the whole range of surgery where the patient seems to be so apt to be infected by septic influences, and no precautions against them can be too great. The room in which the patient is to be treated ought to be fairly large, and so arranged that ventilation may be possible from window or door to the fireplace without the current crossing the bed of the patient. There should be no unnecessary furniture, and as little upholstery work as possible. Two small iron couches, with firm hair-mattresses and a water-pillow, are needed; and an intelligent woman for nurse, who will do as she is told, *and nothing more*, is absolutely essential. If two such can be got to act as relays for the first eighty hours after the operation, it will be found a great advantage.

The patient herself requires a little preparation for the change that is about to be made in her alvine actions. For this purpose, I direct that her food should be limited to soup and a very little bread for forty-eight hours before the operation, and that, on the morning of the day previous, she shall have a small dose of castor-oil, followed, early on the morning of the operation, by a dose of eight or ten drops of laudanum. I generally operate in the afternoon, and I do so, almost invariably, on the bed the patient is to occupy, the only precaution taken being to place a thick draw-sheet under the patient. The time of the operation should be about midway between two menstrual periods. The instruments for the operation are chiefly scalpels, dissecting, artery, and vulsellum forceps, two syphon trocars of different sizes, various sizes of clamps, a chain *écraseur*, cautery irons, needles, silk thread and wire, some solid perchloride of iron, and good sponges. As the operator grows in experience, he will find that there are many other instruments that he may have near him with advantage, such as an aspirator. Especial care must be taken to have the sponges clean and of good quality. To secure this, I generally get a very large and fine cup-shaped Turkey sponge and cut it into four, six, or eight pieces. These I soak for twenty-four hours in a solution of muriatic acid sufficiently strong to be disagreeably acid to the taste, and thus get rid of the chalky sand which infests them. It used to be my custom to use fresh sponges to every case, but I find that, after being used, if they be well cleansed in cold water, and then soaked for a day or two, first in a strong solution of sulphurous acid and then in a strong brine, and afterwards once more well washed, they are quite as good as new.

There cannot be a doubt that an important item of success in ovariotomies lies in the anæsthetic employed; and, however valuable chloroform may be in obstetric work or in general surgery, in this operation its use is quite inadmissible, on account of the frequent and very persistent vomiting which follows its use. I have seen this vomiting have a fatal result, and it has so often given me great anxiety that I strongly urge the discontinuance of Simpson's anæsthetic for ovariotomy. Sulphuric ether is not much better, and has other disadvantages. The safest and most satisfactory anæsthetics are the bichloride of methylene and the methylene ether of Dr. B. W. Richardson.

The patient having been completely anæsthetised, and properly placed, and the bladder emptied, I make an incision in the median line between the umbilicus and the pubes, the latter having been shaved, not less than four inches long. This incision should go at once through skin and subcutaneous fat. A pause then is made, and any bleeding point of the slightest consequence is seized by Mr. Spencer Wells's scissor-handled forceps, than which I do not know a more valuable instrument. The bleeding having been entirely checked, the central tendinous line is sought for, and not always so easily found as might be imagined. The easiest way to find it is first to make a short diagonal cut across it, and then to follow it. The tendinous expansion is laid open, as is also the extraperitoneal fat until the peritoneum is reached. Another pause is then made, and again all bleeding points must be secured. While the surgeon makes this incision, he will find a soft towel in his own left hand far more useful in letting him see what he is about, than any number of sponges in the hands of assistants. To open the peritoneum, a variety of devices are in use; but I trust to nothing but a sharp knife, and open the cavity at the middle of the wound to as great an extent as will admit my left forefinger. Passing this downwards, I extend the wound in that direction by a probe-pointed bistoury. In this way, there is no possibility of cutting anything the forefinger cannot feel, and that always must be the best director. The wound should be brought down as close to the pubes as is consistent with the safety of the bladder, so as to diminish the subsequent strain on the pedicle, if it should happen to be short, and have a clamp applied to it. If there be no adhesions between the cyst and the peritoneum in front, this part of the operation is very simple; but, if there be adhesions, it is no easy matter, in some cases, to find the point of union, and, in spite of the greatest care, occasional instances will probably happen of mistaking the peritoneum for the cyst. The peritoneum is often so altered in appearance, being thick, leathery, and gelatinous, as to deceive any but the most experienced operator. When the cyst is reached, it should be tapped by a large-sized syphon trocar, and emptied as quickly as possible. Sometimes the cyst-contents are glairy, or even gelatinous, and will not pass through a trocar; in which case the cyst must be laid open for three inches, either edge of the wound into it seized and dragged outwards by forceps, and the contents scooped out as well as may be. After the major cyst has been emptied, traction should be made on it, so as to ease it gently out through the wound. Two kinds of obstacles may hinder its exit—secondary cysts or adhesions. The secondary cysts should be punctured or broken down from within the cavity of the major sac, thus preventing as much as possible the escape of the morbid fluid into the cavity of the peritoneum—a most important matter. Adhesions are mediate or immediate, the former being generally parietal or omental, existing in the shape of round or flattened bands of peritoneum. They seem to be formed by isolated patches of adhesion, dragging off the peritoneum from the abdominal wall by pieces of adherent omentum. They are seldom large, and are only of any moment when traversed by a large blood-vessel, which, however, may generally be secured by torsion or by ligature. The immediate adhesions, if of old date, are often very serious, so much so as to render it sometimes impossible to complete an operation when they occur in the pelvis or to some important organ, as the liver or stomach. When the tumour is adherent only to the anterior wall of the abdomen, the complication does not seem to be of great moment. I have, in one case, separated very extensive adhesions in the pelvis successfully, but I have also seen an iliac vessel torn across, fatal hæmorrhage being the result. I have removed a very large tumour which was adherent almost universally, but the patient died in forty hours of shock. I had diagnosed extensive adhesion before the operation.

Hæmorrhage from adhesions is sometimes troublesome, and may require considerable patience to overcome it. If a bleeding point be within sight, and it be limited to one mouth, it had better be secured by a ligature cut short, if torsion fail to stop it. If it consist of oozing from a surface, either a touch with the solid perchloride of iron or the hot cautery is better.

If there be no adhesions and no large secondary cysts, ovariotomy thus far is a very simple operation, which seldom takes above five or six minutes to complete, and this simplicity has been a great snare to many; for there is no operation usually performed which requires the surgeon to be more alive to possibilities, and to be prepared for them, than ovariotomy. The complications and unexpected difficulties are endless, and sometimes extremely trying to the presence of mind and ingenuity of the operator. Thus a second dermoid cyst may be found packed down in the pelvis, as has twice happened to me, and to get it out may be a matter of no little trouble. For such a condition, the aspirator will be found invaluable, and it ought always to be within reach. The cyst-walls may be found so thin, that any kind of forceps will tear them, and the contents so glairy, that they will not run through a trocar, as I have more than once experienced; or the secondary cysts may be found so numerous and so small, that there is no alternative but to bring them one by one to the surface and slit them open, brushing the escaped contents immediately off with a sponge. This has occurred in my practice several times, and I have always adopted this plan rather than carry the incision above the umbilicus.

As the tumour is being withdrawn, an assistant should be ready, on the left side of the patient, to insert the forefinger of his right hand into the wound, and, by grasping the integuments on the one side with his thumb and on the other with the remaining fingers, to close the wound, and thus prevent the escape of the intestines. If he be sufficiently alert, the bowels need never be seen in a well conducted ovariotomy. Having got the tumour fairly out, the surgeon's first duty is to examine the pedicle and decide how it is to be treated. I have tried four methods of treating the pedicle, namely, by the long and short ligatures, division by the *écraseur*, and inclusion in the clamp, and I have arrived at the firm conviction that the clamp is the best in every way when it can be applied. The form I prefer, after a trial of all the kinds I have seen, is the calliper-clamp of Mr. Wells. I have divided the pedicle ten times with the *écraseur*, and only one of these patients has died, the case being that of the very adherent tumour I have referred to, and which would have died no matter how the pedicle had been treated. I have a distrust of the *écraseur*, however, because, in two of my cases, a pelvic hæmatocele formed coincidently with menstruation a few weeks after the operation. In neither of them was there any danger to life produced by the hæmatocele; but, considering how frequently an irregular menstruation occurs a day or two after ovariotomy, I have given up the use of the *écraseur* in the treatment of the pedicle, dreading an unfortunate result. Moreover, Mr. Wells has shown that a divided pedicle dropped in back is very apt to contract adhesions to the intestines, and give rise to serious trouble. One case I treated by carbolised ligatures, and she died on the fifth day from pelvic peritonitis and suppuration. In one case, there was no pedicle, and I removed the tumour as well as I could, partly by the *écraseur* and partly by scissors, tying the bleeding points as I found them. This patient died on the fourth day. Any similar case I may meet with in future, I shall treat by Dr. Miner's plan of enucleation. In two cases, I tied the pedicle with silver wire and dropped it back. Both these patients made excellent recoveries, and both carry their wire-rings to this day without inconvenience; and I think I shall adopt this plan when I cannot use a clamp. In one case, I used the long ligature, and she died on the fourth day. She will be the last in which I shall so treat the pedicle. I have had no experience of the use of the cautery.

After the pedicle has been satisfactorily dealt with, the state of the peritoneal cavity ought to be the subject of the surgeon's attention; for it is certain that the careful removal of any clots or cystic fluid that may be there, is a necessary part of the success of any operation. Large flat sponges are best for this, and they should be stuffed well down into the pelvis and round into the lumbar regions, and left there for a few minutes. The operator should always know how many sponges are in use, and they should be counted before the wound is closed. Previously to this last step of the operation, it must be carefully ascertained that the other ovary is healthy. If it be enlarged by cysts, it had better be removed, or, if it contain only one or two small cysts, they may be opened and their contents pressed out. Any tumour of the uterus had better be left alone, unless it be markedly pedunculated. If the uterus be found enlarged by pregnancy, it must be left alone; but, if unfortunately punctured in mistake for a cyst, as has happened several times, the safest treatment is to lay it open and empty it, as has been done successfully by Mr. Spencer Wells. The closure of the wound I usually effect by silver sutures passed by a handled needle; and, when a clamp has been applied to the pedicle, I pass the first stitch as a double wire immediately above the clamp, and fasten it at once. I always act on Mr. Wells's suggestion, and leave a sponge in the abdomen, just within the wound, until the other stitches are passed, and withdraw it before they are fastened. Care must be taken to include the peritoneum on both sides in the stitches, and to enclose no intestine or omentum in them, nor in the clamp. In fastening the deep sutures, the lips of the skin-wound must be carefully adjusted, and, if necessary, superficial sutures should be inserted. For the closed wound, a variety of dressings may be used. In my own practice, when I have treated the pedicle by returning it within the peritoneum, I have always used Lister's lac plaster, and I have found it a very convenient form of dressing. I may say that I did not take any other antiseptic precautions, nor have I ever seen a case where they seem to have done any good. In cases where the operation has been done under a carbolic spray, the only difference observable was in the comfort of the operating surgeon, and this difference was no advantage. When I have used the clamp, I have always adopted Mr. Wells's dressing, which consists of little squares of dry lint tucked in under the clamp and laid over the wound. It is extremely neat and convenient, and, if covered by little bags containing Skinner's disinfecting powder or a pad of oakum, it is, perhaps, the best of all. Instead of Mr. Wells's strapping, I employ a linen binder fastened by safety-pins. The wound rarely requires to be dressed more than once in twenty-four hours, and, for cleansing it, some old linen or lint should be used without moisture. The wound generally heals by first intention, and the stitches may all be removed on the seventh or eighth day, except the one nearest the pedicle, which had better be kept in somewhat longer. The clamp generally comes away between the eighth and twelfth days, but its separation ought never to be hastened. In one or two cases where I have helped it a little, I have had reason to regret my haste by seeing the stump slowly sink downwards, keeping me in suspense for a few days as to whether or not the peritoneum would again be opened. When the clamp has come away, the dry lint dressings should be continued until the wound has healed, and the patient should be warned that the wound may open up slightly and discharge some menstrual fluid for a few months after the operation. In a case where I removed both ovaries and included both pedicles in one clamp, this after-discharge did not occur.

[*To be continued.*]

EXTRACTION OF A PIECE OF STEEL FROM THE VITREOUS HUMOUR BY THE MAGNET: RECOVERY OF ALMOST PERFECT VISION.

By WILLIAM A. McKEOWN, M.D.,
Surgeon to the Ulster Eye, Ear, and Throat Hospital, Belfast.

EDWARD MILLS, aged 15, apprentice in an iron ship-building yard, consulted me at the hospital on the 21st of November last. He stated that on the previous day, whilst he and another lad were striking a rivet, the two hammers struck each other violently, and a piece of metal flew from the hammer and wounded his right eye. A wound appeared in the cornea, beginning in its centre, and passing out towards the outer margin. It seemed to be superficial at the centre, and to become deeper and penetrate as it passed outwards. The sphincter of the pupil was cut at the outer margin, and the iris at that part retracted towards its peripheral attachment. The boy could count fingers easily; but no accurate determination of the degree of vision was made, in consequence of the extreme tenderness of the eye. The ophthalmoscope showed no trace of opacity of the lens; and the fundus of the eye could be seen distinctly, except a small part at the temporal side. Deep in the vitreous body at that part were observed, by direct illumination, opacities situate near to the retina, and showing a marked tendency to a dependent position, as if somebody were pulling them down. Sometimes, at the lower part of one of the opacities, a silvery streak appeared, as if from the sharp margin of a bright metallic body. On throwing the light obliquely from the mirror held to the left of the middle line of the patient, and placing my eye in such a position as to receive the rays reflected from the opacities, they appeared red, with a very lustrous aspect, as if some bright reflecting substance were imbedded; whilst the margin before referred to could also be recognised. To all present at the examination, the evidence of the presence of a foreign body, masked by a slight effusion of blood in the vitreous, was convincing. The metal had taken an extraordinary course, as, after penetrating near the centre of the cornea, wounding the iris, and passing behind it, it turned round the margin of the lens, apparently without wounding it, and entered the vitreous body.

Next day, the patient reported that he had suffered from intense pain in the eye and brow during the night. The media of the eye had become so cloudy, that the disc was obscurely seen, and the foreign body could no longer be dectected. It was plain that the eye was threatened with a rapidly destructive inflammation, and that immediate interference was necessary. By keeping the patient lying on his face for some time, the body again came into view.

In a case such as this, my course of action, according to the practice of the profession and the advice in standard works, should have been—1. To make a wound in the sclerotic near the site of the foreign body, and hope that it would be expelled with a quantity of vitreous humour, and, if not, to endeavour to seize it with forceps; and, if these efforts should be fruitless, to rest satisfied if the injuries inflicted should excite suppurative inflammation and total loss of the organ; 2. To allow the body to remain, and trust to the chance of its being encysted, but be prepared to enucleate the eye, should inflammation set in of such a character as to destroy the eye and endanger the other.

The prospect from either of these methods was not inviting. I know of only one case recorded in which metal was extracted from the vitreous body by forceps with preservation of good vision; and the cases in which metal becomes encysted, and never gives further trouble, form but a small percentage. The universal experience of the profession, showing the great peril of total loss of vision from foreign bodies in the vitreous body, made me determine to extract it; but I had the gravest doubt of its accomplishment by forceps. I had given the matter for some time some thought, and had come to the conclusion to try, in the first case in which the presence of a piece of steel or iron was undoubted, the power of magnetic attraction. I had obtained a bar-magnet about eight inches long, one inch broad, and one line thick, and tapering at both extremities to a blunt point.

The patient having been etherised, I made an incision about two and a half lines in length in the sclerotic at the outer part, about two and a half lines from, and parallel to, the corneal margin. A pair of iridectomy-forceps were introduced into the vitreous humour, but they failed to touch the body. I then tried the magnet. I introduced the pointed end into the vitreous humour as far as its shape would admit, and directed it backwards towards the posterior pole of the eye. The foreign body was felt to become attached; but it was only on the third trial that I had the satisfaction of withdrawing the metal on the end of the magnet. It was oval in shape, about a line long, and half a line broad, sharp on the edge, particularly on one side. The thickest part was about a quarter of a line. It weighed half a grain.

Although the magnet seemed a clumsy instrument to thrust into the eye, yet it answered the purpose admirably—it fulfilled the important indication of perfectly preventing loss of vitreous humour during the operation. The foreign body was twice removed from the magnet by the grasp of the margins of the sclerotic wound. For this reason, it would be an advantage to have on each side of the end of the magnet a little slide, which could be pushed down about a line past the extremity of the magnet, so as effectually to shield the foreign body from contact with the edges of the wound at the time of withdrawing the instrument from the eye.

The vitreous body, whilst it retains its structure, offers great resistance to the passage of a foreign substance through it by magnetic attraction. Suppose a piece of metal to be under the influence of the magnet, and that the vitreous body between the substance and the magnet be sound, the most powerful magnet will not draw the foreign body through the vitreous humour; but the vitreous humour, if there be space to move in, will move in mass with the body, and attempt at extraction will fail. Hence it is necessary that the vitreous humour intervening should be broken up, so as to make a passage whereby the metal may pass. The knife by which the incision is made should be used for this purpose, or even the end of the magnet itself. So, suppose the metal should have entered by the sclerotic, then the incision should, as a general rule, be made at that part, as the magnet will tend to attract the body along the track it has already traversed. In such a case, also, a powerful magnet may be used in another way—viz, by applying one pole outside the eye, so as to draw the metal to the wound; and, the body being thus held by magnetic influence, it may be seized with forceps and extracted.

I am not aware of magnetic attraction ever having been used for extraction of foreign bodies from the vitreous body, and I trust that the extremely satisfactory results in this case may lead to its recognition and adoption. Before applying it, the surgeon should know (1) that the foreign body is steel or iron, or some other metal attracted by the magnet; (2) the region in which the body is; (3) that the foreign body is not imbedded in one of the tunics of the eye, or enveloped in fixed organised inflammatory deposits. To avoid this complication, the operation of extraction should be attempted as soon after the accident as possible.

The boy remained in hospital three days, and was subsequently treated as an extern patient. The treatment consisted in the instillation of a solution of atropia and the application of the compress bandage. No pain was felt after the operation; the media of the eye cleared rapidly; and the vision improved from day to day. In a short time, the wound in the cornea was scarcely perceptible; the iris, where it was cut and bruised, seemed to atrophy, the rest of it remaining healthy; the lens retained its transparency; the vitreous body showed some slight filmy opacity where the foreign body had been lodged. The field of vision was perfect, save the small part to the nasal side corresponding to the part of the retina in the neighbourhood of the wound.

On the 13th of December last, I brought the patient before the members of the Ulster Medical Society, when we found the state of matters above described. I tested his vision, and found that he could read No. 2 of Snellen's types at one foot—a degree of acuity extremely satisfactory. In fact, the boy notices very little difference between his eyes. He resumed his work soon afterwards, and has continued well ever since.

LEAVES FROM MY DIARY DURING THE ASHANTEE WAR.

By ALBERT A. GORE, M.D., Surgeon-Major.
Late Surgeon 34th (Cumberland) Regiment.

V.—Sierra Leone.

Herodotus mentions voyages in the direction of Sierra Leone undertaken by the great Carthaginian explorer Hanno, who, it is said, returned frightened from further advance by mountains of fire, and noises too terrible to listen to—vagaries of an excited imagination. The name was given by its first explorer Pedro de Cintra, who visited here in 1467. A century afterwards, a French fleet, anchored in its roadstead, lost its admiral and many sailors from malignant fever; a little more than two hundred years more saw its transfer to England by its original possessors the Timmanees, who still style it "Romarong". Since its cession in 1787, it has—in spite of attacks from the natives, bombardments by the French, and the ravages of epidemics—been much improved, and is now the chief seat of government in Western Africa.

The site is quasi-insular; west-south-west lie the Banana Islands. The Bunce River, to the north, meets Campbell's Creek from the south, a small *portage* intervening, thus rendering the colony almost an island. These several boundaries enclose an area of 250 square miles, containing a population of some 45,000, chiefly congregated together in Freetown, the capital; the residue are scattered in the small river and mountain hamlets of Kissy, Leicester, Gloucester, Regent, Waterloo, etc. Freetown has had the advantage of a modern plan for its formation: it slopes up gradually from the river front to Fort Thornton or Government House, immediately behind which is the military store, and beyond, the garrison hospital at the base of Tower Hill, an isolated conical "pap" 375 feet above sea-level. Upon its summit, surrounded by a wall of ironstone, are the barracks, built in 1826, and consisting of three principal bungalows, capable of containing the head-quarters and five companies of a West India Regiment. In former days, the men occupied shanties at the foot of the hill, in the vicinity of the present hospital. These barracks, the best constructed in Western Africa, are admirably situated, their isolation and elevated situation admitting of a free perflation of air and facilitating drainage. Behind, are the mountains; intervening, is a gorge; a road encircles the base of the hill. Freetown boasts of a cathedral, colonial hospital, lunatic asylum, liberated African yard, custom-house, and market. There are several well-built houses, chiefly situated along Water Street, besides numerous native hovels. The former have basements of ironstone and wooden superstructures, usually enclosing two or four rooms, surrounded by a piazza or weather boarding; the latter are constructed of mud and wattle, thatched with bamboo or long grass, or covered with shingles. Each of these houses or hovels is surrounded by a small compound enclosed by hedges of the cactus, croton, or castor-oil plants. Regularly laid out in streets running at right angles to each other, the gradual slope yields great facilities for natural and artificial drainage, the heavy periodical rains thoroughly cleansing and carrying much of the surface-soil and impurities to the sea, which, after heavy showers, is coloured for some distance a reddish-yellow. From the want of proper outlets, and owing to the lowness of their situation, much water lodges in the grass-fields and rocky bottoms to the south of the town.

The colony has one *curio*, an almost defaced inscription left by the Dutch upon an outscarp of primitive rock below King Jemmy's Bridge, of which only the words "Vice-Admiral Van Hollant" can now be deciphered. The primary rock appears to be a hypersthene. Ironstone, capable of being worked up into building material, and rapidly hardening when exposed to the air, abounds everywhere; the soil is chiefly the detritus of this or a dark vegetable loam. The market, the best along the coast, is well worth a visit; vegetables and fruits of all sorts being exposed for sale, including ochros, cassada, guava, avocado peas, oranges, bananas, plantains, parti-coloured peppers, cabbages, and shalots, the last two raised in the mountains. Ginger and arrowroot are largely cultivated for exportation, while a rich and nutritious rice is imported from Bullom. Beef, mutton, fowls, Muscovy ducks, fish, and oysters are sufficiently numerous for home consumption and exportation. Since 1863, beef has been regularly sent to the Gold Coast from here, in order to allow of the troops obtaining fresh animal food three or four times a week, a system of supply springing out of the Ashantee war of 1863-64. The steamers and fleet draw largely upon the market for fresh vegetables and provisions, causing these essentials of existence to become of late years much advanced in price.

The rides about Freetown are very pretty, especially in the direction of Kissy, where the road passes a mountain cataract, peeping out at intervals from its rich green surroundings; while the view from the summit of Leicester Mountain, fourteen hundred feet above sea-level, is most lovely. In the background, frowns the tree-topped summit of the Sugar Loaf; below, is a bird's-eye view of the harbour, and the shelving ledge of diluvium upon which the capital lies; to the north, the distant Bullom shore; and, far away to the east, the silvery river, with its sleeping islands—a panorama not to be exceeded in beauty of perspective. The fauna of these mountains is quite different from that of the swampy plains below. The wild guavas (*Psidium pyriferum*) are natives of the country, and clothe the sides of the Leicester range; while the little winding roadways are lined by plants and shrubs, the mere enumeration of which would alone fill a small volume. It is difficult to say which of these are indigenous to the country, but some may be observed in situations where they are evidently growing as original tenants of the soil.

The baobab, or monkey-bread (*Adansonia digitata*), next to the oil-palm one of the most valuable productions of Western Africa, grows here; its fruit, of considerable size and oblong shape, is full of seeds, and tastes like gingerbread, with a pleasant acid flavour; the roots are of a most extraordinary length, while the foliage is not so abundant as to conceal the vast proportions of the trunk. The wood is so light and soft that the wild bees perforate and lodge in it their honey. Like all plants of the same order (*Malvaceæ*), the pulverised leaves are emollient and mucilaginous, and are used by the natives in fevers, diarrhœa, etc.; the acid and agreeable juice of the fruit is used for a similar purpose, as well as for seasoning many native dishes, especially those made of corn-gruel. If the fruit be burned, the ashes, mixed with rancid palm oil, form a dark soap much used. The flowers of this fine tree are large, white, and handsome, their snowy petals and violet masses of stamens being particularly striking. The locust-tree of Sierra Leone (*Inka biglobosa*) is also a beautiful tree when in blossom, covered with compact biglobular heads of fine vermilion-coloured flowers, which are surrounded by compact bunches of pods, containing a yellow farinaceous substance of which the natives are very fond. With their food they also mix the yellow greasy juice of the *Pentadesma butyracea* or tallow-tree. There are several varieties of plum, the most conspicuous being the brown hog-plum (*Spondinus myrobalanus*) and yellow pigeon-plum (*Chrysobalanus clepticus*); in both, the stone forms the greater part of the fruit. The last of the two makes an excellent jam. These plum-trees are more valued by the natives for their durable and excellent woods than for the fruit. Another fine tree is the mango, yielding an inferior fruit but agreeable shade, were it not for the numbers of red ants infesting it, whose nests, composed of a few leaves agglutinated together by some white substance, are dotted all over. There are two species of tamarind: the ordinary tree, with its long brown pods (*Tamarindus Indica*), and the velvet tamarind (*Codarium acutifolium*), the fruit of which is produced in beautifully black velvety pods, differing little in flavour from that of the other. Both are favourite resorts of the African wasp, a vicious insect. A shrub (*Ficus Brassii*) bears a large fig with a pleasant flavour. The cashew yields a delicious juicy fruit and valuable nut, when the acrid essential oil is driven out by roasting. The several fruits of these trees, with many others, are only the *addenda*, as it were, to the ordinary food of the natives, which here chiefly consists of rice, with many country dishes made up of rich messes of palm-oil, fish, and peppers—a combination highly nutritious, as evidenced by the muscular development and corpulency of those who indulge in them. On these hills, in the early morning and towards evening, the temperature becomes much reduced; this, combined with the gentle breeze which usually blows at such times, renders exercise here agreeable and pleasant, well repaying the exertion of climbing them.

Freetown has now become the great emporium for the surrounding tribes of Mandingoes, Foulahs, Sossoos, Kossoos, Akoos, and Tiramanees. The European population, dwindled down to eighty or ninety individuals, has gradually given place to the native element in commercial matters; the stores and grog-shops of the latter are found everywhere, and in them may be obtained most articles of home consumption. Kissy road, in the early morning or evening, lined by numerous small marts, before which, as in ancient times, are exposed the wares of the several proprietors, is quite a picture to behold, crowded as it is by representatives of all African nationalities, clothed in garments of many colours.

With all this variety, its great natural beauty, and many advantages over other West African stations, Sierra Leone has long had an unenviable notoriety as the abode of fever and disease; being frequently decimated by epidemics of yellow fever, of which the most remarkable occurred in the years 1807, '15, '25, '37, '48, '59, '66, and '71. The ordinary autumnal remittent not unfrequently takes on serious symptoms, chiefly in connection with cerebral congestion or effusion, in very many instances not amenable to treatment.

Enlargement of the spleen is not so common as on other portions of the coast, except in the neighbouring rivers, where young children dwelling upon their banks are especially liable to it; as a remedy, a solution of rusty iron is used with good effect by the natives. For this affection, the Mandingoes use a topical application. Smearing over the left hypochondrium some thin butter, they afterwards apply a heated iron with a series of light taps: the remedy appears to act as a counter irritant. Bowel and dysenteric affections are, comparatively speaking, rare diseases here, probably owing to the purity of the water and nature of the food. At the commencement and drying up of the rains, ague is more or less prevalent among the European residents, but not so much so as at the Gambia and the lower alluvial stations. Among the natives, small-pox, ulcers, leprosy, pneumonia, bronchitis, venereal and urinary affections, and lethargus or sleeping sickness, are the principal diseases from which they suffer. Hepatic diseases are also rather common. Lethargus is a peculiar disease, having many of the symptoms of the *dementia avec stupeur* of French writers. This sleeping sickness, as it is termed by the natives, usually commences with a shock to the nervous system (such, for instance, as the belief of having seen a spirit or ghost), or with enlargement of the lymphatic glands of the neck. Sleeping only at more frequent intervals at first, the stupor becomes gradually more pronounced and prolonged; food, hitherto swallowed mechanically, is less relished, until at last the unhappy sufferer gradually sleeps his existence away, passing fæces and urine involuntarily, until, emaciation supervening, death soon closes the scene. One or two of such cases are usually under treatment in the colonial hospital every month. In the four years ending March 30th, 1850, 112 cases were treated; 91 died; 11 recovered. During the seven years ending December 31st, 1866, 57 cases were treated; 40 died; 17 recovered.

The causes of the origin of the yellow fever of Sierra Leone have never been satisfactorily explained. The epidemic is not unusually preceded by a rather increased number of attacks of fever among the natives and Europeans, in the latter taking on the form of the more severe remittent, in many cases ending fatally. This occurred in 1866, the outbreak on board the *Isis* and *Bristol* being preceded by a large mortality from the ordinary remittent on shore, the one, in fact, merging into the other, the difficulty being to define the boundary line. For instance, on that occasion, an officer of the medical staff died shortly before from remittent fever, accompanied by yellow suffusion and hæmorrhage from the nose and gums; while three other officers succumbed to the same disease, without the yellowness of the skin or hæmorrhage, but with symptoms of cerebral congestion and effusion. In none of these instances was there black vomit, but in the cases which followed it was a characteristic symptom. It is a point of some interest to know that the disease misses those stations between Freetown and the Bonny, where communication with the shore is either difficult or infrequent. It has never hitherto broken out at any of the intervening stations. The fomites may possibly be conveyed in the clothes retained on board steamer until arrival at Sierra Leone, where they are now washed in large quantities on shore. In the harbour, this fatal affection has frequently broken out in coal-hulks, which have been lying there, or among unaffected persons who have only been on board them for a short time—as short as even a quarter of an hour; these last had been treated in another ship without communicating the symptoms to the crew, who had not been on board the affected vessel. Ships coming from the Gaboon loaded with camwood, picked off the mud-banks, have often had their crews attacked with malignant fever, a form very common in the old timber-ships of earlier days. Such facts as these are well authenticated. It may not be uninteresting to state here, that to a somewhat similar cause might be attributed the outbreak on board the *Eclair* in 1848, and the persistency with which the disease stuck to the ship. It may not be generally known that, upon arrival at Freetown, she was short of coals, and was obliged, in consequence, to ship wood for fuel, obtained from a contractor who, by means of subagents, picked up all the refuse of the timber-reaches, which had been soaking in the mud for a considerable time. These were conveyed in canoes to Freetown, broken up, and sent on board reeking with the poison of malaria, which probably remained unsuspected. These facts were mentioned to me by the Hon. Charles Heddle, senior member of the Legislative Council at the date of the outbreak, and for long afterwards an extensive merchant in the colony.

The water-supply of Freetown is excellent: conveyed from Heddle's Farm, high in the mountains, it flows through iron piping to the town and barracks, in which last it is received into a reservoir constructed in the old circular tower, the last remains of the former Portuguese dominion. Bahama grass lines the streets; and the umbrella-trees, planted four years previous to the date of our visit along the side of the roadways, are much grown, and in time will lend an agreeable shade, as do several fine mango trees in the neighbourhood of Government House. As each compound has its little privy or latrine in a corner, the abominable smells of fæcal matter, so common on the Gold Coast, are here absent. During the rains, wood fires are used in all the rooms in barracks and the better class of native houses, an admirable plan when the air is so damp that a night suffices to cover one's boots with mould; the cheerful blaze speaking, in addition, of home and its many comforts, only appreciated when their want is felt in these backgrounds of humanity.

Between the years 1815 and 1833, the average yearly strength of officers present in West Africa was 34.7; the deaths, 6.9; the number returning home sick, 6.4; showing an annual loss of 38.3 per cent. of those serving; 48.3 per cent. of the white troops perished yearly during the same period. In the eight years ending 1822, the black troops lost 4.07 per cent. annually, reduced by the better hygienic arrangements of modern years (1861-71) to 2.24, or nearly one-half. The following may be now interesting as a little health episode of the date of Sir Charles Macartney's old Ashantee war. It must be remembered that the troops on the coast were actively engaged in the field during the years 1822-6 inclusive, the action at Assamacou being fought on January 31st, 1824, the Ashantees being only finally defeated, at Dedowah, in August 1826; so that the influences operating during this interval, and for some time afterwards, were inimical to health, owing to the exposure and usual insanitary conditions incidental to bush warfare. The result was as below.

Year.	Mean effective.	Sick included.	Died.	Invalided.	Remarks.
1821	359	6	9	—	Year before active operations.
1822	473	5	15	—	Desultory attacks commenced.
1823	636	13	38	—	Batch of Europeans sent out.
1824	738	46	136	—	42 killed in action, battle of Assamacou, January 21st.
1825	1279	90	630	14	African white corps and black troops, Ashantees occupying Protectorate.
1826	1227	90	323	111	Ashantees defeated at Dedowah, near Accra.
1827	1257	69	140	50	Active operations ceased.
1828	1158	52	32	44	African corps being reduced.
1829	639	23	30	160	Only 91 Europeans remaining.

In the year subsequent to the ending of the war (1827), the annual proportion of treated to strength was, among black soldiers, 1.05 to 1; Europeans, 3.05 to 1; the deaths to strength being, among the blacks, 1 to 15.94; whites, 1 to 6.91. In 1871, out of a force of 320 West Indian troops, there were 625 admissions into hospital and 5 deaths. Ague and remittent fever accounted for more than half the admissions, the former disease yielding 131, the latter 138 cases. The other principal diseases were gonorrhœa, 42; acute and chronic rheumatism, 36; muscular, 13; ulcer, 22; primary syphilis, 18; dysentery, 16; diarrhœa, 13; bronchitis, 15; conjunctivitis, 13; mumps, 13; orchitis, 15; wounds from accidental injuries, 28; abscess, 14; the remaining 98 being made up of various other affections. These may then be taken as the chief diseases from which the black troops suffered previous to the outbreak of the war.

But to return. As the *Volta* had rather a large amount of cargo for Freetown, we were to spend the night on shore, enjoy the luxury of a bed, and, more delicious still, a "tub" on the following morning—a prospect too tempting to resist. We had already viewed "those scenes so charming" which have been just described, and were congregated together again at a most sumptuous lunch at the Colonial Secretary's, Captain Kendell, and where we heard from Mr. Loggie an account of his Elmina adventures, the attack and repulse of the Ashantees, who were in a regular crowd, at first so intently engaged watching and replying to the Houssas on their left flank, that they were only aware of Wells's arrival behind the garden-wall from the volley of Snider bullets, which made them turn instantly to look in the direction of the new and partially concealed foe. A second volley caused them to break into a confused mass, surge for a moment, and fly to the hills, leaving two hundred dead on the field, who were buried in three long trenches shortly afterwards. The only marine who was killed on our side was in the act of loading his Snider, standing erect instead of stooping behind the parapet; he was shot through the heart. Mr. Loggie told us that he saw an Ashantee pop out from behind a bush and brain with his musket one of his fellows, whose thighs were broken by a Snider bullet, rather than that he should fall into our hands, disappearing too quickly to get the punishment due for such savage cruelty. After listening to the usual gossip of a small place, over the everlasting cigar, we said good bye, and separated into two parties—one going to the barracks to enjoy the hospitality of the officers of the 2nd West India Regiment, the other to Major Primet's, the auditor-general of the settlement, whom we found only just recovering from an attack of autumnal remittent, the traces of which were quite apparent, showing, in the vernacular of the negro, that "dat feber, he lib eberywhere", is too true, unfortunately. Larcom's *jeux d'esprit* soon cheered up our old friend, who forgot the recollections of his malarial ailments under the influence of that social intercourse and those amenities which seem always to bind together English voluntary exiles in foreign lands. As the short twilight disappeared, we sat down to a delicate little dinner, made up of African luxuries—ground-nut soup, barracouta, rock oysters, fowl in tomato sauce, beef *à la mode*, arrowroot pudding, and a sumptuous dessert of native fruit, including the green orange and luscious paupau, the last, with a little lime-juice, scarcely to be excelled in flavour. The beef also was excellent and juicy, as it is always here during the rains when grass is plentiful. For delicate fish, Sierra Leone river is noted. The barracouta and little mangrove perch are excellent, while the mullet, sole, and others of the finny tribe, are equally enjoyed by the palate when dressed with melted butter and fresh green peppers, their usual sauce. The rock oyster is not inferior to the "native" in flavour, while the little mollusca which grow in thousands upon the roots of the mangroves are not to be despised. Curiously enough, lobsters are not caught in these waters, but very fine crayfish are sometimes exposed for sale. Bush fowl, or African partridge, is another luxury one can sometimes enjoy; but no dinner here is considered a success in the absence of a turkey, English ham, and palm-cabbage; the first is rather an expensive and not always easily obtainable dish, costing some thirty-five shillings. Curries they cannot make; they are always greasy and indigestible-looking. Our kind entertainer was fortunate in possessing an excellent cook, a treasure not to be lost when obtained on any account, as, owing to many circumstances, food in West Africa has to be presented in very tempting forms to make it acceptable to the palate. As a rule, *artistes* in this particular profession trained in the French settlements, especially if Jalofs, are superior to others, as being able to make those savoury *entrées*, the only possible manner by which lean beef or tough mutton can be eaten with anything like pleasure.

The day in Africa usually commences with a cup of coffee brought to the bedside by a small boy shortly after sunrise; very excellent coffee it is when made from the native berry, which grows well on the hills. After partaking of this, the "lord of creation" puts on his Pajamas and proceeds to sniff the cool morning breeze, or, in its absence, view nature at its brightest, as the dew sparkles on the leaves, and the air is not yet heated by the beams of the rising luminary, which so soon renders it hot and stuffy. These early dry-season mornings on the coast-line are, between the hours of five and seven, cool and most agreeable, as the earth is almost at its maximum of coldness, and the sun has not yet risen sufficiently high above the horizon to influence the temperature of the air. After 8 A.M., the sun begins to get too warm (except when the sky is clouded) to move about without a solar topee or umbrella. At 9 A.M., half an hour after tubbing, breakfast is partaken of. Lunch at one o'clock, a walk in the afternoon, and dinner at seven is the daily routine. The foreign residents usually defer the breakfast-hour to eleven or twelve o'clock, making the meal do double duty. On board, a siesta after lunch had now become a settled thing, scarcely to be wondered at, as the temperature had risen thirty-two degrees since our departure from Liverpool on the 19th ultimo, from 63 to 92 deg. in the shade in eighteen days. Between noon and 4 P.M., the natural tendency to sleep had become almost overpowering, especially during those hot sultry days when the still atmosphere feels most oppressive, and a tropical sun is reflected from the surface of the calm and glassy ocean in all its brilliancy. Of society there is very little in West Africa; what there is, is confined to the intercourse between the few Government officials at each station and half a dozen of the principal merchants. As our countrywomen do not flourish here at all, the loss of their gentle influence is much felt. European females soon become pale and anæmic, pine gradually away, and, if nursing, so rapidly lose flesh and health, that an immediate return to England becomes necessary. When not child-bearing, they manage to get on somewhat better.

It was a keen sense of enjoyment to find oneself once more in a comfortable bed, even for a night, and not cooped up in a cabin seven or eight feet square. After posting letters for home next morning, and paying a parting visit to the monkeys and other savage animals exposed for sale in the market, we embarked and weighed anchor at 4 P.M. on a lovely evening, handkerchiefs being waved in adieu from the windows of our kind entertainers on shore. A hearty cheer from the crew of the *Sherbro'*, as we passed her, was almost the last sound we heard as we leaned over the port bulwarks, watching, receding in the distance, that peninsula, as remarkable for its natural beauty as it has been noted for its unhealthiness. The evening sun was shining on the mountains, a sea-breeze, feeling cool at a temperature of 83 deg., was blowing from the west; and, as we rounded Cape Sierra Leone, a gun from the signal-station indicated the approach of a steamer from the northward, proving afterwards to be a gunboat making for the harbour of Freetown.

[*To be concluded.*]

A CASE OF RIGHT HEMIPLEGIA AND LOSS OF SPEECH FROM LOCAL SOFTENING OF THE BRAIN.

By J. HUGHLINGS JACKSON, M.D., F.R.C.P.,
Physician to the London Hospital, and to the Hospital for the Epileptic and Paralysed.

THIS case is reported as a text for forthcoming Lectures on several subjects. There are for consideration (1) Hemiplegia; (2) Affection of Speech; there was (*a*) Loss of Speech and (*b*) Disorder of Speech; (3) The Constitutional State of the Patient; (4) The Process of Embolism and Thrombosis; (5) The most important matter is the Recovery of the Patient; (6) The Occurrence of Convulsion (Epileptiform) after Recovery; (7) Death and *Post Mortem* Examination. For the important parts of the notes I am indebted to Mr. R. W. Parker. We are both, however, responsible for the accuracy of the greater part of the report, as it will be seen that from time to time we went over the case together.

Robert S., aged 28, was admitted in the morning of June 29th, 1869. I saw him in the afternoon. He was speechless, except for the words "yes" and "no"; and he could utter a noise supposed to stand for "don't know". He was paralysed on the right side (face, arm, and leg). The facial paralysis was extensive in range, and involved the muscles of the forehead, the orbicularis palpebrarum, and the cheek of the right side, but it was slight in degree. He did not put his tongue out when told, but swallowed well, as I ascertained by direct experiment. There was no deviation of the eyes, and no ocular abnormality was discovered; the ophthalmoscope was used. The right arm was only partially paralysed; he could move it; for instance, when he raised himself in bed to drink, he used the right arm a little. There was still less palsy of the leg; he seemed to move it as well as the other when lying in bed, but it was perceptibly weak in walking. It was not quite certain whether sensation was diminished or not; but, if it were diminished, the diminution was very slight. He could utter the words "yes" and "no" very clearly, and used them satisfactorily in answering questions which required affirmatives or negatives only. He had never been able to write at all, nor to read much. The temperature in the axillæ was 100.6, but in the elbow flexures it differed: right, 99.4; left, 100.6. Two thermometers were used, and the readings were practically the same when sides were changed. There was a doube murmur at the base, the impulse lay outside the nipple, and there was a considerable heaving over the heart's region. There was no history of rheumatic fever. His elder brother was carefully questioned on this point. Whether he had had scarlet fever or not was not known. There was, however, a history of a severe accident. Nine years ago, he fell into a ship's hold, and for three days and nights was insensible. He was in a hospital for six weeks, and then went to his work, although he was not well.

The mode of onset was curious. His wife told me that he came home from work as usual, and was then seemingly in good health. He made a wax-end, and then, all at once, he put his hands to his head. His wife remarked to him that he was ill. He did not reply to her, but went into the yard. She followed him, and found that he "dropped to the right side". He could then talk, and talked "all manner of strange things". He said, for instance, "I want a night". His wife asked, "A knife?" He replied, "No, a night". He said, "My head; I must go out". She urged him not to go out, but he would; and they walked together in the streets for hours. At four o'clock A.M. he went to bed, but at five he would try to get up, and then could not speak at all, and had lost the use of his right arm. He was led to the hospital.

I had to go out of town, and thus I saw him no more until August 17th, when I examined him with Mr. Parker. He had gone out with no paralysis, and with but little impairment of speech perceptible. He had gone to work, although he was not fit for it. We could not persuade him to come into the hospital again. Now, however, there was decided, although trifling, weakness of the right side, and the palsy of the face was marked in the cheek, and the right eye was not so firmly closed as the left when he tried to close them strongly. He slept well, and his appetite was good.

His speech was not good. He had now, however, plenty of words, and it was not easy to write down what the nature of the defect was; there was no difficulty of articulation. The best way will be to give notes of what took place when Mr. Parker and I examined him.

He said of his right arm that he could not "left so well—not so hard". I asked, "Where do you live?" He replied, "27—No. 7 ch—eh; I don't know what 'tis—oh, I forget". He then tried again, and said, "Eh, some"; and then added, as if despairing, "You see I forget". He gave his wife's name, "Julia", quite correctly. I said, "How can you walk?" He replied, "Oh, fine; anything I can do". He added, "If I could find—you know—hard", holding out his right arm; and then, vivaciously, "and eat anything—meat, bread". Here I remarked to Mr. Parker, "He is a German, and perhaps his speech was never like that of an Englishman". The patient then said, "Oh, I was born here; my father was a German". [He spoke well before the paralysis; and his elder brother, whom I afterwards saw, spoke quite like an Englishman. Their mother was an English woman.] He could not readily give me his name, and said, "I can always say, but all at once it's gone". I again asked where he lived. He replied, "I can't tell the place"; and then, suddenly, "Collingwood Street"; and added, "There you are; that's right". I showed him several articles, and noted the mistakes he made in naming them, adding some of his observations. Pen?—spin, pen. Knife?—knife. Watch?—kni—dnife; "It runs up and gone". Flowers, book, bread, and boots he named at once. Fire-shovel?—Poker, charge—chovel. Poker?—pokey, poker. Umbrella?—"Oh, I" (laughing) "cannot say it". I said, "What do you do with it?" This he knew; and he acquiesced when I suggested the name. Lead-pencil?—He could not name it, and remarked, "I can think of it, and then I forget it always". Being still urged to name it, he said, "Penflo—flo". I then said, "pencil", and he acquiesced. Coat and trousers he named. When I next named several of the above-mentioned articles, he quickly pointed them out. I named others, *e. g.*, table, and he put his hand on the table and said, "There". At another time, he said to Mr. Parker that he was "gooder", and then, correcting himself, said, "better". He never could write, nor could he read much. However, he named letters one after another.

On October 19th, he was brought to the hospital, as he had had a fit. Of this fit, nothing was ascertained except that it occurred in the morning, that he foamed at the mouth and bit his tongue; he had two or three fits after admission. When I saw him, October 22nd, he was in about the same condition as in August. We were told that he had been "rather queer" since his first admission; the information we received in this matter was very vague; he would occasionally get up at night, dress himself, and smoke; at times he saw strange things, and did not know what he was talking about. He still talked badly, and in the same style as before. Once, when asked his age, he replied, "Seven hundred". He appeared to understand all that was said to him; the reply was only a *lapsus linguæ*, like some of the other mistakes recorded. He went out again to his work in a few days; but, before he went, Mr. Herman was so kind as to obtain for me the following. To these notes I attach very great value; they give, I feel sure, a faithful representation of what took place, and are of very much more use than general statements as to the man's manner of talking.

Q. What is your trade?—*A.* A dyer, in the strees—ah! ah! (making gestures of perplexity)—in the skins. *Q.* How are they dyed?—*A.* In the kins—in the kins. *Q.* What do you dye?—*A.* Ah! ah! (gestures of perplexity)—rabbits, and all manner of— *Q.* All manner of what? —*A.* (Gestures of perplexity) Amarris—rab—bits—and the others. *Q.* What others besides rabbits?—*A.* Rabbit, rab—bit skins—me, merikins. *Q.* What skins do you get from America?—*A.* There's, ah, ah (gestures of perplexity)—rabbits, and, and, squirrel tails as well. *Q.* What do you do with them?—*A.* The little things the women have (stroking his breast)—the maws. *Q.* How long does it take?—*A.* Sometimes a day; sumsums two or three. *Q.* How much do you get at it?—*A.* Se, seventeen shillings. *Q.* A day, or a week?—*A.* A we—week. *Q.* Where do you live?—*A.* Collingwood Street. *Q.* Where is that?—*A.* Just over there (making gestures of perplexity, and pointing), in Whitechapel (pointing), over there, you know—North Street. *Q.* What parish is it in?—*A.* Oh, oh (gestures of perplexity), I can't, cause of my— *Q.* What parish?—*A.* Mesmes Green.* *Q.* What is your brother's trade?—*A.* Sum-boilers (gestures of perplexity). *Q.* Sugar-boilers?—*A.* Yes. *Q.* What had you for breakfast this morning?—*A.* (Gestures of perplexity) Eh, eh—bread and butter, and —ah, ah, I can't say it—egg, egg. *Q.* What for dinner?—*A.* Meat, and meg—I can't say some of 'em—potatoes—beer. *Q.* What meat? —*A.* Beef (shaking his head)—I can't think of it. *Q.* What meat comes from sheep?—*A.* Ah, ah—you see it sticks always (pointing to his mouth); button—no, no, I can't—mutton—no, no, I can't say it. *Q.* What comes from pigs?—*A.* Bakacon (shaking his head)—bacon. *Q.* What from a young sheep?—*A.* Ma—mare (gestures of perplexity) —mag. *Q.* Is it lamb?—*A.* Yes, of course, if I could say it. *Q.* Say lamb.—*A.* I know how, if I could—only it 's so thick.

The patient returned to his work; and all I know further of his case was, that he was brought to the hospital dead, May 10th, 1870, having had a fit.

Necropsy.—There were vegetations on the aortic, and on the chordæ tendineæ of the mitral, valves; the aortic valves were incompetent; and the left ventricle was very greatly hypertrophied. In the brain, there was softening on the left side in the district of the middle cerebral artery. The softening affected the outer part of the island of Reil, the lower part of the third (lowest) left frontal convolution, and about the lower third of the ascending frontal and ascending parietal convolutions. The third left frontal convolution, however, was only slightly touched on the under surface where it borders on the ascending parietal. The softening extended inwards to the extraventricular part of the corpus striatum and to the optic thalamus; the mass of these bodies was uninjured. The parts described as softened were diffluent, and of a mortar-like colour. No plugs were discovered in any of the arterial branches of the left middle carotid artery. There was an old embolic patch in one kidney, and a recent red one in the other.

THE GAINS DERIVED FROM THE USE OF THE LARYNGOSCOPE.

By ARTHUR TREHERN NORTON, F.R.C.S.,
Surgeon in Charge of the Throat Department, St. Mary's Hospital.

DR. GEORGE JOHNSON, in an able article in the BRITISH MEDICAL JOURNAL of May 23rd, on the Gains Derived from the Use of the Laryngoscope, refers to certain forms of paralysis of the laryngeal muscles, and remarks that, as they are difficult to explain, they must be left to the physiologist.

The physiologist, however, often relies upon accidents of nature and disease for the advancement of his science; and in the present instance, I think, our knowledge of anatomy, aided by manifest effects of disease, may prove the physiological argument. Dr. Johnson says that, when one pneumogastric or recurrent laryngeal nerve is compressed by an aneurism or other tumour, paralysis of the laryngeal muscles of that side only might be expected, but he instances cases in which compression of one pneumogastric or recurrent laryngeal caused paralysis of both cords. I think, however, we must conclude that compression of any particular nerve in its course may convulse or paralyse the muscles which it supplies, but certainly not those which it does not supply; and we must, therefore, presume that some other reason exists for any *apparent* paralysis of both sides when one nerve only is compressed. Anatomy teaches me, and my practice supports the view, that if a recurrent laryngeal nerve be compressed sufficiently to produce paralysis, there remain the crico-thyroid muscle, and in part the arytenoid, not affected. The crico-thyroid, no longer counteracted, holds the vocal cord of that side in a state of tension.

By the laryngoscope, it is seen that the cord is tense, and does not move either during respiration or phonation; phonation is necessarily hoarse, because the two cords are not adapted for the same pitch of the voice; respiration is but little affected, because the unaffected muscles can open the glottis sufficiently wide for the required amount of air to enter, unless excited by exertion when the space is insufficient, and inspiration is accompanied by stridor.

If both recurrent laryngeal nerves were affected, it appears to me that respiration could not be carried on, for there would be no power to open the glottis; whilst, on the contrary, the tensors of both cords, not being paralysed, would hold the glottis more firmly closed; therefore, slight compression of both nerves would be accompanied by stridulous breathing and dyspnœa, and, as the paralysis became complete, breathing would cease.

The following case illustrates paralysis of all the intrinsic muscles of the larynx, for, as will be seen, there was no fixed point for the muscles to act upon.

A patient came under my charge, at St. Mary's Hospital, suffering from subacute laryngitis. There was tumefaction of the whole mucous membrane, and about and behind the cartilages of Santorini the tissue was œdematous. Both lungs were tuberculous, and I looked upon the case as one of tubercular laryngitis. She was taken into the hospital on account of dyspnœa.

During the following week, the dyspnœa increased, and the respiration became stridulous; and I, therefore, performed tracheotomy.

In about three weeks, the laryngitis had subsided, and the lining membrane had become normal, yet no inspiration could be taken, any attempt to inspire approximating the cords. The tracheotomy-tube was obliged to be retained.

After six weeks, the patient died, with large vomicæ in both lungs.

At the *post mortem* examination, it was found that the cricoid cartilage had necrosed; the soft tissue between it and the œsophagus had given way, and the main portion of the cricoid had been probably swallowed; only a small portion of the anterior ring of the cartilage remained; all the rest had disappeared, yet the mucous membrane of the larynx was sound, and no communication existed between it and the œsophagus.

The reason was now evident why an inspiration could not be taken: there was no attachment for the arytenoid cartilage, and there was no power to open the glottis; therefore, air rushing towards the glottis filled the ventricles of the larynx and pressed the cords together in much the same way as a reflux of the blood in the aorta closes the sigmoid valves, but air was not prevented from passing from the lungs to the mouth, and so the patient could whisper.

This case precisely corresponds to one of paralysis of both sides, and it shows that with paralysis of both sides no respiration can take place, precisely what anatomy would teach. I would say, therefore, that paralysis of both cords does not take place from pressure upon one pneumogastric or one recurrent laryngeal, and that, if from any cause paralysis of both cords take place, death at once ensue unless tracheotomy be performed.

It may be borne in mind that, if one recurrent laryngeal be paralysed and the cord of that side rendered tense by the crico-thyroid muscle, the cord of the opposite side is also necessarily rendered somewhat tense, and may appear, to an extent, paralysed, inasmuch as its movement is less than normal; but the paralysis is only apparent and not real.

A CASE OF FIVE DISTINCT HERNIÆ IN ONE INDIVIDUAL.

By GEORGE J. MURIEL, M.R.C.S.,
Honorary Surgeon to the Whitehaven and West Cumberland Infirmary.

THE subject of this history was C. P., a girl 21 years of age, very tall, being over six feet, her trunk especially being unusually long. The pelvis was well formed, but above the general run in all its measurements. The breasts were almost entirely undeveloped. Her occupation had been that of a milliner. Her expression was florid, but she always had a worn look; her natural temperament was lively and spirited; she was certainly not of a hysterical nature, but was healthy in general external appearance.

About three years ago, I was first called in to attend her, and found her the subject of a large femoral hernia on each side, and also a much larger one coming through the great sacro-sciatic foramen on the right side. Her mother told me that she first felt this sacro-sciatic hernia when about 12 years of age, and it was then about the size of a pigeon's egg. The mother's attention was then called to it by the girl's complaining that, when she went to the water-closet, "something came down which hurt her". The sight of it frightened the mother, and she at once took her to two or three medical men, who all recommended her to let it alone for the present, until the change of life came on, by which time, perhaps, she might outgrow it, as she then seemed to be growing rapidly. This, however, went on, gradually growing larger as time went on, and the mother at length took her to Liverpool and consulted Mr. Bickersteth, who told her it would be necessary for her to wear a truss. By this time, the *left* femoral hernia had shown itself. The instrument was procured and worn, and this state of affairs went on until a little time before I first saw her, when the *right* femoral hernia showed itself; so that at that time she had three herniæ. Both the femoral herniæ came on without any immediate cause. She used to go to Liverpool occasionally to see Mr. Bickersteth, and to have her truss readjusted according to existing circumstances; for all these outlets used to increase from time to time, and the truss consequently required altering occasionally.

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* Collingwood Street runs off North Street, Bethnal Green.

Her only symptoms were great pain in the epigastrium, constant vomiting of a dark green matter (and at times the food she took); generally attended with diarrhœa. These attacks had been becoming more frequent for the last two years before I saw her, coming on about every three or four months, and the pain each time increasing in severity. At the same time, she often had attacks of a milder sort, which she and her friends used to treat without sending for medical assistance. The attacks came on almost invariably when she was "unwell", and her monthly periods were at all times very irregular, any slight exertion, over-fatigue, or sudden fright sometimes stopping and sometimes increasing them. Her pulse, during these attacks, used always to be rapid (100 to 110), but very feeble; her skin hot and dry; her tongue parched and very red, particularly at the tip and edges.

Her symptoms during her last illness were in some respects similar to all her other attacks, but they seemed to be attended with much greater prostration, almost approaching syncope; the face and brow were flushed, but cold, and her extremities clammy, cold, and blue. When I first saw her on this last occasion, she was menstruating profusely, and continued in this state until the day before her death. After taking food (at the most, within five minutes), she invariably vomited a large quantity of clear bright green matter exactly the colour of verdigris; she had also violent diarrhœa, clearly of the food she had swallowed undigested. I was anxious that she should have further advice; but, in consequence of her peculiar abnormality, she had a very strong objection to seeing another medical man; and her friends, expressing themselves perfectly satisfied, would not consent, although I strongly urged such a step as being advisable. I used ice, and, in fact, every drug and other means I could think of, to stay these distressing symptoms, but they were of no avail. Strong astringent enemata were returned as they went in the course of a minute or two. After five days of the most intense suffering, she sank, being perfectly sensible to the very last, and for the last hour perfectly free from pain.

Twenty-four hours after death, with the full consent of her mother and friends, with whom she lived, I, in conjunction with Drs. I'Anson and England, made a *post mortem* examination; but I am sorry to say we were obliged to hurry over it, and were consequently prevented from making that minute investigation we should have wished.

The abdominal cavity was first opened. The intestines seemed on first sight to lie in a normal position. There was slight peritonitis, but of no great severity. After a more close examination, we found the duodenum and stomach passed through an enlarged œsophageal opening of the diaphragm into the thoracic cavity; so that there was, in addition to the three visible during life, a still larger diaphragmatic hernia, accounting for many of the symptoms spoken of above. This, we were of opinion, from its size and general appearance, must have been of long standing. The two femoral herniæ were of such a size, that three fingers could easily be inserted into the sac of that on the left side, while that on the right was not quite so large. The sciatic hernia was very large, and would admit the whole hand. A fifth hernia, which I did not discover until the necropsy, was situated behind the horizontal ramus of the os pubis, about its middle. There was a small piece of gut constricted by a strong band of fibres, but it had no appearance of having been strangulated. I could with ease pass the distal phalanx of my middle finger into the sac.

The liver was larger than usual, slightly congested. The spleen and kidneys were also slightly congested, but otherwise healthy. The uterus was small, but healthy in appearance. The right ovary contained from one to two ounces of serum; the left was healthy. The stomach was occupied, the left side of the thorax pushing the left lung backwards and upwards. With the exception of a small piece of the upper lobe, which was œdematous, the whole lung was collapsed. The right lung was œdematous throughout, but occupied its proper place. The heart was healthy and in position.

I must again express my regret that circumstances did not allow us to go more minutely into the case. It was one of so much interest and of such rare occurrence, that, although I am only able to state simple facts as seen by myself and colleagues, I feel sure that, even for its singularity, it will have some interesting feature to many of the profession.

CLINICAL MEMORANDA.

DYSPHAGIA CAUSED BY IMPERFECT MASTICATION.

In reference to the very instructive case of Dr. Edis (in the Journal for June 13th), in which dyspepsia was caused by imperfect mastication, I would draw attention to the fact, that the same condition very frequently leads to functional dysphagia—that is, to difficult deglutition on account of enervation of the constrictors of the pharynx and œsophagus. It is quite common to see cases where every form of nerve-tonic and of electricity has been tried, where bougies have been passed in the belief that there was a stricture, and where even malignant disease has been not only suspected, but asserted to exist, make a steady recovery after the dentist's aid has been efficiently given. I may, indeed, go so far as to say that I have never seen a case of such dysphagia in which, whatever the assigned cause, the teeth were not more or less at fault; for even if diseased teeth have been removed, and artificial ones substituted, it is not uncommon to find that the "bite" is defective—that is, that the upper molars do not properly articulate with the lower. It is important to remember, as Dr. Edis has indicated, that in all such cases the general system becomes considerably deranged if the local source of irritation have long existed, and that, while removing the actual cause, it is necessary to treat the effect by suitable medicinal and dietetic measures. Lennox Browne, F.R.C.S.Ed., Welbeck Street.

IMMINENT DEATH FROM CHLOROFORM.

In two late numbers of the Journal are some remarks under the above heading. I can fully endorse what Dr. Carmichael says as to the necessity (sometimes, I fear, partly lost sight of) of watching the pulse and respiration without intermission while chloroform is being given. Even after the handkerchief is taken away, anæsthesia deepens for a short time (about a minute), as I have observed. Keeping this in view, the immense importance of noting the very first signs of failure of the heart's action is self-evident. I well remember, on one occasion out of several, when I took chloroform, how very differently I felt towards one medical man whose hand never left my pulse, and another who, I knew, would only put his hand on it now and again.

W. Munro, M.D., Cupar Fife, N.B.

SURGICAL MEMORANDA.

ON SIR WILLIAM FERGUSSON'S NEW OPERATION FOR CLEFT PALATE.

My attention has recently been called to Sir William Fergusson's interesting Observations on Hare-Lip and Cleft Palate, which appeared in the British Medical Journal. He there proposes, as a remedy for the frequent failures which occur after operations, to close the hard palate, to "divide the palate, soft tissues, and bone, about a quarter of an inch from the margin of the gap on each side, cutting the soft tissue in the roof of the mouth with a scalpel, and the bone with a chisel". The margins of the cleft, previously made raw, can thus be readily pushed towards the mesial line and united by sutures.

This operation Sir William applied, in the first instance, to apertures in the bony palate, and subsequently to cases of complete cleft. The objections to the operation are, he thinks, more of a theoretical than a practical kind, and the results, in Sir William's skilful hands, were most satisfactory. He concludes the paper by expressing his conviction that he "has touched new ground in a most complicated field of anatomy and surgery, and added to, if not completed, the power of surgery in such cases of malformation".

I am induced to write these few lines in the hope that it may not be uninteresting to know, in connection with Sir William Fergusson's observations, that Dieffenbach recommended and practised a very similar method of operation in certain cases. Writing of operations for closing fissures extending through both the hard and soft palate, in his *Operative Chirurgie* (Leipzig, 1845, pp. 445-46, vol. i), he says: "In very wide fissures of the hard palate, where the soft is only rudimentary, union may be accomplished by a preliminary lessening or closure of the gap in the palate-bones. Each palate-bone should first be pierced near its margin with a triangular-shaped borer, a thick pliable silver wire being carried through the openings, and the ends twisted together. The mucous membrane must be then incised along the line of junction of the bony palate with the alveolar border, and the bones divided on both sides by means of a thin slightly concave chisel. The wire previously introduced is now twisted until the edges of the bony cleft come together, either partially or completely: usually the former only is practicable. The effect of the approximation of the edges of the fissure in the bone upon the soft palate is immediate and striking, its edges becoming perceptibly closer. The lateral incisions in the bone fill up with abundant granulation. Sometimes, by twisting the wire at a later period, the edges can still further be approximated." Bühring, in two cases where there was a large palatal opening, the consequence of syphilis, divided the bone on each side with a chisel, and, using it as a lever, pushed the bridge of bone so formed towards the gap. The fracture of the bone during the process was quite audible. A fillet was introduced through the lateral incisions to fasten the pieces together. This was removed the following day, and the gaps filled with charpie. In both instances the operation succeeded. He also used wooden wedges for the purpose of pushing the bone towards the centre; and, with the same end in view, passed a wire from one lateral opening to the other by means of a stout needle, the ends being twisted together in the mouth. Wutzer practised a similar operation, which he records in the *Deutsche Klinik* for 1850, p. 260.

It is stated that Dieffenbach failed in his attempts to close the palate after the method he describes in his *Surgery;* and his successor, Baron von Langenbeck, has told me that he had a strong objection to it. Bardeleben, commenting on the various operations for procuring closure of openings in the hard palate, states that Langenbeck's experience has proved that ouranoplasty, as performed by loosening and transferring the muco-periosteal covering of the bony palate, so far surpasses in every respect all former methods, that it is hardly necessary to discuss them.

In the absence of any experience of this method, I do not feel competent to express an opinion; but without doubt, Sir William Fergusson's revival of Dieffenbach's operation will excite discussion. It appears to me that there are clefts so wide and so scantily supplied with soft parts, that the restoration of the bony arch to a more natural position by osteotomy may prove of valuable assistance in the treatment, and render their closure practicable. The operation has been proved not to be very severe. It is probable, too, that Dieffenbach's idea of boring a hole in the edges of the loosened bones may make it more easy to retain them accurately and steadily in apposition, than the method of passing sutures through the lateral clefts.

WILLIAM MAC CORMAC.

OBSTETRIC MEMORANDA.

CASE OF ATRESIA VAGINÆ.

THE following case never showed a bad symptom. I saw the patient with Dr. M'Hardy of Banchory. She was a fine girl, aged 19. She had been suspected of being pregnant, and subjected to the usual opprobrium. The hymen was very firm and convex; fluctuation could be felt above the pubes, and palpation between the hymen and the abdominal wall. Dr. M'Hardy suggested a large dose of ergot before operation. We agreed, and applied a firm wire binder. The size of the womb was that of a six months' pregnancy. The hymen was freely divided, and nearly two gallons of dark sepia-coloured fluid gushed out. The binder was tightened with the greatest care as the fluid escaped. The womb was carefully syringed with very dilute carbolic acid, and water was gently thrown in and continued till all trace of stain had disappeared. The patient was faint. Some brandy and water was given her, and there was no drawback on her recovery.

The hymen is said often to reunite; but if the patient be intelligent, she can easily prevent it. A. VANS BEST, M.D., Aberdeen.

POST PARTUM HÆMORRHAGE.

MRS. M. A. L., aged 28, a rather anæmic-looking woman, was delivered of her third child by a midwife, after an ordinary labour, on May 18th. On the 21st, I was sent for by some of her friends, and found the patient in a very weak condition. The face was very pale; the lips and tongue almost white; the discharge from the uterus then normal. On inquiry, the midwife told me that, when the after-birth came away, the patient lost a very large quantity of blood, but she did not send for a doctor, because the flooding came on after the placenta was discharged, and in consequence did not attach so much importance to it. Restoratives were administered—brandy chiefly. On the next day, there was great tenderness over the abdomen, with slight tympanites. Warm fomentations were ordered, which gave slight relief; but on the following day she was much worse, the abdomen being very much swollen. Turpentine stupes, together with linseed poultices, were applied, giving great relief; but still there remained great tenderness over her abdomen. There was delirium at times, with loss of sleep, which was relieved by calomel and opium. Light farinaceous diet, with brandy-and-egg mixture, was administered. The patient remained in about the same condition, with the exception of absence of pain, until May 28th, when she died—that is, ten days after confinement.

The above case is interesting, inasmuch as the opponents of the injection of perchloride of iron solution would no doubt have given the credit of the cause of death to that injection, had it been used. Had I been called in during the flooding, I should certainly, after having tried all ordinary means without success, have tried the perchloride injection, as the patient was in such a condition that very little loss of blood would have told very much against her. I think that, before the injection of iron is condemned, those who do so should carefully examine several fatal cases where it had been used, and where it had not. This case is also instructive, as it shows a want of knowledge on the part of the midwife, and is another argument in favour of the special instruction of that class of persons.

CORNELIUS BIDDLE, L.R.C.P.Lond., Merthyr Tydfil.

REVIEWS AND NOTICES.

LECTURES ON BRIGHT'S DISEASE, WITH ESPECIAL REFERENCE TO PATHOLOGY, DIAGNOSIS, AND TREATMENT. By GEORGE JOHNSON, M.D., F.R.S. London: Smith, Elder and Co. 1873.

THE pathology, diagnosis, and treatment of Bright's disease have formed one of the most prominent subjects of study and observation of our time, and have engaged the attention of distinguished pathologists and physicians in nearly all the States of Europe. Our own country has, as might have been expected, furnished many eminent labourers to this field, and among them the author of the little work now before us takes a foremost place.

Dr. JOHNSON has sought, in these lectures, to give a brief and clear exposition of the nature and treatment of the several forms and stages of Bright's disease adapted to the wants of the busy practitioner, and has avoided, for the most part, obscure and disputed questions of pathology. With a subject so difficult and complex, this was not an easy task; nevertheless, he has been very successful, and has provided the most reliable guide to the diagnosis, prognosis, and treatment of Bright's disease which we possess.

He brings to the execution of the work rare advantages. More than twenty years ago, he was already accepted as an authority on diseases of the kidneys, and since then has enjoyed, not only the opportunities of clinical study which a hospital affords, but what, in this affection, is of higher importance in forming the groundwork of experience—the richer field of private practice. We maintain, indeed, that no man can achieve eminence as a clinical teacher whose experience is not as largely drawn from private as from public practice; and in no disorder is this more obvious than in Bright's disease, of which the milder examples and the early beginnings of all cases are rarely submitted to the hospital physician. Besides, the opportunity of watching closely through months and years the progress of individual cases, and of the results of treatment under *strictly favourable conditions*, are almost confined to private practice. If we further bear in mind the length of time over which such observations must extend—cases of Bright's disease being known to endure for ten, fifteen, and even thirty years, as in the example recorded at page 93 of this book—we may be able to appreciate more fully the value of the matured experience which Dr. Johnson now places at our service.

Dr. Johnson's work comprises seven lectures. In the first, there is described the minute anatomy and physiology of the kidneys; the physical characters of the urine; the mechanism of albuminuria; and the mode of testing for albumen. The second lecture treats of acute Bright's disease, while the third, fourth, and fifth lectures are devoted to the chronic form in its several varieties of the small red granular kidney, large white kidney, simple fat kidney, and the lardaceous kidney.

The sixth lecture is full of interest, and of especial value in reference to the pathology and diagnosis of renal disease. It treats of albuminuria not associated with what is commonly understood as Bright's disease, under the following heads:—1. Passive congestion of the kidney, with albuminuria, the result of impeded venous circulation; 2. Albuminuria and hæmaturia from embolism in the minute blood-vessels of the kidney; 3. Puerperal albuminuria; 4. Suppurative inflammation of the kidney from retention of the urine; 5. Acute cystitis.

Of the four groups into which cases of albuminuria may, for the present, be conveniently arranged—1. Albuminuria from renal disease; 2. Albuminuria from disease of the mucous membrane lining the urinary passages; 3. Albuminuria from mechanical congestion of the kidney; and 4. Albuminuria from alterations of the blood, without disease of the kidney or of the urinary mucous membrane (*e.g.*, in organic and functional disorders of the liver and stomach, phthisis, pyæmia, purpura, etc.)—the fourth group, although scarcely demanding special notice in a strictly practical work like the present, is yet of the highest interest; and it is obvious that further knowledge under this head will help us greatly to a better understanding of Bright's disease, and will aid us materially in attaining to more efficient means of treatment, both preventive and curative.

As the morbid anatomy and pathology of albuminuria have for some time past obtained considerable attention in our pages, we shall limit the few observations we have to make to the seventh and last lecture, in which the treatment of acute and chronic Bright's disease is admirably described. Dr. Johnson's therapeutics are strictly rational, the explanations of the *modus curandi* being fertile in useful application, while his directions are clear and concise, yet free from dogmatism.

Of the two kinds of remedies, hygienic and medicinal, he justly assigns a much higher value to the former; and his observations on the diet and regimen of albuminuria merit careful perusal. He insists strongly on the importance of securing good digestion—so favouring the assimilation of the food and lessening the eliminative work of the kidney—and warns us against the use of any form of diet, or of any medicine, which may mar the easy and efficient play of this function. The observations on milk-diet are excellent. The diet may consist of this fluid alone, if it be easily digested; and, in cases where the patient has long indulged in rich and stimulating food, this regimen will be often found of great service, not only in the acuter forms of Bright's disease, but in acute jaundice and in several morbid conditions of the stomach and liver. So far as we can, we thus rest the organs of digestion and assimilation, and the large quantity of fluid acts as a diuretic; but care must be taken not to press this exclusive diet, unless the patient can easily digest sufficient milk to supply the required nourishment. This is sometimes overlooked, and increasing weakness is the result.

On the important question of the use of stimulants, Dr. Johnson observes:—"As a rule, it is well to give no alcoholic stimulants, or, if need be, to give them very sparingly, in cases of acute Bright's disease" (page 138). Again, "In all cases of chronic renal disease, alcoholic stimulants in any form should be given sparingly, or abstained from entirely, unless, for some special reason, they appear to be indicated" (page 141).

We are glad to find our author speaking so decidedly against the use of alcoholic stimulants, more especially as some recent writers—*e.g.*, Rosenstein (*Traité Pratique des Maladies des Reins.* Deuxième édition. Paris, 1874)—advise that wine should be more or less frequently taken. Our own experience is strongly in favour of abstinence from alcoholic drinks, both in the acute and in the chronic disease. There are, indeed, a few exceptions in the chronic form where the digestion and assimilation seem to be favoured by their use; but more frequently they embarrass the action of the stomach and liver, and impose an additional burden on the eliminative function of the kidney.

The use of iron is thus referred to by Dr. Johnson:—"In all the cases of recovery from long-continued albuminuria, the preparations of iron have entered largely into the medicinal treatment of the disease, and have apparently contributed much to the favourable result. There are two preparations which I have found especially useful; these are the tincture of the perchloride and the syrup of the phosphate. The former in doses of from ten minims to half a drachm, and the latter in drachm doses twice or thrice daily" (page 139).

It is scarcely possible to doubt the value of iron in chronic albuminuria, but the dose, mode, and time of administration, are all-important. The capacity of the system to assimilate iron is much less than is usually supposed, and the dose of the drug is generally too large. The excess worries the stomach and bowels, and the medicine is often abandoned as unsuitable, when a smaller dose and milder form might render good service. The doses of the perchloride and phosphate indicated by Dr. Johnson are larger than we have found desirable. When the digestion is good, and bears it well, the perchloride is a valuable preparation, fulfilling the two indications of adding iron to the blood and at the same time promoting the contractility of the vessels. When iron is employed for its tonic properties alone, we prefer, as being milder and more easy of assimilation, such preparations as the iodide, citrate of iron and ammonia, the tartarated iron, and the carbonate.

A new preparation—the solution of dialysed iron, much used in Germany—deserves more attention than it has received in England. It is made by dissolving the peroxide in the perchloride of iron, and then separating the former by dialysis. The solution is dark brown in colour, has no taste of iron, and is quite free from astringency. There is, moreover, another form in which iron may be often given more advantageously than in the medicinal preparations; that is, in the natural mineral waters. We have seen several instances in which even the smallest dose of medicinal iron could not be borne, and yet the patient could take with comfort and advantage a carbonated chalybeate water. There are four of these springs which we have found especially palatable, and suited to the delicate stomach—Bussang, Spa, Schwalbach, and Orezza—now named in the order of their strength, the Bussang being the weakest.

In the treatment of the anæmia of Bright's disease, in addition to good diet, sea-air, and iron, we have found advantage from the persevering use of the inhalation of oxygen gas. As yet, this help in the process of blood-making has scarcely received the attention which it merits. It must also tend to lessen the amount of carbonic acid in the blood, the inhalation of which has been shewn by Vogel to be sufficient of itself to cause albuminuria.

With the view of lessening the escape of albumen, the employment of acetate of lead, tannin, gallic acid, krameria, uva ursi, and other astringents, is much relied on by many practitioners. Dr. Johnson does not refer to their use. Our own experience of them is not very encouraging, and, to obtain their remote astringent action, these drugs require to be given in doses which are apt to disorder the stomach and cause constipation.

In the hope of advancing our knowledge of albuminuria, we would suggest (1) more general testing of the urine in disease and in chronic ill-health; (2) a series of observations on the urine passed under special circumstances, such as after the cold bath, so as to ascertain, if possible, the peculiar constitution or condition of body which favours the appearance of albumen; a like series of observations may be usefully made in persons after the use of the Turkish bath; after exposure to dry heat; after severe exercise; after the use of certain dietaries, and after the use of certain medicines; (3) renewed investigations by the chemist on albumen, its modifications and combinations; and (4) new researches on the endosmosis of albumen through animal membranes, with the view of determining more precisely the conditions which favour this process as regards, on the one hand, the albumen and its varieties, and, on the other, as regards the membrane.

The admirable researches of numerous workers, both at home and abroad, have already made important advances in several of the directions we have indicated, and our knowledge of albuminuria grows rapidly; but, though the labour of the past will naturally be absorbed in the investigations of the future, our author may feel well assured that the prominent part he has taken in clearing the way to a fuller knowledge of this difficult subject will not be forgotten, and that his name will always have an honoured place in connection with Bright's disease.

THE INDIAN MEDICAL GAZETTE; a Monthly Record of Medicine, Surgery, Obstetrics, Jurisprudence, and the Collateral Sciences. Edited by C. MACNAMARA and R. MCLEOD.

WE have before us a large file of this admirable monthly medical journal, which we take to be the best that has ever been published in India. It will, we think, bear a favourable comparison with contemporary journals, not only in England, but in Europe. It is edited by two of the ablest medical officers in the Bengal service, and we observe that its contributors belong chiefly, although far from exclusively, to the Indian service. The volume before us contains papers on medicine, records of surgical cases and operations, of which our great London hospital physicians, surgeons, and teachers might be proud, and cases illustrating some of the most difficult questions in medical jurisprudence, of the highest interest and importance. We have been much struck, in particular, by the ability with which the reviews of books are written.

We observe, also, with pleasure, the tone of manly independence, combined with perfect courtesy, with which the acts of the Indian Government are commented on, in all that relates not only to medical and sanitary questions, but even as regards the dealings of the highest authorities with the service to which the writer belongs. We think this most creditable to both parties, and certain to result in good to the progress of science, the enlightenment of the Government, and the well-being of the millions committed to its charge.

We could wish that this journal had a larger circulation in England than it has. It is clear that our brethren in the East work hard to keep themselves abreast of the progress of medical science in Europe; and we can assure our readers that, in their turn, the Indian medical service does not leave fallow the vast field of inquiry they are sent to cultivate.

We quite agree with the editors of the *Indian Medical Gazette*, in reprobating the tendency, so strongly evinced on the part of some in India, to separate medicine and sanitation. We have seen something of the same kind attempted in this country. "The primary and fundamental steps in preventive medicine", say the editors of the *Gazette*, "consist in the differentiation of diseases and the recognition of their causes, and these objects have ever been, and will ever be, compassed by clinical and pathological research. It is idle to depreciate the value of this central and essential element of sanitary science, by bringing into undue prominence its secondary and collateral elements. Sanitation has always been, and must ever be, the offspring of medicine; and the two great branches of the healing art—prevention and cure—must ever be intimately associated, inasmuch as they spring from the same stem".

NOTES ON BOOKS.

DR. J. M. TONER has lately published, at New York, a little volume entitled *A Dictionary of Elevations and Climatic Register of the United States*, in which is given the height, in feet, above the sea-level, of all the cities, towns, and localities in the United States of which the composer has been able to find a measurement, and also the latitude, mean annual temperature, and the total annual rain-fall, of many places. The object of Dr. Toner, in this compilation, has been to place within reach of the medical profession a record that may enable and induce professional men in different localities to observe, record, and contrast the influence of elevation, if it have any, on health and disease.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JUNE 3RD, 1874.

E. J. TILT, M.D., President, in the Chair.

Acephalous Embryo.—A report by Dr. J. WILLIAMS and Dr. CLEMENT GODSON on the specimen exhibited by the latter at the last meeting was read. At the posterior border was a slight ridge similar to a margin of skin around a recent cicatrix, and there was a small rough hard tubercle which projected beyond the surrounding surface; on dissection, this was found to be continuous with the vertebral column. From these appearances, the acephalous condition might be regarded as the result of amputation.

Tumour of the Uterus.—Dr. DALY of Dalston exhibited a specimen where a tumour of the size of an orange occupied the fundus of the uterus. There was also a small ovarian cyst on the left side. The late Dr. Tyler Smith had removed a polypus from this patient some years ago. Twelve months since she suffered from profuse flooding. Ice, gallic acid, and rest relieved this. The uterus was fixed in the pelvis. Between the attacks of hæmorrhage, there was profuse and continued fœtid discharge. Vomiting had been almost persistent during the last four months of life, and nothing relieved it. There was extreme emaciation. Death resulted on June 2nd. The lower portion of the uterus was in a sloughy condition, and it was a question whether the disease was malignant or disintegrating fibroid. After a short discussion, the specimen was referred to Dr. Hayes and Dr. Potter for report.

Placenta attached to Head.—Dr. TILT exhibited a specimen of a fœtus where the placenta was attached to the head.

Calcified Uterine Fibroids.—Dr. JOHN WILLIAMS exhibited a specimen of calcified fibroids of the uterus, the growths being distinct and well marked.—Dr. EDIS referred to a similar case, though somewhat more advanced, that he had exhibited to the Society in February 1869. Some of the tumours had commenced to slough; the patient died from exhaustion.

A New Form of Pessary.—Mr. W. ROSS JORDAN of Birmingham exhibited an intrauterine stem with an inflatable India-rubber ball pessary attached, to keep the former in position, for the relief of flexions and displacements of the uterus. The principal advantages consisted in there being no tube attached, thus removing a source of much annoyance to the patient. It could not be removed by the patient herself, and thus its constant use was insured. Whilst the stem kept the uterus in its proper position and form, the elasticity of the ball or pad allowed all the freedom of movement to the uterus which nature would possibly require. The pad could be distended to any degree, and need not cause overdistension of the vagina. The pad being perfectly soft, gave a comfortable support to the cervix, avoiding the pain sometimes caused by the hard and inflexible vulcanite pessaries. It cured the flexion without simply changing it into a version. The ball was inflated by inserting a movable metal tube into a valve, injecting the air, slightly rotating the tube, which closed the valve, and was then removed, leaving the pad permanently distended to any required extent. It did not interfere with coitus.—Dr. EDIS thought that it was a very ingenious arrangement, but doubted whether it would be prudent in married patients to allow coitus, as the intrauterine stem, being pressed against the fundus, might cause injury to the uterus.

Abnormal Presentation.—Dr. BARNES reported that in Dr. Kesteven's case, exhibited at the last meeting of the Society, there was no fluid in the postcranial bag; there was nothing, in fact, to add to the description already given.

Carcinomatous Tumour.—Dr. HEYWOOD SMITH's report on Dr. Hayes' specimen was to the effect that, though a considerable portion of the malignant mass was contained between the folds of the broad ligament, yet the site of its origin, whether in that situation or from the pelvic walls, there was not sufficient evidence to prove.

Separation of the greater part of the Cervix Uteri during Labour.—Mr. ROBERT GRAY of Armagh related a case. The patient had been in labour twelve hours when he first saw her; the head was then about half-way through the pelvis, surrounded by about half an inch or more of the anterior portion of the cervix uteri, which was thick, soft, and congested. It had a pulpy feel to the touch, much like the feel of a solid clot of blood. The posterior portion of the cervix was separated from the body, having a ragged uneven margin; there was a slight oozing of blood from the vagina. The separated portion was removed, the forceps applied, and a living child delivered. There had been incessant vomiting before delivery. Opium and ergot were administered. She complained of smarting inside the vagina. Injection of water with Condy's fluid was resorted to daily. The pulse sank to 80, the temperature remaining steadily at 96 deg. Fahr. The attached ring separated completely on the fourth day. Recovery ensued. The only cause assignable for the laceration was pressure on the cervix between the head and pelvis.

On Lymphangitis in Pelvic Pathology.—Dr. TILT read a very exhaustive paper on this subject, his conclusions being condensed in the following propositions. 1. Pelvic cellulitis, benign or septic, originates in the lymph-spaces, and in the capillary lymphatics, that have been wounded in some lesion of the utero-vaginal mucous membrane. 2. Wherever situated in the pelvis, cellulitis follows the same course, but varies in name and in symptomatology according to its topographical disposition and to the organs and the tissues that circumscribe it. 3. From the patch of capillary lymphangitis implicated in a mucous membrane lesion, inflammation may spread to one or more of the nearest lymphatics, and may be benign or septic. 4. One lymphatic may pass on inflammation to another, so that a continuous chain of purulent lymphatics may extend from the septogenetic lesion to the lumbar lymphatic glands; and such acutely inflamed lymphatics often inflame their surrounding cellular tissue, their glands, and proximate organs. 5. When lymphatic glands do not succeed in barring the progress of inflammation, they also inflame their surrounding cellular tissue, and may thus cause an internal bubo wherever there be a pelvic lymphatic gland. 6. Occasionally, periuterine inflammation has no other origin than this frequent origin of abscesses of the broad ligament. 7. Purulent lymphatics, on their way to the lumbar glands, may inflame the subserous cellular tissue in the iliac region, and thus cause iliac abscess. 8. The subserous lymphatics and the peritoneum are so intimately united by physical contact and physiological action, that it is almost impossible for subserous lymphangitis not to cause peritonitis. 9. The subperitoneal lymphatics being continuous with and contiguous to those of the ovary and the oviduct, they may be inflamed by subserous lymphangitis, particularly when it is septic. 10. The contamination of the blood by lymphatic pus leads to the inflammation of those parts that are in physiological connection with the lymphatic system, such as the serous and synovial membranes and the spleen; whilst phlebitis more frequently causes metastatic abscesses, if it be not their sole cause. 11. Though often overlooked in *post mortem* investigations, sporadic puerperal lymphangitis is not uncommon, but is more frequently met with in connection with, and eclipsed by, phlebitis. 12. The worst cases of puerperal lymphangitis have their modified counterpart and their subdued presentment in non-puerperal pelvic pathology; and, more frequently than is admitted, lymphangitis is the cause of speedy death from uterine operations. 13. Whether women be poisoned by puerperal lymphangitis or by puerperal phlebitis, the general symptoms are the same in nature and in intensity, and the local symptoms vary according to the amount and to the variety of its primary and of its secondary lesions. 14. The increase in size and in number of pelvic lymphatics during pregnancy, and their increased functional activity, strongly support the rule not to operate on pregnant women. 15. As the liability to puerperal lymphangitis is in direct proportion to the number and to the gravity of lesions inflicted on the utero-vaginal mucous membrane by tedious labours, it is advisable to shorten by the use of the forceps, according to modern practice. 16. The bathing of a puerperal wound in an ichorous discharge is so dangerous, that disinfecting vaginal injection should be made so soon as the lochial discharge becomes in the least offensive. 17. The innocuity of injecting a solution of tincture of iodine into the womb immediately after delivery, and of a solution of perchloride of iron very soon afterwards, warrants the injunction to inject into the womb some strong disinfecting substance whenever the lochial discharge be fœtid. 18. The frightful mortality that has attended some epidemics of puerperal lymphangitis justifies the horror of large maternities entertained by the profession.—Dr. PALFREY did not altogether agree with the author as regarded the frequency of this disorder. It was, without doubt, more common in maternity hospitals than generally believed; and yet, though he was attached to one, he had never seen a case, and in the London Hospital they had never lost one. No proper comparison could be made between the London and Paris hospitals, the ventilation and hygienic arrangements in the latter contrasting unfavourably with the former. He would ask whether the author advised injecting iodine into the uterus three or four hours after labour, and whether there was no fear of the fluid passing through the Fallopian tubes into the peritoneum. He had seen one case where it was fatal. In another, Dr. Head injected the perchloride of iron into the non-pregnant uterus; death occurred shortly afterwards, and iron was detected *post mortem* in the peritoneal cavity. He thought it was not prudent at any time to inject fluids like tincture of iodine and the perchloride of iron into the uterus; the results were often most disastrous. He asked whether Dr. Tilt considered pelvic cellulitis and lymphangitis to be one and the same condition. He had never seen glandular enlargement in the pelvis in pelvic cellulitis; and it was not, as a rule, a fatal disorder. Remembering that what the author taught would go forth to the world, he desired to express his dissent from the views enunciated respecting the harmlessness of intra-uterine injections. If it were so difficult for fluid to travel along the Fallopian tubes, how was it that semen often traversed them, and extra-uterine pregnancy was the consequence? He considered it was very easy for fluid to pass. *Apropos* of a remark of the author, that every one had backed some form of intrauterine stem, he himself had never done so. He had incised the cervix in three hundred cases, and there was no operation so successful.—Mr. ROSS JORDAN considered the Fallopian tubes different in the non-pregnant uterus and in the pregnant one. Semen would pass in the one, but not in the other. He knew of a case where Condy's fluid, injected into the uterus, had found its way into the peritoneum, and caused serious consequences.—Dr. SAVAGE looked upon every inflammation as a lymphangitis. There was no part of the body in which cellular tissue was absent, and this was permeated by radicles. It was open to question, whether matter was propagated beyond glands through the lymph-tubes. In the case of a punctured wound of the extremity, the lymphatics were often inflamed up to the glands in the axilla or groin, as the case might be; but they did not contain pus. The lining membrane of the uterus contained the same kind of radicles as other cellular tissue. Slight operations were often followed by death. In division of the cervix, he had seen death in three cases occurring within nine days. Lymphangitis was very frequent. Though fluid injected into the uterus could gain access to the Fallopian tubes, yet in the case of the spermazotoa it was different; they did so by means of cilia. He had never used iron or iodine in puerperal cases, though he had in certain forms of fibroid. He thought there were some omissions in the paper; but still it was a valuable contribution to the subject, and he had learnt a great deal.—Dr. TILT, in reply, stated that he had not represented the belief in the frequency of lymphangitis to be generally admitted in France and Germany; but he maintained that, if half-a-dozen earnest workers could find a considerable number of cases of puerperal lymphangitis in several of the Paris hospitals during the last four years, similar cases must certainly occur in London hospitals, and he would beg hospital men to look to the lymphatics in cases of speedy death after operations on the pelvic organs. He had not denied the possibility of some fluid passing from the oviducts to the peritoneum, and he was glad to have elicited trustworthy evidence of two cases in which some of the perchloride of iron injected into the womb had been found in that part of the peritoneum that surrounds the fimbriæ; but he maintained that this was of exceedingly rare occurrence; and that, if otherwise, such cases would not be quite exceptional, and they would have frequently occurred in Paris, where during late years it had been the practice to wash out the womb with a strong solution of alcohol or carbolic acid whenever the lochia became fœtid. He therefore believed that, rather than let fœtid secretions remain pent up in the womb after delivery, it was better for a patient to run the infinitesimal chance of the disinfectant passing into the peritoneum. He was fully aware of the value of surgery in uterine therapeutics, and believed the present tendency was to place too great a trust in surgical measures for the treatment of diseases of women.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

WEDNESDAY, MAY 6TH, 1874.

P. H. WATSON, M.D., President, in the Chair.

Pathological Specimens.—The CHAIRMAN showed: 1. The Eye of a Lamb, from the Cornea of which a Tuft of Wool grew; 2. An Epithelial Tumour of the Lower Lip, which had been aggravated by caustic applications, made by a quack; 3. An Epithelioma from the Angle of the Lips and Cheek, which he had removed, and afterwards filled up the gap by a plastic operation; 4. The Bones of the Anterior Tarsus, removed by him by his new operation; 5. An Astragalus, removed from the foot of a medical man, who had sustained a severe wrench in stepping out of his carriage.

Dr. McKENDRICK showed ten Photographs of Microscopic Objects, recently sent him by Professor Beneke of Königsberg. He also gave a brief account of observations he had recently made upon a well-marked antagonism between Bromal Hydrate and Atropine. Bromal hydrate, when administered in a dose of three grains to a medium-sized rabbit, produced contraction of the pupil, dilatation of the blood-vessels, profuse salivation, œdema of the lungs, and effusion of fluids into the pleural, pericardial, and peritoneal cavities, and other effects. He had observed that the fourth of a grain of atropine arrested the excessive secretion, and in various cases saved life from what was afterwards found to be a lethal dose. The detailed results he expected soon to communicate to the Society. In the meantime, he announced the fact as another example of the existence of a true physiological antagonism between certain active substances, as had been well shown by Dr. Fraser and others.

Gastrotomy for Intussusception in an Infant.—Dr. JOHN DUNCAN recounted a case, in which he had performed gastrotomy in a child, aged five months, for intussusception, which had been made out not only by the usual symptoms, but also by the finger in the rectum. Insufflation and injection had failed. He opened the abdomen in the middle line, and found small intestine invaginated into the whole length of the cæcum and large intestine. Pulling failed to reduce the invagination, till assisted by a kneading process. The child rallied for a day, and then sank rapidly.

Causes of Death among Insured Persons.—Dr. GILLESPIE read a report on the causes of death among the Assured in the Scottish Union Insurance Company, from 1824 to 1870, drawn up by himself and Dr. Duffin, the medical officer of the company in London. In numerous tables, a vast amount of information was given regarding the age of the assured, the class, order, and disease under which the cases were arranged, with the average duration of life in each, and the occupations of the assured, in relation to length of assurance and nature of disease.—The PRESIDENT conveyed the thanks of the Society to the authors of the paper, and remarked on the interest which Dr. Gillespie had managed to throw round an otherwise dry subject.—Dr. MATTHEWS DUNCAN directed the attention of the Society to the question of the great risks added to the life of females, at the child-bearing age, by the dangers of first births. He defended his own statistics against the observations of Miss Nightingale and Dr. Farr. He believed that the period of four weeks after child-birth was not long enough to include many deaths which were really due to the effects of parturition.

Cystic Tumour of Kidney simulating Ovarian Disease.—Dr. MATTHEWS DUNCAN communicated a paper, by Dr. A. C. Campbell of Dundee, on a case of cystic tumour attached to the kidney, simulating ovarian disease. The patient, aged 49, a mill-worker, had a tumour, for about eighteen months, in the left flank, as large as a man's head, with fluctuation, and with symptoms of ovarian disease. On exposure of the tumour, and insertion of the trocar, nothing came, as the contents were like porridge. The tumour was therefore laid open, and two pints of the stuff cleared out. Both ovaries were perfectly healthy. It was found that the tumour was an altered kidney; it was, therefore, removed. The patient made a tedious, but complete recovery. About forty ounces of urine were passed daily. Dr. Duncan remarked on the difficulties attending the diagnosis of ovarian and renal tumours.

Absorption of an Exostosis—Dr. CHIENE read a case of absorption of an exostosis. It had been in the vicinity of the knee-joint, had been broken off by a fall, and within a year it entirely disappeared.—Dr. P. H. WATSON remarked that fracture of exostosis generally resulted in necrosis, abscess, and removal.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1874.

SUBSCRIPTIONS to the Association for 1874 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 37, Great Queen Street, London, W.C.

BRITISH MEDICAL JOURNAL.

SATURDAY, JUNE 20TH, 1874.

THE BLOODLESS BRAIN.

II.

THE psychical outcomes of cerebral anæmia affect us much in social life. We are all familiar with the changes which go on in the mental products of the brain when it is insufficiently supplied with blood, from a failing circulation taking its origin in a gravely diseased heart. Especially are the mental symptoms marked in the sufferers from heart-disease associated with chronic Bright's disease, when the changes in the circulatory system induced by that disease are passing into their last or degenerative stages. The effects of the impaired blood-supply upon the cerebral centres are well shown in the mingled products of a vascular supply at once insufficient and laden with impurities.

At other times, we find in certain spinsters a condition of melancholia which takes a religious direction. When the state of panphobia is directed towards a future existence, it produces that condition of theological melancholia which has too often been cherished as the evidence of religious feeling and of spiritual life, instead of being resisted as morbid unhealthy thought. Those unfortunate, earnest, but misguided girls, who seek in religious exercises, in fasting, and sleepless prayer, that solace no longer vouchsafed to them by perfect health, are not usually themselves aware that their actual condition is one of cerebral anæmia, taking its origin in ungratified physiological aspirations: yet this mental altitude rarely survives the marriage rite, and almost never the advent of motherhood.

At other times, under other circumstances, and in females of a different psychical diathesis, the misery, the mental pain of cerebral anæmia, tempts them to the wine-cup. The effects of alcohol in removing mental depression, by flooding the cerebral cells with arterial blood, render it an ever present temptation to these miserable and wretched women. Indulgence gives relief—sadly too certain relief; the experiment is repeated; the power of the will is still further sapped; the consciousness of the practice, the sense of degradation, are now added to the pre-existing misery; and the remnants of self-restraint, of self-respect, indeed, are swept away in the current of a resistless stream, while the measure of her impelling force is the sum total of her misery. It is not that the pleasing sensations of intoxication are craved after now so much, as it is the intolerableness of sobriety which is evaded: it is the positive bliss of oblivion that is sought eagerly and persistently. No wonder, then, that we have learnt to regard habitual intoxication in woman as a hopeless and incurable state of matters. Its pathology makes the subject painfully intelligible. It demonstrates, too, the utter absurdity of attempting to affect such a condition, or to remedy it by moral appeals to higher feelings, which are now fading out and being rapidly obliterated. The capacity to keep to a resolution is destroyed even if the faculty to frame one remain: the lower impulses are emancipated from the control of the higher centres. This is indicated in a recent leader in this JOURNAL, "The Comparative Study of Drunkenness", where, it is said, "the processes most affected by this poison (alcohol) are the higher centres. . . . But when drink has paralysed these highest processes, the lower faculties have the upper hand". Thus we can see how the loss of balance already existing between the emotions and the higher centres, which is producing the uncontrollable, or at any rate uncontrolled, morbid feelings, is aggravated by excessive indulgence in alcohol; and the condition, perhaps at first but temporary, is converted into a permanent state, whose only cure is the grave.

That the condition just described has its origin in physical conditions which are more or less amenable to treatment—the degree to which they are remediable depending chiefly upon the force and duration of the morbid appetite—we are not permitted to doubt; while the treatment, to be successful, must be founded on a correct diagnosis and an intelligent comprehension of the pathology.

These are illustrations of the usual forms of cerebral anæmia, to which may be added the ever-recurring hospital-patient, who is anæmic, either starved from defective supplies of food, or dyspeptic; reduced by over-suckling, or drained by a combination of menorrhagia and leucorrhœa; harassed by intercostal neuralgia or by headache, and depressed beyond measure by gloomy thoughts or "low spirits"—imperfect psychical outcomes of ill-fed cerebral cells.

In all these conditions, a recognition of the true state of matters, of the relation of depression and apprehension, of mental pain, indeed, with ill nourished cerebral conditions—a relation as assured as that which exists betwixt neuralgia and poverty of blood—must precede and direct the therapeutic plan to be pursued; which, however, must ever be based on the individual necessities and special indications of each case.

It is not merely the proper treatment of these cases, which is or ought to be the outcome of the recognition of their true pathology; it is at the correction of our psychical attitude towards these morbid cerebral conditions, when we meet them in common life, that we must aim. It will not do for us, as rational beings, to attribute to moral depravity, to unrestrained cantankerousness, to perverseness, or to blameworthy avoidance of mental effort, what is as little, if at all, under the patients' control as their headaches or their cardiac murmurs. We do not quarrel with the tint of a man's skin when jaundiced, or feel wrath with him for a halt after paralysis, or for breathing through a tracheotomy-tube, or for being aphasic, after certain distinct physical conditions which we have learned to understand; neither should we take umbrage at certain mental conditions equally dependent on organic changes, merely because we are not, or will not be at the trouble to be familiar with them, or to investigate and understand them also.

Finally, there is a point yet unmentioned, which renders this subject more interesting still. Laycock and Schrœder van der Kolk have divided the cerebrum into two parts—(1) the anterior and middle lobes, fed by the branches of the internal carotids, which they regard as the intellectual region; and (2) the posterior lobes, supplied by the division of the basilar artery, formed by the union of the vertebral arteries, which seem rather the area of the emotions. Consequently, there may be emotional disturbances which do not involve the intellectual processes, as there may be intellectual derangement while the emotional centres keep true time. When Rousseau wrote, "I feel bitterly my wrong conduct and the baseness of my suspicions, but if anything can excuse me, it is my mournful state", the intellectual centres were perfectly conscious of the morbid state of the emotions, and of their inability, their powerlessness, to control them. Indeed, Rousseau's intellectual powers survived in fair integrity long after he became abandoned to that mania of suspicion which settled down like a thick mist over the last years of his life.

This view of localised or partial anæmia of the brain may seem at first sight opposed to our impressions as to the free inosculations which exist in the encephalon—impressions formed from our acquaintance with the circle of Willis. But, in reality, the intracranial circulation is not so general as we usually assume; the communicating branches of the circle are comparatively small; the collateral circulation is not sufficient to prevent coma on compression of the carotids, nor paralysis of the opposite side after ligature of the common carotid. The effects of embolism tell us, in unmistakable accents, of the effect upon a part of the encephalon induced by the blocking up of its nutrient artery. The collateral circulation here is not sufficient to preserve the part from necrosis, from utter death, to say nothing of maintaining that higher vascular condition which is indispensable to functional activity.

The treatment of cerebral anæmia consists of the administration of hæmatics, combined with purgatives and cardiac tonics, or other agents, according to the needs of each case; nutritive and easily assimilable food, and a liberal allowance of sleep. For the production of this last, the directly depressant hypnotic remedies—chloral-hydrate and bromide of potassium—are contraindicated, as tending to foster and maintain the anæmic condition. On the other hand, too active remedial measures, intended to increase the amount of blood circulating through the encephalon, though perfectly correct in design, are apt to produce headache in the anæmic brain, which is sometimes as sensitive as a starving man's stomach.

CASUALTY OUT-PATIENTS.

WE have received the following communication from the Secretaries of the Medical Society of London, with reference to the cases of maltreatment among casualty out-patients at St. Bartholomew's Hospital, forwarded to us for publication last week.

11, Chandos Street, Cavendish Square, 15th June, 1874.

SIR,—In your last number, under the head of "Casualty Out-patients," we notice that Mr. Nelson Hardy gives an account of a case of fracture of the radius with resulting angular deformity treated at St. Bartholomew's Hospital, and mentions it having been shown at the Medical Society of London, April 27th, 1874. We consider it our duty to state that, on Mr. Hardy exhibiting the patient and commencing his remarks on the case, a very strong feeling of disapproval was manifested by the Fellows present, and the President at once protested against the rooms of the Society being made the field of accusations levelled against the students or authorities of a recognised hospital, and the Society then proceeded to the next business of the evening.

We remain, Sir, your obedient servants,
WOODHOUSE BRAINE, } *Hon. Secs.*
C. THEODORE WILLIAMS, }

It is not without satisfaction that we publish a letter which will possibly do more than the otherwise great intrinsic interest of the circumstances might have done to direct general attention to Mr. Hardy's cases, and to obtain for them careful consideration in respect to their ethical as well as their professional relations.

It does not seem to us clear that Mr. Hardy took altogether the best course in this matter, since it does not appear why he should not have communicated with the surgeon of the day at St. Bartholomew's Hospital, who has a nominal responsibility for all the cases treated by his dressers, whether or not he has himself seen the cases. But it is noteworthy that the cases are, Mr. Hardy says, not isolated, but representative cases; and, if so, they must be representative not only of what may go on in one hospital, but of a state of things against which there is apt to be too little safeguard in many. There is, no doubt, a great deal of prejudice against hospitals in the popular mind, and patients are not always as grateful as they should be for benefits received. On the other hand, is there not much reason to believe that, if the true history of the casualty out-patient room of a metropolitan hospital were carefully written by a skilled observer, there might be good ground for much more prejudice than actually exists? A popular fiction implies that every patient who attends at a metropolitan hospital has, without payment, the advantage of the skill of the picked men of the medical profession. If the patient be taken into the wards, or if he fall into the hands of an assistant physician or surgeon not overworked, it is so; but how is it with the "casualty patients"? What supervision is exercised? What is the real skill and experience brought to bear, in an average hospital, upon fractures of the upper extremities, dislocations, and the minor ailments of "casual patients"?

After reciting the details of the particular cases to which the Medical Society of London declined to listen, as the Secretaries above write, on the grounds stated, Mr. Hardy, in the communication which he forwarded to us, adds:

"Instances such as these, of careless or unskilful treatment by students at St. Bartholomew's, are continually coming under my observation; and instances of mistake in diagnosis not a few, such as congenital hydrocele being pronounced to be hernia, and tonsillitis with inflammation of the Eustachian tube being set down as polypus of the ear.

"It would, however, in my opinion, be most unfair to blame the students, who probably do the best they can under the circumstances; but the system, which permits poor persons, suffering under injuries or diseases more or less serious, to be treated, in one of our most famous metropolitan hospitals, by any other than properly qualified surgeons, is surely very much to blame.

"On a recent visit to the hospital, I heard the porter in the surgery call out to the assembled patients the name of a dresser, in order that those who, at their first visit, had received tickets with that dresser's name on them, might come forward to be treated by him. Many came forward accordingly; and, during the few minutes I remained, I witnessed the treatment of several cases by unqualified dressers, the medicine that was required for them being very appropriately made up by an old woman, who looked like a superannuated nurse.

"In one of the most striking passages in his *History of England*, Lord Macaulay states that 'every bricklayer who falls from a scaffold, every sweeper of a crossing who is run over by a carriage, may now have his wounds dressed and his limbs set with a skill such as, one hundred and sixty years ago, all the wealth of a great lord like Ormond, or of a merchant-prince like Clayton, could not have purchased'. It is true, he may have the benefit of such skill if, perchance, his injury have been sufficiently severe to cause him to be admitted as an in-patient; but otherwise he may, unfortunately, as the above cases show, become the victim of such carelessness and unskilfulness as, we may reasonably hope, was not common even two hundred years ago."

There is no ground for believing, so far as we know, that St. Bartholomew's is any worse in this matter than any other metropolitan hospital. The system is bad, and the results cannot be altogether good. The matter is one to which we have before referred as requiring looking into. The greed for patients at many hospitals makes the numbers treated to seem, in the eyes of the governing authorities, as of more importance than the perfection of their treatment. It behoves the responsible medical officers to resist this tendency; and, whatever objection may be urged to Mr. Hardy's course, we feel that, broadly viewed, it deserves approval as a courageous and straightforward statement made, in such detail, and with such openness, without shrinking from mentioning names, as will compel the attention which is often denied to statements less directly pointed and less boldly authenticated. It is to be desired that all general practitioners in the neighbourhood of hospitals would be equally plain in stating the facts which come under their notice; nor could there be any better time than the present for discussing the matter.

NURSING FOR THE SICK POOR.

AMONG the numerous efforts made periodically to originate a system by which trained nurses may be employed to attend the sick poor, and to provide them with those benefits which are now for the most part limited to such of the class as are patients in hospitals or union infirmaries, a movement set on foot by a Committee of the Order of St. John of Jerusalem in England deserves more than a passing notice. At the annual general assembly of this body, which was held in London last year, a Committee consisting of the Council of the Order was appointed to consider the matter; and from the report of their proceedings, now before us, we gather that the Committee has been at considerable pains to gain information respecting the progress and organisation of the numerous nurse-training establishments in London and the provinces. The results of these inquiries are embodied in the report, and comprise a *précis* of replies to questions addressed to twenty-three societies, with conclusions deduced from the replies; together with a concluding summary of the main features of the scheme for nursing the sick poor which the Committee desires to submit for the approval and support of the general public.

The summary consists of four propositions, to which no exception can be taken, as they are virtually the same as those which distinguish all similar organisations of established merit. Omitting the first proposition, which simply alludes to the desirability of forming an association, the others specially refer to its organisation, and recommend that a central home should be established, together with a system of registration for such nurses as wish to associate themselves with the work in question; that a scale of remuneration should be determined upon, according to their respective merits and periods of service; and that pensions should be allowed to meritorious nurses who have grown old or become invalided in the service. To these proposals a series of suggestions have been contributed by Sir E. Lechmere and Dr. Rumsey, bearing more in detail on the special functions of the proposed association; but, we apprehend, these are intended rather for the purpose of evoking discussion and deliberation, than with the object of defining the principles of administration likely to be adopted. Funds are asked to defray the expenses necessary for the establishment of the central home, and for the system of pensioning the nurses; but it is not quite clear from the report how the nurses are to be maintained in the home, or how they are to be paid for their services; and this, we believe, forms the vital part of the whole question. Like every industrial occupation, the art of nursing has of late years commanded a higher value in the market; and the importance attached to it as an auxiliary to the successful treatment of the sick is now so generally admitted, that great efforts are being made, by systems of probation and educational training, to render it one of the most skilled employments that women can engage in. Unless, therefore, the society be prepared to meet a very large demand on its resources in the shape of adequate remuneration to its *employées*, it is not likely that it will be able to carry out its laudable design of furnishing nurses to "the sick poor of the United Kingdom", or of maintaining that high degree of proficiency which it is its object to accomplish. We have known of institutions for nursing, established with similar aims, which have been forced to adapt themselves to the requirements of private nursing in order to preserve their existence; and, in so doing, they have been productive of the greatest boon to the public. The demand for good nurses for hospitals, workhouse infirmaries, and for private individuals, increases with the growth and wealth of the population; and homes have been established in London and other large towns, as mercantile speculations, to meet the want which is often felt when sickness enters a family. It is of no use to disguise the fact that these establishments have a tendency to absorb the better class of nurses, on account of the more lucrative attractions held out to nurses so employed, and possibly also from the independent position which the nurses not unreasonably acquire when engaged in private families. To cope with this difficulty, the large hospitals have been endeavouring for years past to improve the position of their several nursing staffs, by increasing their relative pay, and by relieving them of the so-called menial duties allied to household work, which it was formerly the practice to incorporate with sick-nursing. Nursing the poor in their own homes must, however, involve a large share of this menial work, independently of the special duties required of a nurse; and we are glad to see that, in the recommendations offered by the Committee of the Order referred to, considerable stress is laid on the necessity of preliminary education of an industrial character as a test-qualification for the office. The period of probation, extending over several years, during which the nurse is expected to be gaining a knowledge of her art, though plausible and laudable in theory, is deterrent in practice, and must exclude a large number of eligible candidates from engaging in the mission; but we presume the Committee have fully considered both aspects of the question. The raw material from which to make good nurses is somewhat difficult to find; and the respectable class of domestic servants, who are most sought after for the purpose, are in such demand in their own special domestic spheres, that we fear it will be a difficult matter to attract suitable persons to the work contemplated, unless substantial inducements be held out to them as an equivalent for their services. We shall watch with interest the progress of this movement, and will hail with pleasure its success, as it cannot fail to confer inestimable benefits on the sick poor.

Dr. Rumsey, Mr. Prescott Hewett, and Dr. Lauder Brunton, have been elected Fellows of the Royal Society.

It is proposed to establish in Bristol a College of Science, which will be in some degree connected with the Medical School.

At a Meeting held lately at the house of the Society of Arts, it was resolved to organise a movement to prevent the pollution of rivers. Dr. Hood is acting as Honorary Secretary.

A Bill has been printed which bears the names of Sir Percy Burrell and Mr. Cunliffe Brooks, having for its object to give increased facilities for the erection of labourers' and artisans' dwellings.

In our report of the deputation to the First Lord of the Admiralty last week, it should have been mentioned that with the First Lord were Lord Gilford and Sir A. Armstrong.

Small-pox is prevalent amongst the inhabitants of some of the thickly populated portions of Gloucester, and several deaths have taken place within the last few weeks.

It has been proposed to establish a Medical College in Italy, to commemorate the centenary of the death of St. Thomas Aquinas (1274), and Rome has been fixed upon as the seat of the institution.

As one of the Governors of St. Thomas's Hospital, the Duke of Edinburgh, who was accompanied by the Duchess, distributed the prizes, on the 11th inst., to the successful students of last year. The Cheselden Medal was gained by Mr. H. P. Potter, and the Treasurer's Gold Medal by Mr. H. C. Sandford. In the absence of the President, Sir John Musgrave, Bart., the Treasurer, Sir Francis Hicks, acted as Chairman.

There is a story told of a young Irish curate who thought to distinguish himself when dining at the table of the Bishop of Lichfield after ordination. Addressing his host, from the further end of a long table, he called out, "Dr. Lonsdale, what do you think of the doctrine of predestination?" "Well, Mr. —", was the courteous answer, "I think it rather a difficult and long subject to discuss." "Ah, well, my Lord, then", said the aspiring young man, "you should read my pamphlet on the subject that I have just published, and you would see that I have settled it quite aisily." The *Lancet* very often takes its cue from the young curate; and never more amusingly than last week, in its comment upon the present position of the Naval Medical Service. It seems that it wrote something on the subject lately, and it is quite surprised to find that a great body of officers in the service have thought it necessary to take any further trouble in the matter, in availing themselves of the services of the Parliamentary Committee of the British Medical Association to bring the long and difficult subject involved under the notice of the Admiralty. Sir Alexander Armstrong, it is known, has for some time made proposals for reforms, the nature of which have transpired, and which are considered by the service insufficient. The Admiralty has the whole matter under consideration; and, during that consideration, it was thought, by members of all branches of the service, to bring a detailed and carefully digested statement of their grievances and claims before their Lordships. All this, however, our valuable contemporary thinks quite unnecessary, for it had said something on the subject a few weeks ago, and the service ought to be content. So true it is, that the fly which buzzes round the wheel, at last begins to think that it is really pulling the coach along.

HOSPITAL SUNDAY IN LONDON.

The amounts received from the Hospital Sunday collection this year in the metropolis are even smaller than those of last year, and do not at present amount to more than £15,000, although the total receipts are, no doubt, still likely to be considerably swelled. This is a relative failure, which causes some astonishment and regret. Considered in relation to the sums subscribed in the provincial towns, the disproportion is startling. But there are probably many hidden causes at work. There is no ground for complaining that medical charities are ill-supported in London; the actual cause of complaint is, on the contrary, that the support accorded to them is indiscriminate; and that institutions which have no serious *raison d'être*, and are rather enterprises ministering to the desire of individuals for professional notoriety, receive the munificent support which should be reserved for charities that are well conducted and really needed. When the Mansion House Committee, yielding to clamour, waived its right of selection, and abandoned all hope of combining benevolence with judgment, and of "organising" its principles of charity, it lost a large part of its hold on the thinking public, and the more reflecting donors resolved to reserve for themselves the right of selecting the objects of their benevolence. Nor is this altogether to be regretted, and certainly it accounts in some measure, possibly not altogether, for the falling off in the collection.

CANON THOROLD ON PROVIDENT HABITS.

THE Rev. Canon Thorold, Vicar of St. Pancras, in a recently published address to his parishioners for 1873, says:

> "Quite as much for the advantage of the poor as of any other class in the community, public opinion is now steadily and intelligently directed to the infinitely important problem of judicious almsgiving.... If I may confess here what I most wish to see, and what I almost totally fail to discover, it is a steady and solid progress among our working classes of habits of thrift and providence. It is neither wise nor just to rush into hasty generalisations from slender and imperfect data. The higher class of artisans, with that intelligible and even becoming reserve about their private affairs which other people share with them, use the Post Office and other savings banks to an extent we are hardly aware of, and invest what they save without thinking it necessary to inform the world of what they do. Of that portion of the working class, however, with which our parochial organisation brings us into contact, it is impossible for me to discover any real improvement in this direction....Were the Charity Organisation Society, which has already done so much useful work in London, in a position to concentrate some of its force on a resolute attempt to encourage provident habits among the working classes, it would do more to raise the entire level of our national life than almost any of its many valuable plans. Far too many Englishmen spend instead of saving, waste instead of husbanding; and then, being poor when they ought to be rich, expect other people to keep them out of the difficulties which, but for their own thoughtlessness and self-indulgence, would never have existed. To indicate but one direction in which the provident idea might be developed—to the speedy disentanglement, by the way, of public hospitals from one of the greatest difficulties embarrassing them at this moment—if provident dispensaries could be multiplied in London, the additional burden on the poor would be comparatively insignificant; the present burden on the benevolent middle class sensibly diminished. The key, however, to this question is plainly in the hands of the medical profession; and not only is it absolutely necessary to consult them on a subject which could not possibly be accomplished without their concurrence, but their admirable and well known sympathy with the sick poor makes it certain that they will be actuated by the highest of motives in whatever action they take."

SMALL-POX IN BIRMINGHAM.

THE long-continued prevalence of small-pox in Birmingham has been the subject of a lengthened interview between Dr. Buchanan, of the Local Government Board, and the Town Council. In a long and able address, Dr. Buchanan brought under the notice of the Corporation the extent to which they had already suffered from the disease, and the great probability that the epidemic would assume still larger proportions unless checked by means of hospital accommodation for the isolation of the sick, a point of the first importance, but one which has hitherto been all but ignored in Birmingham. Tracing the great outbreak of small-pox which spread over England from the importation of the disease during the Franco-Prussian war, Dr. Buchanan showed how, after it had prevailed in London during seven quarters, it then declined until it, about a year ago, entirely ceased to have an epidemic character. In Coventry, a neighbouring town to Birmingham, it also became seriously epidemic during the first quarter of 1871, from which date it increased until it assumed considerable proportions, but it subsided after the first quarter of 1872. During the years referred to, with equal numbers of inhabitants, London had a small-pox death-rate of 33, and Coventry one of 55. With Birmingham, however, the facts are different, and, although the death-rate has as yet only reached a rate of 17 to 18, yet the long continuance of the epidemic brings it out in striking contrast to the two other towns referred to. The epidemic commenced in the third quarter of 1871, and during a period of eight quarters it was never absent. In the first quarter of this year, the epidemic has increased fourfold—that is, the same number of persons died from it in the first quarter of this year as during the whole four quarters of 1873; and it is important to note how these very different phenomena in these three towns are to be accounted for. That there may be different degrees of susceptibility, according as vaccination and revaccination have in previous years been well or ill performed, Dr. Buchanan freely admits, but, from the amount of isolation provided in each town, the most instructive and interesting facts can be gathered. When the outbreak attacked London, that town had already a considerable amount of hospital accommodation ready, and it was multiplied on the spur of the epidemic until about 2,680 beds were at the disposal of the sick, who flocked to the hospitals, whether they were paupers or not. In the quarter following that in which this provision was made, the small-pox mortality fell from 10 to under 4 in the 10,000, and henceforth it steadily declined until it ceased in a few months. In Coventry, again, the people were alarmed at the magnitude of the outbreak, which in one quarter caused a death-rate of over 20 per 10,000, and the sanitary authorities set up 30 beds for the reception of small-pox cases, and this not for paupers only, but for all persons who required provision to prevent infection. Within less than three months, the hospital closed its doors, for there was an end of small-pox in the town. London had provided beds for small-pox cases at the rate of 8 per 10,000 persons; Coventry at the rate of 7½ per 10,000; whereas all that Birmingham has done in this direction amounts but to 2 per 10,000. Facts such as these could not but influence the Corporation of Birmingham, but the fear arose that a small-pox hospital might become a centre of infection to the surrounding population, and we regret to find that this fear was, to a great extent, due to a memorial which had emanated from members of the medical profession. This matter was, however, effectually dealt with by Dr. Buchanan, who, after having placed himself in communication with the various officers of health in London, was able to show that there was no distinct evidence of mischief having been caused in neighbourhoods where small-pox hospitals had been placed.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

AT the annual meeting of the Council of the Royal Infirmary School of Medicine held recently, the newly appointed Registrar, Mr. Mitchell Banks, read a report of the proceedings for the past year, from which it appeared that the new buildings had been completed at an expenditure of about £6000, and were now fully occupied. The newly erected and spacious museum was rapidly approaching completion as regards the rearrangement of its contents and fittings. The School library had received a valuable addition by the transference to its shelves of the extensive library of the Royal Infirmary, through the liberality of the trustees of the institution. The increased accommodation and appliances for teaching afforded by the new buildings had attracted a large increase of students. In October 1873, the entries were 103; in May of the present year, 82; larger numbers than had ever been enrolled in the history of the School. The additions to the dissecting-room, the development of the anatomical department, and the appointment of a demonstrator whose time is devoted solely to the duties, have materially contributed to the success of the School work, evinced, amongst other results, in the satisfactory manner in which the men from this School have acquitted themselves at the primary examinations at the College of Surgeons. The increased severity of these examinations, and the larger demands for theoretical knowledge, have required from students a more extended and continuous course of anatomical and physiological study than heretofore. The two winter courses of anatomy, broken in upon by the intervening summer session, were found an inadequate preparation for the increased demands of the examiners of the College. To meet this difficulty, anatomical demonstrations and dissections are now carried on through the summer session, and at the present time there is a class of upwards of forty students engaged in dissection and attendance on a course of demonstrations. The advantages of this arrangement, to meet the difficulty of the higher standard adopted by the College, the curriculum of study remaining the same as to duration, are not limited to the anatomical department; but, by keeping a larger body of students together through the summer session, has greatly increased the attendance in all the other classes, and thus imparted an improved tone and an elevated standard to the general work of the School. The President of the Council, Dr. Gee, before resigning the chair to his successor, Dr. Whittle, President for the ensuing year, presented, with a few appropriate words, a chaste and elegant silver inkstand to Mr. Reginald Harrison, as a mark of appreciation on the part of his colleagues of his valuable services as Registrar during a period of seven years. It is understood that the trustees of the Royal Infirmary have it in contemplation to erect a spacious operating-theatre to replace the existing building, which, as we have already pointed out, is by no means adequate for the convenience and accommodation of the large number of students now attending the practice of the Infirmary. They are also, we hear, about to extend and improve the present accommodation for *post mortem* examinations and practical morbid anatomy, and thus to afford increased facilities and wider scope for the development of this important branch of study, under the zealous and able direction of Mr. Rushton Parker, the Demonstrator of Histology and Practical Physiology. Further improvements are spoken of; such as the establishment of special clinical departments for systematic instruction in gynæcology, and other departments, with a view to render the Infirmary as complete a theatre of clinical instruction as its extensive resources can afford.

ANALYSIS OF AIR AND WATER.

A MEMORIAL from the Council of the Social Science Association has been presented to the President of the Local Government Board, urging the adoption of a periodical analysis of the air and water of large towns having a high density of population, with a view of detecting disease, and thereby suggesting what may be needful for the protection of public health, and for the prevention of the spread of contagious disease.

LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.

WE have received the following communication from the secretary of the medical board of this institution, respecting an article which appeared in the JOURNAL of June 6th.

The honorary secretary of the medical board of the Liverpool Ladies' Charity and Lying-in Hospital presents his compliments to the editor of the BRITISH MEDICAL JOURNAL, and sends, by order of his board, the accompanying table, showing the incorrectness of the statements in last week's JOURNAL, and which were evidently copied from an anonymous and entirely unauthorised article in one of the Liverpool daily papers.

Number of Patients during Five Years before the Amalgamation.

Years.	Labours.	Special.	Ladies' Charity.	Dispensary.
1864	160	32	1,197	2,043
1865	187	25	1,123	1,965
1866	199	21	1,084	2,355
1867	265	20	1,408	2,983
1868	220	35	1,518	3,222
Totals	1,031	133	6,330	12,568

Number of Patients during Five Years since the Amalgamation.

Year.	Labours.	Special.	Out-Patients.	Dispensary Patients.
1869	199	29	1,594	5,903
1870	235	85	1,841	7,426
1871	155	113	1,777	7,496
1872	189	141	1,758	8,014
1873	150	99	1,584	8,190
Totals	928	467	8,554	37,029

On comparing these tables, it will be perceived that there is a decrease of 103 labour cases in-doors, being an average annual decrease of 20; an increase of 334 special cases, being an annual average of 66; an increase of 2,224 Ladies' Charity cases, being at the rate of 445 *per annum*; and an increase of 24,461 dispensary cases, being an annual increase of 4,892 cases. Selecting the lowest number in the out-door department since the amalgamation—namely, that for last year, 1,584—it appears, on searching the records of the Ladies' Charity, that it is higher than any year for nineteen years prior to the amalgamation.

SALISBURY MEDICAL SOCIETY.

THE annual meeting of this Society was held on Wednesday, June 3rd, at the White Hart Hotel, Salisbury. After the usual business had been transacted, the members sat down to luncheon, and had a very pleasant gathering. The following officers were elected for the ensuing year. *President:* Mr. Davis, Heytesbury. *President-elect:* Mr. H. J. Manning, Launceston. *Vice-President:* Dr. Pike, Weyhill. *Treasurer:* Dr. Good, Wilton. *Secretary:* Mr. Biggs, Salisbury. *Committee:* Messrs. Bennett, Darke, and Straton.

THE ADULTERATION OF TEA.

AN appeal case of Roberts *v.* Egerton, which lately came before the Court of Queen's Bench, raised an important question on the Adulteration Act—whether the sale of an article, as tea, which is adulterated, can be excused on the ground that it is known to be so in "the trade". On behalf of the appellant, who had been convicted of selling green tea faced with gypsum and Prussian blue, it was contended that he had sold, just as he bought it, what was known as green tea in the trade; but the Lord Chief Justice, Mr. Justice Blackburn, and Mr. Justice Archibald concurred in thinking that the article was adulterated, although Mr. Justice Quain dissented. The conviction was accordingly affirmed.

UNIVERSITY HONOURS.

THE authorities at Cambridge signalised the opening of the Cavendish laboratory by conferring honorary degrees upon several distinguished persons. Amongst them were Sir James Paget and Dr. Stokes of Dublin who were admitted to the degree of LL.D. *honoris causâ*. In the course of his remarks upon the occasion, the public orator enlarged upon Sir James Paget's services as a contributor to surgical pathology, and as an eminent practitioner of the art of surgery. In presenting Dr. Stokes, the orator referred to his services to public health and to his eminence as a physician.

A NEW MORTUARY PROCESS.

DR. VON STEINBEIS, a German *savant*, proposes to revive an old method of disposing of the bodies of the dead. The plan is to cover the body with Roman or Portland cement, which hardens into a solid mass and renders the escape of noxious gases impossible. According to this plan, the corpse would be placed in a sarcophagus of already hardened cement, the cavity in which it reposed would be filled up with the same material, and both would harden together into a thick slab of a substance resembling stone. Thus the deceased buried in this manner would rest within instead of under his tombstone, and grave and monument would be comprised in the same block of imitation granite.

MEDICAL SCIENCE AT OXFORD.

DURING the course of last year, the Vice-Chancellor of Oxford sent a circular letter of inquiry to the several boards of studies and professors of that University, bearing reference to various points of educational detail. Amongst these questions was one on the creation of additional professorships; and in the replies to the queries, now published in a collected form, we find that Dr. Acland expresses his opinion, that for the "scientific side of medicine alone it is desirable to appoint four additional professors". Professor Rolleston also proposes that there should be three new professors—one for comparative anatomy, zoology, and histology; a second for human anatomy, physiology, and ethnology; and a third for physiology, as opposed to anatomy and morphology.

ST. JOHN'S HOSPITAL.

At a dinner to be held on behalf of St. John's Hospital for Skin-Diseases, Leicester Square, Mr. Albert Grant, M.P., in the chair, a new and ingenious procedure appears to have been adopted. In the first instance, cards of invitation have been widely circulated requesting the attendance of —— and lady; and subsequently a second circular has been issued, intimating that the invitation card already sent will not admit to the rooms, but that tickets, one guinea each, will be required. The idea is novel, but we should imagine that the result would be disappointing; and, looking to the facts of the case, it would not be regrettable if it were so, for the institution is one to which much objection has been, and we think may fairly be, taken.

SANITARY AND EDUCATIONAL EXHIBITION.

An exhibition of sanitary and educational appliances, similar to that at Leeds in 1871 and at Norwich last year, will be held at Glasgow from September 30th to October 10th, in connection with the Social Science Congress to be held there at that time. The exhibition is specially designed to bring under the notice of the public generally, and particularly those who are interested in social, sanitary, and educational questions, in a collective form, the latest scientific appliances for improving the public health and promoting education. The articles will be divided into the following classes:—1. Warming, ventilation, and lighting; 2. Domestic appliances and economic apparatus; 3. Sanitary architecture and appliances; 4. Sanitary engineering and disinfectants; 5. School furniture and educational apparatus.

SAMARITAN FREE HOSPITAL.

On Saturday last, a house in Dorset Street, Manchester Square, formerly occupied by the late Mr. Babbage, the celebrated mathematician, was opened as a branch establishment of the Samaritan Free Hospital. The applications for admission, especially of women suffering from ovarian disease, have lately been so numerous, that it has been found absolutely necessary to augment the accommodation. Earl Ducie presided over a full gathering of the friends of the institution, and urged its claim upon public support. Lord Selborne, in moving the first resolution, to the effect that the meeting approved the step taken by the committee, said that no one could doubt the necessity for the increased accommodation for the cases of ovarian disease which sought admission to the Samaritan Free Hospital; for, whilst 76 per cent. of such cases operated upon in general hospitals died, the mortality was only 21 per cent. in the Samaritan Free Hospital; he regarded the work done at the establishment with admiration, representing, as it did, one of the most splendid triumphs of modern surgical art. Ovarian disease was formerly regarded as reducing the reasonable possibility of life in the woman afflicted by it to less than four years of declining health and hopeless misery. He highly eulogised Mr. Spencer Wells, who had been the means of adding twenty-five years of restored health and happiness to the probability of life of each of the three hundred and seventy-three women on whom he had successfully operated. Mr. Wells was a public benefactor, and deserved the highest reward and praise. Dr. Savage, Sir T. Chambers, M.P., Mr. Forsyth, M.P., and other gentlemen addressed the meeting. The subscriptions announced in the course of the afternoon exceeded £500.

ANNUITY FUND FOR TRAINED NURSES.

A Society has been formed for the purpose of granting annuities to worn-out trained nurses. Candidates, says the prospectus sent us, must have been actively engaged in medical or surgical nursing for a period of at least fifteen years. They must have attained the age of fifty years. They must produce evidence, satisfactory to the Committee, of having nursed for three years in one or more of the public hospitals or acknowledged nursing institutions; and, should they have commenced to nurse subsequently to the year 1865, they must also be able to show that they have been properly trained to their vocation in some public hospital or recognised establishment for the training of nurses. They must produce testimonials of character. Candidates will be elected by the Committee after due inquiries have been made, with the assistance of the Charity Organisation Society. Candidates of all creeds and denominations shall share alike in the benefits of the Society. On election, each annuitant shall pay the sum of £15 towards the General Fund. It being considered desirable that provident habits be fostered, candidates who can show that they have saved the required sum of £15 by subscription to a savings' bank or provident society will have a preference over other candidates, and it is considered that they should be able to save this amount, it being only about 4d. per week during their term of service. A meeting is to be held at Grosvenor House, on Thursday, June 25th, at 4 P.M., at which the objects and working of the Society will be explained. Tickets can be obtained from Lady Bloomfield, 16, Holland Park, W.; and from the Hon. Secretary, J. C. Stirling, Esq., 9, South Eaton Place, S.W.

NURSES FOR THE SICK POOR.

A meeting will be held, on Thursday, June 25th, at 4 P.M., at Willis's Rooms, under the auspices of the Order of St. John of Jerusalem, to consider the expediency of forming a National Association for Providing and Training a Body of Nurses for the Sick Poor in London and in the Provinces. In order to encourage women to make nursing, especially that of the sick poor, a profession, and with the view to provide for deserving nurses in their old age, it is proposed, as a part of the scheme, should the means supplied by the public permit, to establish a Pension or Annuity Fund, to which the nurses would be required to contribute, on the principle of the superannuation fund of the police.

IRELAND.

THE IRISH POOR-LAW SERVICE.

A deputation on behalf of Irish dispensary medical officers had an interview with the Chief Secretary for Ireland on June 12th, in connection with the Public Health Bill and the Coroners' Bill. The object of the deputation was to obtain privileges and remuneration for Irish medical officers similar to those enjoyed by medical officers in England and Scotland. It was suggested that the dispensary doctors should become medical officers of health, and that provision should be made for the payment of medical men for giving evidence at coroners' inquests and for examining lunatics. Sir M. H. Beach promised that the points laid before him should have his attentive consideration.

HEALTH OF IRELAND: QUARTERLY REPORT.

From the Registrar-General's return, for the quarter ending March, we learn that the births registered during that period amounted to 36,634, being equal to 27.6 in every 1,000 of the population; and the deaths to 25,883, representing an annual mortality of 19.5 per 1000, which latter is considerably under the average of previous years, but the deaths from zymotic diseases show an increase of 251 as compared with the last quarter of 1873; the registrars who refer to the subject reporting most unfavourably as regards the sanitary condition of their various districts. Small-pox caused 141 deaths, being an increase of 69 in the number registered during the preceding quarter, the source of infection in nearly every instance being traceable to Scotland. In Mountcharles district, Donegal Union, inoculation, according to the local registrar, is still carried on, and has produced a large number of cases of the disease, almost all being of the confluent character. To measles, 199 deaths were attributed, whilst 76 resulted from scarlatina, and diphtheria was unusually fatal, no less than 151 deaths having occurred from this disease. Hooping-cough caused a mortality of 581, and was epidemic in Waterford, being so fatal in that county that no child under twelve months old, attacked by it, recovered. The deaths from fever amounted to 787; diarrhœa, 469, and simple cholera, 14. The mean temperature at Dublin, for the quarter, was 42.3 degs., and the rainfall measured 5.264 inches.

ABSTRACT OF LECTURES ON THE SURGICAL TREATMENT OF ANEURISM.

Delivered at the Royal College of Surgeons of England.

By T. HOLMES, F.R.C.S., Professor of Pathology and Surgery.

LECTURE I.

THE first lecture dealt chiefly with gluteal aneurism. In some prefatory observations, the lecturer stated what the general object of the present course would be, viz., to exhibit the results of surgical treatment, as far as they are known hitherto, in aneurisms of the lower limb. He remarked, that a certain antagonism has sprung up between the patrons of cutting operations on the arteries, and those of the bloodless method of treatment, as if one plan were opposed to the other ; and that, from the successes of compression and flexion, an idea had been engendered that the Hunterian operation had proved a failure, and should be nearly banished from practice. This, however, is fallacious. It can be shown, by the evidence of facts, that the Hunterian operation has been extremely successful, more so than published statistics have led surgeons to believe, and especially in popliteal aneurism, while there is no evidence to show that the general result of compression, and the other bloodless methods, has hitherto been at all better than the general result of surgical operations, although the bloodless methods have, as a general rule, been applied in a milder class of cases. Yet it cannot be denied that there are cases (and those are not a few) in which the bloodless methods are successful, and their success is so immediate, so painless, and so free from danger, that no judicious surgeon would think of preferring the Hunterian method in such instances. The inference would be, that the two methods of treatment ought to be regarded as complementary to each other, that the surgeon's object should be to discover what cases are best adapted for the bloodless methods, satisfied that, if in any case, *à priori* consideration, or the result of a careful trial, have shown him that more harm than good would result from such treatment, he has in the Hunterian operation a most trustworthy and successful resource. And it would further be shown that the general results of treatment of aneurism in the lower extremities are exceedingly satisfactory in our British hospitals.

With regard to gluteal aneurism, the following were the main topics of the lecture. The disease is a rare one, and no example of it was known to the lecturer as having been in the London hospitals of late years. He referred to the sources from which the literature of the subject is derived, and which give more or less full histories of thirty-five cases, divided into the following classes:

1. Open wounds of one of the arteries of the buttock, of which no more was said, the subject not being part of this course of lectures;
2. Traumatic aneurism of the gluteal or sciatic arteries, or of some of their branches ;
3. Spontaneous aneurism, in which, besides those vessels, the pudic artery may be affected, as shown by a preparation of Hunter's in the College Museum, or an abnormal "ischiatico-popliteal" artery, as shown by a preparation in the Museum of Guy's Hospital. An interesting preparation of gluteal aneurism is Stevens's well-known case, dissected by Owen, which is in the museum of the College, in which the aneurism was seated on the sciatic artery ;
4. Finally, two cases of arterio-venous aneurism are on record.

The difficulties in diagnosis in each form of aneurism were dwelt upon, depending, in the traumatic form, frequently on the absence of pulsation, the case not being so much aneurism strictly, as subcutaneous wound or rupture, so that the case is mistaken for abscess ; and, in the spontaneous form, a pulsating tumour with *bruit* has often turned out to be a cancer connected with the pelvic bones, of which examples were furnished by a preparation placed by Mr. Guthrie in the Hunterian Museum, and by a case lately operated on by Professor Porta of Pavia. These difficulties may best be met by great care in auscultation, for, in many cases of supposed abscess, an arterial *bruit* has been heard on careful examination ; and by great attention to the condition of the pelvis. In any case which is not perfectly clear, the condition of the pelvic bones should be minutely examined, both from the back and front of the body, and also from the rectum, by introduction of the whole hand if need be. Whenever the bones are found to be affected, the diagnosis of cancer becomes the most probable. But it must be allowed that some cases can hardly be diagnosed with perfect certainty.

The following have been the results of treatment in traumatic and spontaneous aneurisms.

a. In traumatic aneurism, the Hunterian operation has been performed twice, and in both cases with a fatal result. The gluteal artery has been tied once on the method of Anel—*i. e.*, without opening the sac—by Campbell of Montreal, and with success. The old operation has been performed thrice with success by Schuh, Syme, and Carmichael, and once by Toracchi with a fatal result, the mouth of the sac being found to be within the pelvis. Galvano-puncture and the injection of perchloride of iron have each been tried on one occasion, but not completely, so that the experiment was inconclusive.

b. In spontaneous aneurism, the Hunterian operation has been the method usually followed. The total number of cases in which the internal iliac artery has been tied is about thirteen, and in almost all the cases it was tied for spontaneous aneurism in the buttock. The deaths and recoveries are as nearly equal as possible. On two occasions, the common iliac was tied ; in one instance, for secondary hæmorrhage occurring after the operation of Anel on the sciatic artery; in the other (Uhde's case), on account of the laceration of the internal iliac artery by the aneurism-needle when passed around it. Death followed in both. The latter case was commented on at length, since it shows one of the dangers of the Hunterian operation when performed for spontaneous gluteal aneurism—viz., that the artery may be found diseased, and be unfit to bear the ligature.

Coagulating injections have been employed in about five cases, and cure is claimed in two ; but the evidence in both cases is unsatisfactory, especially the one under Baum's care, which was almost certainly a case of spontaneous recovery. The occasional occurrence of spontaneous cure was mentioned and illustrated by a case recorded by Bouisson ; and the comparative frequency with which the symptoms remain for some time in abeyance was proved by reference to several cases.

From all this, it was concluded that the Hunterian operation ought, if possible, to be avoided, since (1) the diagnosis is liable to be erroneous, (2) the artery may be found unfit to bear the ligature, (3) the operation is in itself very fatal, and (4) the symptoms are often not sufficiently dangerous to justify the risk.

The methodical compression of the aorta or common iliac with or without chloroform has not, as yet, been tried (except imperfectly in a single case); but it holds out the best prospect of curing the disease, combined, if necessary, with coagulating injection or galvano-puncture. It is only on the failure of such measures that an operation should be practised ; and in those cases the choice will lie between the Hunterian and the old operation.

In arterio-venous aneurism, the use of coagulating injection has been successful. The only operative measure indicated is the old operation, but the symptoms are not usually severe enough to justify it.

A CASE OF FATAL SYNCOPE DURING THE ADMINISTRATION OF CHLOROFORM.

MR. J. T. CLOVER sends us the following note.

In the following notes, two modes of giving chloroform are alluded to. The first is what is known as "Clover's chloroform apparatus," consisting of a bag (in this instance charged with a mixture of thirty-two minims of chloroform, four of ether, and one thousand cubic inches of air) from which bag the patient inhales by means of a tube and valved face-piece. The second is called "the blowing apparatus," and consists of a bellows moved by the foot, which drives air through a vessel containing chloroform, and forwards by means of a tube held in, or near, the patient's mouth or nose. A stop-cock regulates or stops the current. It is intended only for operations in which the first instrument cannot be applied.

On June 13th, 1874, Mr. John Marshall was about to remove some adenoid growths from the posterior nares of a gentleman. It was likely to be a tedious operation, and, for its effective performance, the patient must be kept quiet as well as insensible. The patient was seated on a chair, much reclining backward. A piece of vulcanite, with string attached to it, was put between his teeth, and he commenced inhaling from the bag apparatus. He inhaled well, but swallowed frequently. At the end of five minutes, he vomited three or four ounces of yellow matter. After the retching ceased, he began talking, but leaned back quietly, and took the anæsthetic for three or four minutes, when Mr. Marshall began to explore the nostril and fauces. This produced some retching, and he became unsteady, so that I found the blowing apparatus I had just applied inconvenient. I put it aside, and a third time used the bag apparatus, until the cornea was insensitive, and the pupils well contracted. His pulse was regular, but a little diminished in force at this time, about fifteen minutes from the commencement of inhaling. I now finally put down the bag inhaler, and, the prop having been adjusted, Mr. Marshall again made an examination of the growth, and was beginning to put a ligature through the nostril into the mouth. I was thus delayed using the blowing apparatus a minute or so, and the patient became half conscious, and leaned forward voluntarily; but he was not sick. On renewing the application of chloroformed air by the tube, he drew in so much fresh air along with it that, in order to make the instrument effective, I placed a cambric handkerchief lightly over the face, watching the pulse carefully at the same time. In less than half a minute after this, he seemed about to vomit, and his pulse became weak, but not weaker than is usual when vomiting takes place under chloroform. I removed the handkerchief and chloroform, and was about to hold a basin under his chin whilst his head was raised, but noticing that he was pale, and his pupils dilated, we placed him at once recumbent upon the floor. He breathed slowly, and with remarkable freedom; and as the respirations became less effective, we assisted them artificially by the Silvester and Baines's method. The prop remained in its place, and by keeping the mouth open assisted the access of fresh air. There was no difficulty about this getting through the larnyx. It passed without an audible noise, and without any check. He moaned three or four times, and once or twice I thought I could feel the pulse, but the pupils never regained their natural size. In about a quarter of an hour, there seemed to be a little mucus in the air-passages. Ammonia was held near the mouth, cold water dashed on the face, hot cloths applied over the chest, and artificial respiration was kept up for an hour, when it was evidently useless to continue it longer.

Remarks.—No opportunity of examining the heart after death was afforded us. There may have been something besides chloroform to cause death, but I cannot hold the chloroform blameless, and am induced to think that, when the handkerchief was applied like a veil over the face, the vapour became too strong for an enfeebled heart. Although I have used the blowing apparatus so many times with marked success, and might use it again a thousand times without meeting with the conditions to cause a like result, I shall not use it again until some plan can be devised for making it an impossibility to give a stronger percentage of vapour than experience with the bag inhaler makes me believe to be quite safe. Whether it caused the catastrophe or not, the exchange of the bag apparatus for the blowing instrument was so quickly followed by alarming symptoms, that I cannot help suspecting it yielded the chloroform too freely.

It will occur to many who have used ether as an anæsthetic, that this would have been a safer agent. But it should be remembered that there were special reasons here for avoiding irritating the throat, and I had noticed that the very small quantity put into the bag inhaled, caused frequent swallowing.

Ether can indeed be introduced so gradually as to produce very little irritation, by the aid of nitrous oxide. I have already so used it in more than four hundred cases, without any untoward result, and with immense comfort to the patient as compared with the ordinary way of giving ether, but I did not think this a fit case for using a combination which must, as yet, be considered as upon its trial. Perhaps it is fortunate that I did not, for it might have been supposed to have had more to do with causing death than the method adopted, whose use has been established for many years.

In the next case of this sort, I intend to give ether with gas, and then ether with a limited supply of air for at least ten minutes; and if I give any chloroform after this, it shall be still more diluted than it was in this unhappy case.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A meeting of the Committee of Council will be held at the Freemasons' Tavern, Great Queen Street, London, on Thursday, the 2nd day of July next, at 3 o'clock in the afternoon.

Francis Fowke, *General Secretary*.

37, Great Queen Street, London, June 11th, 1874.

SOUTH MIDLAND BRANCH.

The annual meeting of this Branch will be held at the Town Hall, Buckingham, on Thursday, the 25th June, at 2 P.M.—Dr. Bryan, President; Robert De'Ath, Esq., President-elect.

Refreshments kindly provided from 1 P.M. to 1.30 P.M. previously, by Robert De'Ath, Esq., at his residence.

Dinner, at the White Hart Hotel, at 5 P.M. Tickets, 6s. each, including waiters.

Gentlemen intending to furnish papers and cases, are requested to send the titles of same at once to Dr. Bryan, or to

W. Moxon, *Honorary Secretary*.

Northampton, May 27th, 1874.

BRITISH MEDICAL ASSOCIATION: FORTY-SECOND ANNUAL MEETING.

The Annual Meeting of the British Medical Association will be held at Norwich, on Tuesday, Wednesday, Thursday, and Friday, August 11th, 12th, 13th, and 14th, 1874.

President—Sir William Fergusson, Bart., F.R.S., Surgeon to King's College Hospital, London.

President-elect—Edward Copeman, M.D., Senior Physician to the Norfolk and Norwich Hospital.

The business of the Association will be transacted in four Sections, viz.:—

Section A. Medicine.—*President:* Dr. Eade, Norwich. *Vice-Presidents:* Dr. Sydney Ringer, London; Dr. Durrant, Ipswich. *Secretaries:* Dr. Bradbury, Cambridge; Dr. Lowe, Lynn.

Section B. Surgery.—*President:* Sir James Paget, Bart., F.R.S., London. *Vice-Presidents:* T. W. Crosse, Esq., Norwich; Dr. Macnamara, Dublin. *Secretaries:* F. Worthington, Esq., Lowestoft; Reginald Harrison, Esq., Liverpool.

Section C. Obstetric Medicine.—*President:* Dr. Churchill, Dublin. *Vice-Presidents:* Dr. W. S. Playfair, London; Dr. Steele, Liverpool. *Secretaries:* Dr. Edis, London; F. Image, Esq., Bury St. Edmunds.

Section D. Public Medicine.—*President:* W. H. Michael, Esq., London; *Vice-Presidents:* Dr. Bateman, Norwich; Dr. Ransome, Bowden. *Secretaries:* Dr. Bond, Gloucester; Dr. Leech, Manchester.

The Honorary Local Secretaries are:

Dr. J. B. Pitt, Norwich.
H. S. Robinson, Esq., Norwich.
Dr. Beverley, Norwich.

Tuesday, *August 11th.*

10.30 A.M.—Cathedral Service.
1 P.M.—Meeting of Committee of Council.
3 P.M.—Meeting of the Council, 1873-74.
8. P.M.—General Meeting—President's Address, Annual Report of Council, and other business.

Wednesday, *August 12th.*

9.30 A.M.—Meeting of Council, 1874-75.
11.30 A.M.—Second General Meeting.
11.30 A.M.—Address in Medicine, by Dr. Russell Reynolds, F.R.S.
2 to 5 P.M.—Sectional Meetings.
9 P.M.—Soirée at St. Andrew's Hall.

Thursday, *August 13th.*

9 A.M.—Meeting of the Committee of Council.
10 A.M.—Third General Meeting—Reports of Committees.
11 A.M.—Address in Surgery, by William Cadge, Esq.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

Friday, *August 14th.*

10 A.M.—Address in Obstetric Medicine, by Dr. Matthews Duncan.
11 A.M.—Sectional Meetings.
1.30 P.M.—Concluding General Meeting.

Excursions.—The Excursion Committee will make arrangements for the convenience of members and their friends wishing to visit the factories and places of interest in the city and neighbourhood during the meeting, and for parties of ladies and gentlemen to do so on Friday afternoon.

On Saturday, there will be excursions to geological and botanical stations and places of antiquarian and general interest in Norfolk and Suffolk.

The Honorary Secretary will endeavour to arrange for gentlemen well acquainted with the locality to accompany the parties on Friday and Saturday.

Any information will be given by Mr. H. B. Francis, St. Clement's, Norwich, Honorary Secretary to the Excursion Committee.

Members of the Association will receive cards for the above proceedings, evening meetings, etc., at the Reception Room, Assembly Rooms, Norwich.

ANNUAL MUSEUM.

The seventh annual Museum of the British Medical Association will be held at the Assembly Rooms, and will be open daily from 10 A.M. till 6 P.M., on August 11th, 12th, 13th, and 14th, for the exhibition of the following objects.

1. Latest inventions in medical and surgical instruments and appliances of all kinds.

2. New chemicals and apparatus; new drugs and their preparations; and new articles of diet for invalids.

3. General pathological specimens; with photographic models, drawings, etc., illustrating disease.

4. Urinary calculi; with drawings or diagrams of urinary disease, and of operations on the urinary organs. Also instruments with diagrams, etc., illustrating the history of the operation of lithotomy from the earliest periods up to the present day.

5. Drawings, diagrams, or models illustrating the ventilation of hospitals and private dwellings.

6. Microscopic pathological specimens.

The following is a list of the Museum Committee; to any member of which communications, etc., may be addressed—Mr. William Cadge, *Chairman*, 24, St. Giles' Street, Norwich; Mr. Francis Sutton, London Street, Norwich; Mr. Jonathan Hutchinson, 4, Finsbury Circus, London, E.C.; Mr. Joseph Allen, Tombland, Norwich; Mr. Francis Fowke, 37, Great Queen Street, London, W.C.; Mr. Chas. Williams, 9, Prince of Wales' Road, Norwich; Mr. J. R. Baumgartner, Norfolk and Norwich Hospital; Mr. Charles Firth, *Hon. Sec.*, 65, St. Giles' Street, Norwich.

NOTICE TO EXHIBITORS.—Application to be made as soon as possible, at the same time giving a list of objects, and mentioning the space required. Each object to be accompanied by a printed or written description, or reference, for insertion in the Catalogue; and it is important that these descriptions should be sent *as early as possible*—viz., not later than July 28th.

All parcels to be delivered on or before August 4th, and to be removed within three days after August 14th. They must be addressed "British Medical Association, care of C. Firth, Esq., Assembly Rooms, Norwich". All expenses of carriage and all risk to be borne by the exhibitors. A card bearing the name and address of the exhibitor to be enclosed in each package, ready to be fixed on the outside.

N.B.—Specimens of disease and calculi which have been exhibited at former meetings cannot be received on this occasion.

Communications to be addressed to CHARLES FIRTH, Esq., St. Giles' Street, Norwich, the Secretary for the Museum Department.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the Midland Hotel, New Street, Birmingham, on Tuesday, June 23rd, at 3 P.M.; when an address will be delivered by the President, W. C. GARMAN, Esq.

The annual dinner will also be held at the Midland Hotel, at 5 P.M. precisely. Dinner tickets (exclusive of wine), 7s. 6d.

T. H. BARTLEET.
BALTHAZAR W. FOSTER, M.D. } *Honorary Secretaries.*

Birmingham, May 26th, 1874.

SOUTH-WESTERN BRANCH.

THE annual meeting of this Branch will be held at the Museum, Torquay, on Tuesday, June 23rd, at 1.30 P.M.; J. KEMPTHORNE, F.R.C.S., President; SPENCER THOMSON, M.D., President-elect.

After the meeting, a visit will be paid to Kent's Cavern, under the guidance of E. Vivian and W. Pengelly, Esqs. (Superintendents of the Exploration), who have kindly offered to accompany the party.

The dinner will be at the Torbay Hotel, at 5.30 P.M. Tickets, 7s. 6d., exclusive of wine.

The South Devon and Cornwall Railway Companies will grant (on production of dinner-ticket) return tickets at single fares.

Gentlemen intending to read papers or exhibit cases are requested to communicate at once with JOHN WOODMAN, F.R.C.S.,

Exeter, June 6th, 1874. *Honorary Secretary.*

SOUTH-EASTERN BRANCH.

THE thirtieth annual meeting of the South-Eastern Branch will be held in the Royal Pavilion, Brighton, on Thursday, the 25th June, at two o'clock; G. F. HODGSON, Esq., President-elect.

Dinner punctually at half-past five. Tickets, 8s. each, not including wine.

Among local objects of interest may be enumerated the County Hospital; the new Workhouse Infirmary; the Aquarium; the new Free Library, Museum, and Picture Gallery.

Luncheon at the Pavilion, by invitation of the President-elect, from 12.30 to 2.

A collection of Surgical Instruments will be exhibited, especially electrical ones used in Medicine and Surgery.

Dover, June 1874. CHARLES PARSONS, M.D. *Hon. Sec.*

MIDLAND BRANCH.

THE annual meeting of the above Branch will be held at the Guildhall, in the city of Lincoln, on Thursday, June 25th, at 1.30 P.M.: President, H. LANKESTER, M.R.C.S., Leicester; President-elect, T. SYMPSON, F.R.C.S., Lincoln.

After the usual preliminary business, the President will deliver an address, and the following papers will be read and discussed.

1. On Transplantation of Skin *en masse* as distinguished from the *greffe dermique*. By C. Bell Taylor, M.D., F.R.C.S., Nottingham.

2. On the Use of Convalescent Rooms in Infirmaries. By A. H. Dolman, Esq., Derby.

3. A Discussion on the Use of Alcohol in Disease will be opened by John Broadbent, M.R.C.S., Cottingham.

4. Is not Deligation of the Umbilical Cord at Parturition a Physiological Error? By E. M. Thompson, M.R.C.S., Billinghay.

5. A Case of Uterine Fibroid. By the President.

6. A Case of Excision of the Knee-joint. By the President.

7. Some New Instruments will be exhibited and explained by D. Mackinder, M.D., Gainsborough.

A Code of Rules for the Regulation of the Branch will be brought before the Meeting by Edwin Morris, M.D., Spalding.

A series of Sections of Tumours will be exhibited under the Microscope.

Dinner at the Great Northern Hotel at 4 P.M. Tickets (dinner and dessert), 6s. each.

In order to facilitate the arrangements, members intending to be present at the dinner, are requested to inform the Secretary as soon as possible. C. HARRISON, M.D., *Honorary Local Secretary.*

Lincoln, June 8th, 1874.

METROPOLITAN COUNTIES BRANCH.

A SPECIAL general meeting of this Branch will be held at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Tuesday, June 30th, at 8 P.M. precisely, for the purpose of electing Representatives of the Branch in the General Council of the Association for the ensuing year.

At 8 P.M. on the same day, an ordinary meeting will be held at the same place, when a paper will be read by W. Eassie, Esq., C.E., on "Cremation in its Bearings on Public Health".

A. P. STEWART, M.D.,
ALEXANDER HENRY, M.D., } *Hon. Secs.*

London, June 15th, 1874.

NORTHERN BRANCH.

THE annual meeting of this Branch will be held in the Town Hall, South Shields, on Tuesday, June 30th, at 1.30 P.M.: President, 1873-74, G. Y. HEATH, M.D.; President-elect, 1874-75, A. LEGAT, M.D.

The following resolution will be proposed by Dr. Eastwood:—That the title of the Branch be "The North of England Branch", in place of "The Northern Branch".

The annual dinner will take place at the Winterbottom Marine School, South Shields, at 4 P.M. precisely.

G. H. PHILIPSON, M.D., *Honorary Secretary.*

Newcastle-upon-Tyne, June 17th, 1874.

NORTH WALES BRANCH.

THE annual meeting of this Branch will be held at the Royal Oak Hotel, Bettws-y-coed, on Tuesday, July 7th, at 1 P.M.; T. EVANS JONES, Esq., President.

Luncheon will be kindly provided by the President at the Hotel, from 12 to 1 P.M.

The dinner will be ready at 4 P.M. precisely. Tickets, 10s. 6d. each, including a pint of wine.

Gentlemen who may wish to communicate papers or cases, and who intend dining, will please to give early intimation to the Secretary.

D. KENT JONES, *Honorary Secretary.*

Beaumaris, June 3rd, 1874.

SOUTHERN BRANCH: HAMPSHIRE, DORSET, SOUTH WILTSHIRE, AND THE ISLE OF WIGHT.

THE first annual meeting of the above Branch will be held on Thursday, July 9th, 1874, at the Pier Hotel, Southsea, at 3.30 P.M., when the President, Inspector-General SMART, M.D., C.B., will deliver an address.

The business of the meeting will be to receive the report of the Provisional Council, to elect the officers of the Branch, and the representatives to the General Council for the ensuing year.

The dinner will take place punctually at a quarter past six. Tickets, 10s. each. (Wines at moderate charges.)

The Dinner Committee particularly request that those members who intend to be present at the dinner will send in their names before Saturday, July 4th, in order that the necessary arrangements may be completed.

J. WARD COUSINS, *Hon. Sec.*

Southsea, June 11th, 1874.

BATH AND BRISTOL BRANCH.

THE annual meeting of the above Branch will be held at the Mineral Water Hospital, Bath, on Thursday, July 9th, at 4.20 P.M.; when Dr. FOX will resign the Chair to F. MASON, Esq.

The members will afterwards dine together at the York House. Dinner tickets, 7s. 6d., exclusive of wine.

R. S. FOWLER, Bath. } *Honorary Secretaries.*
E. C. BOARD, Clifton. }

Bath, June 17th, 1874.

SOUTHERN BRANCH: SOUTH HANTS DISTRICT.

THE following resolutions have been passed at a meeting of the Council of this District.

Proposed by Dr. AXFORD, seconded by Dr. KEALY, and resolved—

"That Dr. Smart, as President of the Southern Branch, and Dr. Ward Cousins (*ex officio*), be the representatives of the said Branch in the Council of the Association for the year 1874-75."

Proposed by Dr. SMART, seconded by Dr. ELLIOTT, and resolved—

"That the Honorary Secretary be requested to make the matter known to the District Secretaries, together with the explanation that the date fixed for the annual meeting will unfortunately prevent the regular election of representatives for the current year, as it cannot take place within the time required by the laws of the British Medical Association."

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE Stockton Board of Guardians have increased the salary of Mr. Hedley, Medical Officer for the Middlesborough South District, from £80 to £100 *per annum*.

THE appointments of the seven District Medical Officers of the Aylsham Union, as Medical Officers of Health for the Aylsham Rural Sanitary District, have expired; and the Authority will not, unless compelled, renew them.

THE LATE DR. SAMUEL D. DOWNING.—At the last meeting of the Birkenhead Board of Guardians, it was resolved unanimously:—"That the Chairman of the Board be requested to convey to the family of the late Dr. Downing their sincere sympathy with them on the irreparable loss they have sustained in his death; and they also bear testimony to the satisfactory manner in which, for a period of fourteen years, the deceased discharged his duties as Medical Officer of the Workhouse, and of No. 2 District."

INFECTED HOUSES.

THE Government Bill for amending the Sanitary Laws has a clause providing that if any owner, or occupier, or person letting for hire, or showing for the purpose of letting for hire, any house or part of a house, when questioned by any person negotiating for the same as to the fact of there being in it, or having within three months been, any person suffering from an infectious, contagious, or epidemic disease, knowingly makes a false answer, such person shall be punishable on summary conviction with imprisonment not exceeding one month, with or without hard labour, at the discretion of the justices, or to pay a penalty not exceeding £20. The phraseology of the clause might be improved so as to include the case of an applicant for a house or for lodgings who puts his question generally, or without limiting it to the three months specified in the Bill.

WATER-ANALYSIS.

MR. METCALFE (Beccles).—We are really hopeless of reconciling the discrepancies of statement. If Dr. Frankland has, indeed, ever attempted any refutation of Mr. Wanklyn's criticism of his process, or given, as he says, any answer to those criticisms, we should much like that gentleman to favour us with references to any periodical, scientific or otherwise, in which that refutation was published. We should also be glad to know from Dr. Frankland whether any chemist of repute at present employs his process of water-analysis.

MILITARY AND NAVAL MEDICAL SERVICES.

ARMY MEDICAL DEPARTMENT.

SIR,—In a recent number of your JOURNAL, you invite communications on the army medical department and its affairs.

It seems to me that, among many others, two points have hardly been sufficiently pointed out: one a professional, the other a social one. By the new system, the medical officer attached to a regiment will no longer see his own sick men, but pass them on to a general hospital, there to be treated by others. Thus he will, probably for some years, lose all practice, except among a few officers, women, and children; and, although he should know the men best, he will not see them while ill. Secondly, by recent arrangements, medical officers have lost their regimental appointments. The juniors have been turned out; the seniors allowed to hold on, "attached to" their former regiments for the present. Thus, all have ceased to belong to regiments to which they were commissioned. They have lost their rights and social advantages of regimental position, although they must still pay regimental joining subscriptions, etc., and subscribe to what is no longer theirs. The unfortunate medical officer is a stranger, attached *pro tem.*, possibly for five years; but not in any respect like the regimental field officers. The interests and prospects of the regiment are no longer his; the regimental mess and band, the entertainments, the invitations are no longer his in common with other officers of the regiment; in fact, he has all the expenses, but none of the advantages, of a regiment.

It has been said, however, that medical officers will be more available for general duties, on service during a campaign, etc. The answer to this is, that all medical officers, regimental and staff, have always been available for any duty, by order of the military and medical authorities on the spot.

There are at this moment many juniors in rank (many of them seniors in service, as far as long service goes) who, in spite of their regimental commissions, have lost everything that made the service agreeable or comfortable—I mean their regimental appointments—notwithstanding all the expenses of joining necessarily incurred. They are now "doing-duty wallahs", available at a moment's notice for any duty anywhere, constantly moving and subject to repeated change and transfer of patients, duties, books, etc.

As far as I can judge, after twenty years' service, constantly moving about among strangers, with little practice and responsibility, must tend to deteriorate even a medical officer of standing, through the want of permanent interests and the incentive to gain a good reputation as a doctor in his regiment, among his brother officers and the men, women, and children.

I think I ought to add, to justify my writing strongly on the subject of staff and regimental medical service, that I have held appointments in both branches, each of which had, under the old system, special advantages, which medical officers could obtain without difficulty by appointment or exchange, some preferring the one or the other, according to circumstances, reasons of health, family, place, etc. Both staff and regimental officers were available for the duty of the other when the service required it; and the two kinds of service were available and obtainable by the department generally, so that all tastes or preference on the subject could be followed, as in the general military service there are the two grand divisions of staff and regimental officers.

I am, etc., A. H. D.

THE NAVAL MEDICAL SERVICE.

SIR,—Your contemporary the *Lancet* possesses the questionable advantage of having upon its staff one who evidently suffers from hyperæsthesia of the visible faculties, otherwise it is impossible to imagine what there is in the report of the proceedings of the British Medical Association to cause "amusement". The profession at large—for whom I presume the paragraph in question is intended—is composed for the most part of men with properly balanced intellects; and I am afraid they will fail to appreciate the joke. Sarcasm is a double-edged weapon, which requires to be dexterously handled to be effective. Into the polished word, the sting must be skilfully introduced, and its use should be entrusted to those alone who know how to handle it. One would have supposed the *Lancet*, both from its name and its antecedents, could have delivered a better thrust. The mantle of the men who directed its envenomed attacks thirty or forty years ago has not descended on the present generation. With these, the "spirit indeed is willing, but the flesh is weak". Thus is it that such an inane attempt as that of last Saturday is suffered to appear. What the general reader, however, has a right to expect—who does not care to enter into journalistic disputes—is, that a true, and not a garbled, account will be given of public proceedings interesting to the profession at large. Every one knows that the British Medical Association numbers amongst its members men who have shed lustre on our common calling, and, when a medical journal endeavours by a *suppressio veri* to convey the impression that such men were received by a minister with a "snub", it does all in its power to drag down its own cloth, in order that a little personal spite may be gratified. Who is the informant of the *Lancet* that, of the twenty-two points brought forward, some are entirely beside the mark? We pause for a reply. On the other hand, it may rest assured that the deputation of the Association, who so kindly, at their own personal inconvenience, waited upon the First Lord, were in possession of the wishes of the whole Naval Medical Service, and on that occasion acted as its spokesmen. Less than what was then laid before him will fail to effect the object in view; and I would request your contemporary to publish the remainder of the reply, which it states was so neatly put by Mr. Ward Hunt, and which it will find reported as follows.

"Lord Gilford was giving his special attention to the subject, and no doubt the expression of views by the deputation would be of material assistance. He (Mr. Hunt) would be much obliged if Mr. Hart would forward, in writing, the representations which had been made, in order that they might be deliberately considered."

The Naval Medical Service is deeply indebted to those gentlemen who formed the deputation, and, with the assurance that their affairs are in such good hands as those of Lord Gilford, they are for the present content to abide results. I am, etc.,

Dublin, June 16th, 1874. A Naval Medical Officer.

THE NAVAL MEDICAL SERVICE.

Sir,—The naval medical world awoke last Saturday to the unexpected and most gratifying fact that, on every side, it numbered friends who were all eager to advance its claims to consideration. Thus the *Army and Navy Gazette*, a few weeks since, when the groans of the service began to make themselves heard, cried up the Royal Naval as a popular service among young medical men, accusing the *Lancet* of having gone out of its way of late to foster a different opinion. Both these rivals, drawing hebdomadal inspiration, not from the Pierian spring, but from the fount in Spring Gardens, and sacrificing independence as journalists for that draught—both these organs were found, I say, on June 13th, to be earnest in their convictions that each had uniformly stood by the cause of the weak, and that each was of itself capable, without external aid, except from the aforesaid fount, to work out everything necessary to render the naval service quite popular in the schools.

The policy of the *Army and Navy Gazette* has been long understood, and it is still true to that; but why the *Lancet* should have oscillated so much during the last three months is quite incomprehensible. When we consider its traditional *prestige* as the leader of independent opinion, why it should, like the wind in tempestuous weather, veer round so suddenly to the powers that be is, I repeat, quite incomprehensible. This is certain, that, after some years of patient waiting, to realise high ideas laid before the Committee of 1866 with recurring proofs only that one person was paramount in those ideas, the Naval Medical Service stirred itself to advocate its own wrongs, and to preclude another such period of inaction for the benefit of the corps. Animated by the honest expressions in Parliament of the First Lord's want of satisfaction with our decaying branch of the naval tree, they looked for a direct mode of communication by free agency to make known to that minister the deeply felt defects of the service, which are undermining its very existence. They saw in the Parliamentary Bills Committee of the British Medical Association a professional body which rarely makes known its sentiments in vain; and, having laid before it a sufficient body of evidence, that Committee resolved to seek an interview, which has resulted most satisfactorily in the opinion of the service in general. It has opened the eyes of the First Lord of the Admiralty to the real state of the department, and to the only measures by which confidence can be restored to prevent the present exodus of medical officers of every standing. His expressions to the deputation are assuring that he is not the man to be beguiled as his predecessors have been by a false calm, the reasons for which they saw not; and thus hopes of redress of grievances have revived which may influence favourably the coming examination of candidates, although it is to be hoped that men of the present generation are too wise to put much faith in promises alone.

In the sudden renewal of the long dormant good wishes of vacillating journals, we recognise only another proof of the force of the classical fable of Hercules and the waggoner—"Put your own shoulder to the wheel, and then implore the gods," and of the more modern maxim, "Aide-toi et Dieu t'aidera". While depending on this great principle, we are thankful for help from vacillating, because inspired, friends; but, at the same time, we are sensible that to the Parliamentary Bills Committee of the British Medical Association, to which many of us belong, and to Mr. Hart as chairman of it, we are indebted for the uncompromising statement of what is absolutely required to render the medical branch of the navy a stable, because a satisfied, department.

I am, etc., One of Them.

Portland, June 15th, 1874.

CORRESPONDENCE.

COMPRESSION OF THE INTERNAL ILIAC ARTERY.

Sir,—Mr. Holmes, in his lecture on Gluteal Aneurism at the Royal College of Surgeons, June 8th, mentioned the late Mr. Syme's case, treated by boldly laying open the sac, and restraining the hæmorrhage by Lister's aortic clamp. It may be well to draw surgical attention to the fact that the internal iliac artery may be effectually compressed for a time by pressure through the rectum on the true pelvic wall; a less serious procedure than compression of the aorta through the abdominal wall. I am, etc., Richard Davy.

OBITUARY.

SURGEON-GENERAL G. S. BEATSON, C.B.,

HONORARY PHYSICIAN TO THE QUEEN.

The death of Surgeon-General Beatson appears to demand some further mention than the brief obituary notices which have as yet been published, both on account of the very important position he held in the medical department of the army, the services which he had rendered, and the serious loss which both his own department and the army generally sustain by his unexpected and comparatively early death. Having graduated at Glasgow and Edinburgh, George Stewart Beatson joined the medical department of the army at Fort Pitt in 1838, and, on July 13th of that year, received his first commission. He was appointed to an assistant-surgeoncy in the 71st Highlanders, but never joined that corps, and, in 1839, embarked on the staff for Ceylon; thus commencing a long term of Eastern service, which, interrupted by intervals of duty in other parts of the world, comprised the greater part of his career.

After a tour of twelve years in Ceylon, where he married, and where, in 1846, he was promoted, Dr. Beatson returned to England in 1851, and almost immediately re-embarked for Madras as surgeon of the 51st Light Infantry, and with that corps took a part in all the important operations of the Burmese War of 1852-53. Accompanying his regiment to England, Dr. Beatson arrived at home in August 1854; was advanced to the rank of staff-surgeon of the 1st Class in October of the same year, and immediately proceeded to Turkey. It was not his good fortune to witness the active operations of the Crimean War, but he was busily and usefully employed in the hospitals of Koolalee, Scutari, and Smyrna, ultimately embarking in October 1855 for Balaklava, and serving there as principal medical officer till June 30th, 1856. After a short period of service on half-pay, Dr. Beatson was one of several first-class staff-surgeons who, after being in the position of administrative officers, were placed in executive charges, and as such he was appointed to the newly raised 2nd Battalion of the 22nd Foot, with which he did duty until promoted by Mr. Alexander, then director-general, to be deputy inspector-general of hospitals on December 31st, 1858, in the same gazette with the present director-general, Sir William Muir, with Surgeons-General Frazer, Longmore, and James. Dr. Beatson had entered the army without any special interest or assured prospects of promotion; and, although senior by several years to some of his contemporary deputies, his advancement, after only twenty years' service, was rapid, and was due entirely to the abilities which he manifested for the duty of the higher ranks.

Although he was personally unknown, or scarcely known, to the Director-general, Mr. Alexander, that authority, ever ready to recognise ability, and to advance deserving officers, whether among friends or others, saw in Dr. Beatson the qualities which fit a man for administrative work, and, by his promotion, turned them to account for the good of the department. After serving for a time as Deputy Inspector-General of Hospitals in the Ionian Islands, Dr. Beatson was sent to Madras, to assume superintendence of the medical department of Her Majesty's British Forces in that Presidency—a charge for which he was especially fitted from his previous service and experience. In May

1863, on the retirement of Inspector-General (now Sir William) Linton, he succeeded to the charge of the entire department in India, and joined the head-quarters of Lord Strathnairn as Principal Medical Officer of Her Majesty's British Forces, the most lucrative, as well as the most important, appointment which can be held by any officer junior to the Director-General.

Dr. Beatson assumed his new charge at a critical and most important time. Up to the year of the Mutiny, the position held by the British Medical Department in India was far from satisfactory. There was but one Deputy Inspector-General of Hospitals in each of the minor Presidencies, and one Inspector-General in Bengal. Their duties were almost nominal, and consisted chiefly in the compilation of statistical returns, the professional and financial supervision being virtually in the hands of the superintending surgeons of the Honourable East India Company.

Some advance had, however, been made up to 1863. There had been an increase to the administrative ranks, and the Inspector-General of Hospitals was recognised as a member of the Army Head-Quarters Staff, the professional and sanitary adviser of the Commander-in-chief on all questions connected with the British Forces. Still much remained to be done: the *status ante bellum* was in many respects maintained; the financial direction of British hospitals was not in the hands of medical officers of the British Service; the newly acquired artillery, cavalry, and infantry transferred from the East India Company's Forces were still in charge of medical officers of the Indian Army, whose allegiance was divided; there was an obsolete code of rules; a defective subordinate establishment; a faulty system of equipment, each needing alteration; and there was, besides, a sanitary commission, then a sanitary commissioner, first a civilian, afterwards a major in the army, holding direct communication with Government, exercising great power, and trenching in many ways on the legitimate functions of the Principal Medical Officer.

In his relations with this anomalous institution, Dr. Beatson could only accept what the Supreme Government had decided upon, and, in the treatment of questions, could but concur when the action was right, and record his dissent when views were advanced which he knew to be injudicious. To the important questions which came before him—the proposed amalgamation of the British and Indian Medical Services, the rectification of the position of his own department—as well as to those questions having more direct bearing on the welfare of the British soldier, Dr. Beatson brought long experience, clearly formed views, and sound judgment, as well as capabilities for work to which few, if any, of his predecessors could lay claim.

The history of Dr. Beatson's first tenure of office as head of the medical department is virtually the history of that department from the transition state of 1857 to that which it now occupies. By firmness, tact, and the weight of his local knowledge and experience, Dr. Beatson effected many improvements; and, during the five years, from 1863 to 1868, many important reforms were carried out. A large increase to both administrative and executive ranks of the department was established; the anomaly was abolished by which professional and financial details were vested in separate authorities of distinct services; a more complete subordinate establishment was allowed; a new system of purveying; a revised scale of dietary; and improved plan of hospital equipment, were all introduced, while many obsolete rules were abrogated and new ones were substituted. All British troops were in medical charge of officers of the British Medical Service, subordinate to the Inspector-General, while he was himself recognised as in a position of direct adviser to the Supreme Government on questions of interest to the British Forces.

In the vitally important question, too, of improved barrack-accommodation, and the large increase to the hill-stations for the European Forces, Dr. Beatson's views were accepted by the Government of India, and, in a great measure, carried out. Thus, when Dr. Beatson embarked for England in 1868, he left the department to his successor Dr. Muir in a state vastly changed and improved, and it required but the judicious selection of subordinate administrative officers to make permanent the position it should hold, and to secure for the advice which its members might be called upon to give that weight and consideration which ability and experience, when united, cannot fail to command.

Dr. Beatson, having been relieved in India by the present Director-General, returned to England, and assumed medical charge of the Royal Victoria Hospital at Netley. Here the inconsistency of the system of military hospital administration became strikingly apparent. An officer second only to the Director-General in England, holding the rank of major-general, and who, for five years, had not only superintended the hospital administration of the whole of India, but had been in direct communication with the Supreme Government and military authorities of that country, found himself subordinated first to a major-general, as governor of the hospital, and subsequently to a lieutenant-colonel, to whom, or to any junior military officer acting for him, he was obliged to refer matters of even trivial importance, and whose orders on various subjects he was expected to carry out.

It could not be wondered at that, on the transfer of Dr. Muir from India to Whitehall in 1872, Dr. Beatson welcomed the order which relieved him from such a position, though the order necessitated a return to India, and separation from many members of his family.

The appointment of Dr. Beatson a second time to the charge of the department in India called forth at the time numerous comments, and those who were uninformed of the real state of the case imagined that, in his holding again the great prize of the service, an injustice was done to others: yet it was in the ordinary routine of the service, unaltered by favour or affection, that Dr. Beatson was again sent to Bengal. He was at the time first on the list of Inspectors-General for foreign service, and would have been equally obliged to go abroad wherever the vacancy had occurred. As it happened, the vacant post was the same which he had before held, and it would have been unjust to him to deviate from the ordinary course of relief to give advantage to another officer. During the four years of his absence from India, while Dr. Muir held charge, the interests of the department had been well maintained, and in some respects improved; so that Dr. Beatson might well hope, as he did, to be able to conduct the affairs of his office without the anxieties of changes and the necessity for new reforms.

But the movements of the Government and the army head quarters, together with the special superintending duties of his post, compelled him to travel long distances, to undergo considerable fatigue, and to spend part of two hot seasons in Calcutta. He had suffered from attacks of fever from time to time, and, when in Calcutta during April last, was sorely tried by the climate. As he expressed it, he felt "he had enough of India"; and, considering how many years of his service he had spent there and in Ceylon, he might well say so. Ordered to join his office at Simla, he left Calcutta on April 22nd; but, his constitution having been gradually, though surely, undermined, he suffered greatly on the journey, arriving at Simla on May 4th in a state of prostration, from which he never completely rallied. Particulars of his illness and death have not yet, of course, been received; but it is known that he had repeated febrile attacks, with hepatic pain; and, at the date of the last letters received, May 21st, he was much worse: temporary improvement had passed away, and he had lost all the little ground he had gained.

Nothing further is known beyond the brief telegram received on June 8th, stating that he had died on the previous day. In all probability, liver-abscess was the cause of death.

In Dr. Beatson, the Army Medical Department has lost one of its most able members, and one marked by the opinion of his brother officers as fit to succeed to the highest departmental position. He possessed a singularly accurate and retentive memory, which, in a position such as his, where so much depends upon precedent and regularity, was especially valuable. He was seldom wrong in the facts upon which he formed his opinions, and his deductions were clear and logical. His remarkable clearness and accuracy were very prominent on the occasion of his examination before Mr. Sidney Herbert's Committee in July 1857; and it was the impression which his evidence made upon Mr. Alexander, as well as on the several members of that committee, which, perhaps, more than anything else marked him as fitted for advancement. In his career in India, where more than elsewhere he was prominently before the eyes of the department, he showed great zeal and energy in the cause of the British soldier.

Second only to the interests of the army and the public, he held the interests of the medical department in the highest consideration; and only those who were in official intercourse with him know how much his brother officers owe to his exertions. Few were so well acquainted with all matters connected with the service, and none could be more jealous of its welfare. In his administration, he was invariably just; and, while liberal and indulgent to those who showed that their duty was their first consideration, he was strict in his efforts to repress anything detrimental to the professional or social character of the department over which he presided. He never carried official differences into private life, and was on terms of the happiest social intercourse with those whom he could not but oppose in their public capacity. He was a strong supporter of the new departmental system, and an advocate also of amalgamation with the Indian Medical Services, on the basis of separation of the civil from the military elements. In every relation of life, he was genial, kind, and considerate; and his death will long be felt, not only by his widow and immediate family, but by very many others who were much attached to him, and who have to regret a friend not soon forgotten and not easily replaced.

WILLIAM BURKE RYAN, M.D.LOND., F.R.C.S.

Dr. Ryan was the son of Michael Ryan, Esq., of Old Town, Queen's County, and was born in 1810. He received his medical education at Dublin; and qualified as L.M.Dublin in 1831, and M.R.C.S.Eng. in 1833.

Dr. Ryan long enjoyed an extensive practice at Sutton Coldfield, near Birmingham; subsequently he removed to London, and graduated at the University of London as M.B. (1848), and M.D., first-class (1857). In 1861, he passed the examination for the Fellowship of the College of Surgeons.

In 1856, Dr. Ryan was awarded the Fothergillian Gold Medal of the Medical Society of London for an essay on Infanticide; he was also author of a treatise on the same subject, and of various contributions, chiefly on medico-legal topics, to the medical journals. For many years, he had performed the duties of Surgeon to the South Middlesex Rifle Volunteers, and had been engaged in general practice at Norfolk Terrace, Bayswater; but had retired about a month previously to his decease, which took place on the 4th instant, at New Ross, Wexford, after a very brief illness.

Dr. Ryan had gone to Ireland in the best of health only a fortnight before; his death resulted from choleraic diarrhœa, brought on by passing a night in a hotel bedroom infected by the gases from an adjacent water-closet. He had contemplated returning home on the very day when he died; and his loss has caused great and heart-felt sorrow among his friends and patients, by whom, as well as by his professional brethren, Dr. Ryan was deservedly esteemed and respected. The remains were brought to England, and interred in the Roman Catholic Cemetery at Kensal Green.

DAVID TORRANCE, M.R.C.S.ENG., RUGBY.

Mr. Torrance, who died on March 26th, 1874, in his seventy-seventh year, was the eldest son of the late John Torrance, Esq., Sheriff Clerk Depute, Hamilton, Lanarkshire. He was educated in the schools of his native town, and completed his studies at the University of Glasgow; and subsequently became a Member of the Royal College of Surgeons of England. After a few years spent in the Honourable East India Company's Service, he settled as a general practitioner in Rugby in 1829. Soon afterwards, while the making of the London and Birmingham Railway was in progress, there came an epidemic of cholera. The "navvies" on the line, especially those living at Newbold-on-Avon, suffered severely; and the foreign experience of Mr. Torrance stood him and his patients in good stead. So much were his efforts appreciated, that, when the cholera passed away, those for whom he had laboured subscribed and presented to him a purse of a hundred guineas. Mr. Torrance has had a very large practice in Rugby and neighbourhood. During the last few years, Mr. Torrance had several attacks of paralysis, the frequent recurrence of which led to his death.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 11th, 1874.

Hope, James William, Hay. Breconshire
Plant, Henry Walter, 61, Bunhill Row, E.C.
Pocock, Walter, 337, Brixton Road, S.W.
Solly, Samuel Edwin, The Priory, Roehampton

The following gentlemen also on the same day passed their primary professional examination.

Lewis, Joseph, Guy's Hospital
Thompson, Alfred, London Hospital

MEDICAL VACANCIES.

The following vacancies are announced:—

ABERDEEN—Public Analyst: 2s. 6d. to 10s. 6d. per analysis.

ANDERSON UNIVERSITY, Glasgow—Professor of the Practice of Medicine; Professor of Anatomy. Applications 29th instant.

ARMY MEDICAL DEPARTMENT—Surgeons. Applications, 10th August, to Sir W. M. Muir, Director-General.

ASYLUM FOR IDIOTS, Earlswood—Assistant Medical Officer: £150 per annum, board, and apartments. Applications, 29th instant, to the Secretary, 36, King William Street.

BARONY PARISH NEW LUNATIC FARM ASYLUM, Woodlie, Glasgow—Medical Superintendent: £500 per annum, house, etc. Applications, 1st July, to Peter Beattie, Inspector of Poor.

BRIGHTON AND HOVE LYING-IN INSTITUTION, HOSPITAL, and DISPENSARY FOR WOMEN AND CHILDREN—House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 1st July, to Thomas A. Brew, Honorary Secretary.

CARLISLE DISPENSARY—Assistant House-Surgeon: £90 per annum, apartments, coals, gas, and attendance.

CHARING CROSS HOSPITAL—Medical Registrar.—Assistant-Physician. Applications, 23rd inst., to Henry Woolcott, Secretary.

DARLINGTON UNION—Medical Officer and Public Vaccinator for the Haughton-le-Skerne District: £21 per annum, and fees. Applications, 20th instant, to Wm. Hodgson, Clerk.

ENNISCORTHY UNION, co. Wexford—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Ferns Dispensary District: £90 per annum, and fees. Applications, 24th instant, to Richard Dockrill, Honorary Secretary, Bayview, Camolin.

FROME UNION—Medical Officer and Public Vaccinator for the Nunney District: £77 per annum, and fees. Applications, 22nd June, to G. W. Bradbury, Clerk.

GENERAL HOSPITAL, Birmingham—Resident Surgical Officer: £100 per annum, board, and residence.—Assistant Dispenser: £40 per annum to commence. Applications, 29th instant, to W. T. Grant, House Governor.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY AND DISPENSARY, Cardiff—House-Surgeon and Secretary: £100 a year, board, washing, and furnished apartments. Applications, 20th inst., to the Committee.

GREENOCK AMALGAMATED FRIENDLY SOCIETIES MEDICAL ASSOCIATION—Medical Officer. Applications, 25th instant, to John White, 1, Bellville Street, Greenock.

HOLBORN UNION—Medical Officer for the Farringdon Road Workhouse, and No. 1 District: £130 and £105 per annum.

HORNCASTLE UNION—Medical Officer for the Wragby District: £35 per ann.

INDIAN MEDICAL SERVICE—Fourteen Surgeons. Applications, to T. P. Pears, Major-General, Military Secretary.

KANTURK UNION—Apothecary for the Kanturk Dispensary District: £25 per annum.

KENMARE UNION, co. Kerry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Sneem Dispensary District: £100 per annum, and fees. Applications, 7th July, to Thomas M. Jermyn, Hon. Sec., Less Cottage.

LEAD MINING DISTRICT CLUB—Medical Practitioner: over £300 per annum, house, etc. Applications to Mr. Bates, Secretary, Allenshead, Allendale, Northumberland.

LEICESTER UNION—Medical Officer for No. 2 District: £80 per annum.

LEOMINSTER URBAN SANITARY DISTRICT—Medical Officer of Health: £40 per ann. for two years. Applications, 6th inst., to G. T. Robinson, Clerk.

MINING COMPANY in SOUTH AMERICA—Medical Officer: £500 per annum. Applications to G. G. G., care of Messrs. Davies and Co., Advertising Agents, Finch Lane.

NEW ROSS UNION, co. Wexford—Medical Officer for the Templeudigan Dispensary District: £50 per annum. Application, 25th instant, to Edward Kavanagh, Honorary Secretary, Ballygalvert, Ballywilliam.

NORTHAMPTON GENERAL INFIRMARY—Physician. Applications, 1st July, to S. P. Bennett, Secretary.

QUEEN'S HOSPITAL, BIRMINGHAM—House Physician: £50 per annum, board, lodging, and washing.

ROTHES, Morayshire—Parochial Medical Officer: £52:10 per annum. Applications, 1st July, to Wm. Watson, Inspector.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician. Applications, 14th July.—Dispenser: £80 per annum. Applications, 20th instant, to C. L. Kemp, Secretary.

ROYAL INFIRMARY, Aberdeen—Surgeon.

ROYAL NAVAL MEDICAL SERVICE—Surgeons. Applications, 6th August, to A. Armstrong, Director-General.

ST. GEORGE'S HOSPITAL—Resident Medical Officer: £250 per annum, increasing to £300, furnished rooms, and board. Applications, 30th instant, to C. L. Todd, Secretary.

SALISBURY MEDICAL CLUB and PROVIDENT DISPENSARY—Medical Officer.

SEAMEN'S HOSPITAL, Greenwich—House-Surgeon: £100 per annum, and furnished rooms. Applications, 23rd instant, to Kemball Cook, House Governor and Secretary.

SHEPTON MALLET UNION—Medical Officer and Public Vaccinator for No. 3 District: £97 per annum, and fees. Applications, 23rd instant, to John Nalder, Clerk.

SIDMOUTH URBAN SANITARY DISTRICT—Medical Officer of Health: £25 for one year. Applications, 30th instant, to J. G. G. Radford, Clerk.

SITTINGBOURNE URBAN SANITARY DISTRICT—Medical Officer of Health for six months: £50 per annum. Applications, 20th instant.

SOLIHULL UNION—Medical Officer for the Tanworth District: £35 per annum, and fees.

STOURBRIDGE DISPENSARY—House-Surgeon and Secretary: £120 per annum, with furnished rooms, coals, and gas, and occasional extras. Applications, 23rd instant, to J. B. Shepherd, Esq., Honorary Secretary.

THORNE UNION, Yorkshire—Medical Officer for the Hatfield and Stainforth District: £40 per annum.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

Gayton.—On June 14th, the wife of William Gayton, L.R.C.P.Ed., Medical Superintendent of the Homerton Small-pox Hospital, of a daughter.

Noake.—At Poplar House, Halton, near Leeds, on June 17th, the wife of *Samuel J. Noake, M.R.C.S.E., of a daughter.

Yule.—On June 14th, at 52, Bolton Street, Bury, Lancashire, the wife of *J. S. C. Yule, Esq., Surgeon, of a son, prematurely.

DEATHS.

*Anderson, Daniel, L.R.C.P.Ed., at Evercreech, near Bath, on May 24th.

Wallace, Arthur Kennedy, M.R.C.S.Eng., at Largs, aged 32, on June 3rd.

Mdlle. Simonowitsch, who has been carrying on her medical studies first at Zürich, and afterwards at Berne, has just obtained the degree of M.D. *summâ cum laude* in the latter University; being the first lady student who has ever taken that degree at Berne.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY.........Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY, June 19th.—Medical Microscopical Society, 8 P.M. (St. Bartholomew's Hospital.) Mr. J. Needham, "On Osteo-sarcoma".

FRIDAY, June 26th.—Quekett Microscopical Club, 8 P.M. (University College, Gower Street.) Mr. Samuel Holmes, "On Binocular Microscopes".

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

NOTWITHSTANDING that nearly every number of the BRITISH MEDICAL JOURNAL published this year has included a supplement of eight pages, and that one-third more of original matter has been published this year in the BRITISH MEDICAL JOURNAL up to the present date than in any former year, we have still a considerable accumulation of manuscripts from town and country contributors. We would therefore especially ask our correspondents to compress, as much as possible, any communications with which they may favour us, with a view to their publication with the least possible delay.

THE SOHO HOSPITAL FOR WOMEN.

SIR,—As one in general practice, I hold that the thanks of that section of the profession are due to Mr. Spencer Watson, for calling attention, in your last week's issue, to the abuse of so-called charity exhibited at the Hospital for Women, Soho Square. It has come to my knowledge that several ladies, quite capable of paying for home attendance, and of surrounding themselves with every rational domestic comfort, have been induced, by the pretentious character of this institution, to leave their homes and enter the paying wing. One of my patients, the wife of a well-to-do tradesman, since retired from business, was domiciled there some weeks, much to my astonishment and that of some of her female friends, who were fully aware that the disease she was being treated for was imaginary. In another case, a young lady whom I had previously attended in confinement, but who had removed to a distant suburb, was for some weeks under treatment with retroverted uterus. On leaving, after the uterus had righted itself, the existence of pregnancy was still an open question; but a hint was given by the gentleman under whose care she had been, that she must be very particular who attended her, if she turned out to be pregnant, and something was said as to his own special qualifications. Some weeks afterwards her brother-in-law called on me, and having told me his story, said that his wife was very anxious about her sister, and desired my opinion as to engaging a gentleman to advise her. I replied by expressing my belief that, as the uterus was now restored to its right position, there could be no reason why the services of an expert should be necessary. My advice was followed, a neighbouring general practitioner was called in, and she did well.

The profession will see from this how large an interest it has in frowning down, so far as it is able, the specious pretences of such like *charitable* institutions. If, however, any doubt still exists, I would advise those who have leisure to go to Soho Square on out-patient days, to note the dress and general appearance of the young ladies and others who crowd the waiting-room.

Hereafter I will trouble you with something I have learnt respecting the kindred establishment, recently removed from Berners Street to Soho Square, viz., the Hospital for Diseases of the Heart. I am, etc., JOSEPH ROGERS.

33, Dean Street, Soho, June 18th, 1874.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to Advertisements, changes of address, and other business matters, should be addressed to Mr. Francis Fowke, General Secretary and Manager, at the Journal Office, 37, Great Queen Street, W.C., and not to the Editor.

THOMAS GUY.—Sir Astley Paston Cooper was created a Baronet in 1821, and twice elected President of the Royal College of Surgeons; viz., in 1827 and 1836.

DENS.—D.D.S. means Doctor of Dental Science, a title conferred by the American Dental Colleges.

TWO MEMBERS OF THE BRITISH MEDICAL ASSOCIATION (Whitchurch, Salop).—The index of a clinical thermometer is itself a part of the mercurial column, whose variations are employed to denote the degrees of heat; the temperature must, therefore, be "read off" from the top of this index; but if the instrument be gently removed, so as not to jerk it, the reading may be done at a window, or in another room, or even next day (in cool weather and temperate climes), provided only that the thermometer has not been shaken at all, and has been laid in a horizontal position.

ETIQUETTE AT BRIDGNORTH WORKHOUSE.

SIR,—I am truly sorry in again trespassing upon your valuable time and patience relative to this matter; but I do think it right to inform "Amicus Curiæ" that he is completely in error in saying that the lunatic was removed to the workhouse for examination. It was distinctly stated in my letter that Mr. Bethell examined him at his own house. I do not wish to repeat what I have already said, but simply refer "Amicus Curiæ" to the said letter. As to expounding the law, all I have to say is, that if the writer will take the trouble of perusing the Lunacy Acts, he will find that a lunatic may be examined either at his own house or elsewhere, and that a justice may call to his assistance any physician or surgeon to certify as to his insanity; also, that a lunatic may be temporarily deposited in a workhouse for taking steps preparatory to his removal to an asylum. But, assuming Mr. Bethell to have made a breach of etiquette, I think "Amicus Curiæ" must admit, as a gentleman, that after the explanation given by Mr. Bethell to Dr. Roe, and his wish that the latter should take the fee for signing the certificate, no further notice, I submit, ought to have been taken of the matter. This is all I have to say, although much more might be said; but I do not wish to manifest a vindictive spirit.

Apologising for the trouble I am giving to you, I am, etc.,

June 15th, 1874. WILLIAM REYNOLDS.

SIR,—It appears to me that both Dr. Bethell and Dr. Roe mistake their position in respect of certificates of lunacy given by them in the case of paupers, and I would refer them to the *Local Government Chronicle* of to-day, where they will find a full exposition of the subject. A pauper lunatic can only be received into a lunatic asylum on the order of a justice of the peace, *upon whom alone* the law casts the responsibility of deciding whether to send the supposed lunatic to an asylum or not; and for this purpose "he shall call to his assistance a physician, surgeon, or apothecary, to examine such person". The examination is, therefore, performed in the capacity of adviser of the magistrate: and, although a Poor-law medical officer is, as a matter of convenience, usually consulted, any other practitioner chosen by the magistrate is competent to do so.

A few years since, the medical officer of an union was incompetent to give a certificate within his union; and it is questionable whether, now that a considerable portion of the cost of maintenance of a lunatic is paid by Government, the old rule should not be resorted to. In practice, I believe it will be found that when a Poor-law officer certifies that a pauper should be sent to an asylum, he receives a fee; but if his certificate be against such a step being taken, the fee is withheld.

Slough, June 13th, 1874. I am, etc., CHARLES HOLMES.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Birmingham Daily Gazette, June 15th; The Carlisle Patriot, June 13th; The Macclesfield Advertiser; The Shield; The Glasgow News; The Manchester Guardian; The Cork Examiner; The Dublin Evening Mail, June 15th; The York Herald; The London Sun; The Hastings and St. Leonard's Chronicle; The Paris Journal; The Lancaster Daily Courier; The Leeds Weekly Express; The Liverpool Daily Courier; The Brighton Daily News; The Berkshire Chronicle; The Northwich and Wingsford Guardian; The Huddersfield Weekly News; The Alston Herald; The Halifax Times; The Northampton Herald; The Kensington News; The Alnwick Mercury; The Cork Examiner; The Macclesfield Advertiser; The Torquay Directory; The Blackburn Standard; The Cork Constitution; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Mr. G. W. Callender, London; Dr. T. More Madden, Dublin; Dr. J. Hughlings Jackson, London; Mr. Leighton Kesteven, Derby; Dr. Wickham, Newcastle-upon-Tyne; The Rev. W. Banister, Liverpool; Dr. Fleming, Birmingham; Our Paris Correspondent; Dr. Munro, Cupar Fife; Mr. C. D. H. Drury, Harleston; Mr. M. J. Biggs, Salisbury; Captain Flood Page, London; Dr. J. Braxton Hicks, London; Dr. A. A. Gore, Dublin; Mr. T. Holmes, London; Dr. George Johnson, London; M. O.; Dr. J. W. F. Smith, Belfast; M.D.; Mr. Horace Turner, Norwich; Dr. Desmond, Liverpool; Mr. J. E. Ingpen, London; Our Dublin Correspondent; Mr. W. MacCormac, London; Dr. Finlayson, Glasgow; The Secretary of Apothecaries' Hall; The Registrar-General of England; The Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of the Medical Society of London; Mr. Charles Holmes, Slough; Dr. Farquharson, London; Dr. C. Harrison, Lincoln; Mr. W. Reynolds, Bridgnorth; Dr. Thorne Thorne, London; Dens, Jersey; Mr. R. S. Fowler, Bath; Mr. Rendle, Forest Hill; Mr. C. S. Webber, London; Dr. Cornelius Fox, Chelmsford; Dr. D. P. Barry, Twickenham; Dr. Balthazar W. Foster, Birmingham; Mr. Bromfield, Whitchurch; Mr. Ambrose R. Gedge, Whitchurch; Mr. Woodhouse Braine, London; Dr. Theodore Williams, London; Dr. A. W. Edis, London; Mr. T. W. North, York; A Staff-Surgeon R.N.; "One of Them"; A Naval Medical Officer; Mr. Chauncey Puzey, Liverpool; Dr. Grimshaw, Dublin; Dr. Maclagan, Hexham; Mr. H. B. Harrison, Devonport; Dr. Cross, London; Dr. J. T. Clover, London; Dr. J. C. Steele, London; Dr. A. K. Newman, London; Dr. Philipson, Newcastle-on-Tyne; Dr. Grabham, Earlswood; etc.

THE HASTINGS PRIZE ESSAY,

1873.

ON THE PATHOLOGY AND TREATMENT OF OVARIAN DISEASES.

By LAWSON TAIT, F.R.C.S.,
Surgeon to the Birmingham and Midland Hospital for Women, etc.

V.

THE after-course of a case of ovariotomy is subject to many rude checks, which alter its history very much from the fortunate career supposed in the preceding sentences. There are many dangers in the path of every patient submitted to this operation, and there are many indications of their approach, but none so trustworthy as those derived from a close observation of the patient's temperature-curve. It should be the invariable practice of the surgeon to have a temperature observation of his patient made night and morning for a few days before the operation, and afterwards this ought to be repeated every four hours. Nothing has been to me more instructive than a comparison of a group of such charts; and I have repeatedly seen grounds for a prognosis in a case by the comparison of its temperature-range with those of former cases. It will almost invariably be found that, immediately after the operation, the temperature falls considerably. I have seen it do so as much as two degrees, indicating the risk the patient has to run in the form of shock. To obviate this, it is always well to place hot-water bottles to the sides and feet, and, if depression be severely marked, to administer a diffusible stimulant. By far the best is an enema of diluted champagne with a little brandy. I make it a rule always to administer a small dose of morphia, a third or a fourth of a grain, immediately after the operation by subcutaneous injection, and by this I believe I ward off shock, in great measure, and prevent the after-sickness which is often so distressing a condition. Since I have discontinued the use of chloroform, this latter accident has been almost entirely absent from my practice. From the twelfth to the twentieth hour after the operation, the temperature slowly rises, unless the patient succumb to the shock; or, in the still rarer condition, where the operation has had to be undertaken on an emergency due to cyst-inflammation or an attack of peritonitis, in which case the temperature falls. In a case of the latter, where I operated with a temperature of nearly 40 degs. centigrade, it fell in twenty-four hours to 37 degs.

After the recovery from shock, the patient generally breaks out into a gentle perspiration, and this should be slightly encouraged, and the temperature may vary from 36.8 deg. cent. to 38.5 without giving rise to any alarm. If it rise, however, above the latter point, especially if accompanied by an increased pulse frequency, dry tongue, pain, and inflation of the abdomen, green vomiting or hiccup, and anxious face, the access of peritonitis, in some form or other, may be taken for granted. The treatment of this must vary very much according to the circumstances of each case. Where I thought bleeding would be borne, I would not hesitate to put two or three dozen leeches over the abdomen, or even to bleed from the arm. I have several times painted large surfaces with blistering fluid with most excellent effect, but my staple remedy is opium. This may be given either as laudanum by the mouth, or in a rectal injection or suppository, and is most useful in small doses frequently repeated. Some authorities recommend calomel and opium in pill at the onset of peritonitis, but usually there is too little time to afford delay for the action of such a remedy; and, if mercury is to be of any use, it must be given in the form of mercurial inunction. I have found a combination of opium and quinine of signal service.

For the first twenty-four hours after an ovariotomy, I allow the patient no other sustenance than ice or iced water, and, perhaps, in the case of sickness, a little soda-water and brandy, or champagne. Nutriment may be given cautiously on the second day in the form of chicken-broth or beef-tea, in small quantities frequently administered, so as to obviate vomiting. I seldom allow any solid food to be taken till after the fourth day, which seems to be a sort of critical time; and I have found fish, such as a plain boiled sole, to be the best form to begin with. After that time, more latitude of dietary is admissible, but always with the precaution that any fresh article is to be tried carefully in very small quantities, lest it be found to disagree.

During the second or third day we may find symptoms of exhaustion appearing in the form of restlessness, vomiting, and hiccup, sunken and pinched features, and frequent sighing. Under such circumstances, food and stimulants may be allowed more liberally, especially champagne with a little brandy in it; and very ofter great benefit may be derived from frequent small enemata of beef-tea and brandy.

In the event of the occurrence of symptoms of peritonitis, special interference may be requisite, such as opening the recto-uterine *cul-de-sac* from the vagina, for the purpose of draining any purulent or other fluid that may be collecting in the peritoneal cavity. Dr. Marion Sims has recently proposed to pass a drainage-tube in this way in every case of ovariotomy, before the closure of the abdomen, in order to prevent such collections. He is of opinion that they are the cause of the peritonitis instead of, as it seems to me, the result; and, though it is extremely probable that their evacuation may prevent subsequent purulent infection, yet the presence of a seton in the peritoneal cavity in every case of ovariotomy is far more likely to increase the number of cases of peritonitis than to diminish them. In none of the *post mortem* examinations that I have seen of fatal cases of peritonitis after ovariotomy, could Dr. Marion Sims's suggestion have been of the slightest use in securing the escape of the effusion. In all of them, the lymph and pus were out of reach of any tube which would pass between the parietal wound and an aperture in Douglas's pouch.

Septic poisoning is no more a peculiarity of the after-course of a case of ovariotomy than it is of an amputation; but it seems an accident to which it is liable with extreme readiness, if submitted to any sources of infection. Thus we find the mortality of ovariotomy in large hospitals so great as to render its performance in such institutions perfectly unjustifiable. Before operating, and during the period of his attendance on a case of ovariotomy, the surgeon ought to take the most especial pains not to perform any *post mortem* examination or dissection, nor to handle any patient suffering from purulent infection. Indeed, he ought to conduct himself as if he were engaged in a large midwifery practice.

Septicæmia is generally ushered in by rigors, and is indicated by an exaltation of temperature. If it take an acute form, a few hours may suffice to end the case. If it be of the subacute variety, beginning on the fourth or fifth day after the operation, it runs a longer course, and is more marked by nocturnal exaltation of the temperature curve, night-sweats, diarrhœa, dry, brown and furred tongue, green or coffee-ground vomiting, hay-smelling breath, and tenderness over the liver; pneumonia often occurs in its course, and death usually takes place in four or five days. The chronic pyæmia, resulting in abscesses of joints, etc., is rare after ovariotomy; there seems not to be time enough for its development.

Vomiting is a frequent and often troublesome symptom after ovariotomy, and may arise from any of the complications I have mentioned. It is absolutely necessary to stop it, if possible, for I have seen the straining tear the wound open. There are many remedies that may be employed, as prussic acid, creasote, iced champagne, sinapisms over the stomach, etc.; but by far the most useful, in my experience, has been Morson's pepsine wine, given in drachm-doses every ten minutes with a little ice-water. This has been especially beneficial in bilious vomiting.

Flatulence is often a very distressing symptom, and, if accompanied by a high temperature, is pathognomonic of peritonitis. Milk and lime-water often mitigates it very much, and the passage of an O'Beirne's tube as far as possible up the rectum will often give much relief. Failing that, I have several times punctured the distended bowels with a fine exploring trocar, and kept it in for some hours with great relief. An irregular menstruation comes on very generally within forty-eight hours after ovariotomy, and seems to be a relief; for many of my cases where it has not occurred have died. It is often a source of alarm for the patients, and they ought always to be informed of the probability of its occurrence.

Inflammatory attacks in the chest sometimes occur during the convalescence after ovariotomy, and they are always sources of anxiety. After an operation in which a very large tumour has been removed, especially in a patient advanced in life, a short irritating cough is not unusually noticed in a few hours. This rapidly increases in severity, and I have seen it carry off a patient in thirty hours. It is evident that we have, in such cases, to deal with something very like the passive suffocative catarrh of old age. The expiratory muscles, probably chiefly the diaphragm, from long want of use have become atrophied, and, missing their *point d'appui* in the tumour, are unable to carry on the process of expectoration of mucus. It is one of the many reasons for preliminary tapping, that we may gain time for the muscles to recover their strength.

Acute pneumonia, bronchitis, and pleurisy are sometimes met with, and two of my patients have been nearly lost by the first of these complications. In one case, I hesitated for some hours as to whether I should not bleed from the arm; and, though the case recovered without it, I think the issue would not so long have been doubtful if I had bled her. The full administration of nutriment and stimulants is most to be trusted to, aided by the wrapping of the whole chest of the patient in jacket-poultices. With this necessary precaution, if once begun, they they must not be left off until the crisis is over; and, in their use, it is most essential that, in changing them, the old poultice shall not be disturbed until the fresh one is ready for immediate application.

Diarrhœa may set in about the third or fourth day, and prove most irksome. It is often the indication of septicæmia, but more frequently it originates in some hard fæces lodged in the lower bowel. In the latter case, it is easily remedied by warm water enemata, followed each time by a morphia suppository.

For three or four days after the operation, the patient should not be allowed to pass urine without the catheter, which ought to be used every six or seven hours. Great care must be taken to clean the catheter well after each time it is used, for it is not unusual to see severe cystitis set in from the introduction of an uncleaned catheter containing a drop of fœtid urine. If this accident should happen, its most appropriate treatment consists in the liberal administration of quinine, and the washing out of the bladder every six or eight hours with a weak solution of acetate of lead at about 38 degs. cent.

The intention of the use of the catheter is to keep the pelvis as quiet as possible, and for this purpose it is also well to administer occasional small doses of opium, to prevent any action of the bowel for seven or eight days, even though there be no pain to necessitate the opiate. In some cases, the bowels may remain without action for ten, twelve, or fourteen days after the operation without giving rise to any uneasiness. After such a time, the fæces which have collected in the lower gut may have become hardened; so that, when there does come on an inclination to have a motion, a small emollient enema ought to be given to facilitate its passage.

After the action of the bladder and rectum have been fairly established, the clamp loosened, and the wound healed, the further convalescence of the patient does not differ materially from that of one on whom any other serious operation has been performed. I have sometimes noticed a peculiar rapid emaciation, which comes on about the end of the second and beginning of the third week of recovery, which, on one occasion, the first time I saw it, was a source of anxiety to me. After the wound has so far healed that it has begun to contract, the patient may be allowed to leave her bed for a little every day, and in due time to assume the erect position. There is one precaution always advisable, that the patient should wear a tight-fitting abdominal belt instead of stays; for, in spite of all care in inserting stitches to include all the layers, and to have immediate union of the abdominal walls, there is a proneness to the formation of ventral hernia in the cicatrix for many months after the newness of the union has passed off.

Sometimes we open the abdomen to remove an ovarian tumour, and find that we are unable to complete the operation. This has happened only once to me, the first time I attempted ovariotomy, and the case was an instructive one in many respects. In May 1868, I saw Mrs. H. in consultation with Mr. Kemp of Castleford. She was 37 years of age, considerably emaciated, had always menstruated regularly, had been married seven years, and was the mother of four children. About six months previously to my seeing her, she had noticed a lump in the left iliac fossa. This increased very rapidly, and, on her consulting Mr. Kemp, he diagnosed an ovarian tumour. The increase was so rapid, that he tapped her, removing a large quantity of clear straw-coloured fluid; and I saw her seven days afterwards, when there was a considerable reaccumulation. Percussion elicited a perfectly dull note all over the abdominal wall, below a transverse line passing an inch and a half above the umbilicus. Partly above this line, but mostly below it and to the right of the umbilicus, I felt through the thin parietes a floating tumour, about four inches in transverse and three inches in vertical measurement, which I believed to be secondary growth in the wall of the major cyst, the latter being regarded as unilocular. The uterus was normal in position and freely mobile. She had a very well marked ovarian face and a shrunken dry skin.

I made the usual incision, but I had much difficulty in recognising the peritoneum from the cyst-wall. I found that they were intimately adherent, and it was only by diverging a good deal to the right under the rectus muscle that I came upon a point of separation. Slitting open the peritoneum, I found that on the right side the tumour was free, and that I could readily reach the ovary and fundus uteri on that side. The ovary was healthy, but the uterus was tuberculated and somewhat fixed in front. I found that the cyst was adherent throughout to the left side and above the umbilicus, and that it had a long pedicle running from the left corner of the uterus into a firm mass at the brim of the pelvis. The flat floating tumour which I had felt near the umbilicus was a mass of soft cancer in the omentum. Long before I had made out these details, I had satisfied myself that the case was one of unilocular ovarian cyst complicated by general cancer of the peritoneum; for all over the peritoneum of the pelvis, and less abundantly on the parietal peritoneum, and on the free cyst-wall, were scattered little flat and wart-like patches of a light pinkish red colour, and very friable. They did not bleed when torn in breaking down the adhesions. This process I only partially attempted, and soon desisted. I then emptied the cyst, and, finding its contents perfectly limpid, I removed a piece of it, so that its cavity should communicate with that of the peritoneum. This I did because the fluid in the peritoneum was darker and more dense than that of the cyst, and it seemed possible that the exhaustive process of tapping would not be so frequently required, if the effused ovarian fluid were drained into the peritoneum to dilute the denser liquid. I had to secure two large vessels in the parietal wound, and it was closed by silver wire sutures after the cavity had been carefully sponged. I saw her ten days afterwards, and found that the wound had suppurated profusely, the two ligatures had come away, and that there was no reaccumulation of fluid in the peritoneum. The wound closed completely in three weeks, and she died a month afterwards from extension of the cancer, Mr. Kemp having written to me, to say that the enlargement of the omental tumour had been most marked, and that there had been no re-secretion of fluid. We were not allowed to examine the body.

The piece of cyst-wall which I removed I placed in a one per cent. solution of chromic acid, and then examined thin sections of it, stained and unstained, to determine the character of the peritoneal patches.

I found that they were cellular throughout, and that the cells were more or less flattened, irregular, and of an epithelial character. The patches seemed to be continuous with the epithelial layer of the peritoneum, and, indeed, to be constituted by a malignant proliferation of the normal epithelial cells, many of which were evidently immaturely formed and freely intermixed with free nuclei. I could trace no vessels in the patches, which peculiarity would explain the absence of hæmorrhage when the adhesions of the tumour were broken down, these adhesions being evidently the coherence of opposing peritoneal surfaces by cancerous cell-growth. In some places, the patches, varying in size from a millet-seed to a pea, had split on the surface, and presented a villous appearance. Occasionally, a patch undergoing fatty degeneration was found. Nowhere was any capsulation of the cells noticed, as is seen in skin-cancer, though otherwise the microscopic appearances strongly resembled those of ordinary epithelioma.

Since writing the foregoing part of the essay, I have met with another case, where none of the ordinary signs were available for an accurate diagnosis, and where an exploratory incision was the only course. I am quite sure that each exploratory incision an ovariotomist makes gives him a great addition to his personal skill in diagnosis, and will lessen for the future of his practice the need for such a tentative measure. Not that I recommend all beginners to practise needless abdominal sections, but that, having carefully considered the propriety of an exploratory incision and performed it, the experience the operator has gained from it ought to assist him in avoiding its necessity in similar doubtful cases.

A month ago, I saw Mrs. C., aged 32, in consultation with Mr. Croft of Snitterfield. She had a large abdominal tumour with the intestines above it and to each side, forming the characteristic ovarian coronal clearness of percussion. The tumour was fairly movable, and gave indistinct indications of fluid contents. It had no intimate relation to the uterus; it filled the pelvis, could be pushed upwards out of it, and extended three inches above the umbilicus. I saw her again in a month, when I found the tumour had much increased in size, and that some of the other conditions had been much altered. She was suffering a good deal, and we were anxious to relieve her. I expressed the opinion that the tumour was either a colloid semi-solid tumour of the ovary, or malignant cystic degeneration of the kidney. By none of the signs present could I determine which, for the tumour seemed to me much too pelvic to be a tumour of the kidney, and its relation to the intestines was indicative of an ovarian origin. Further, the history given, both by patient and by attendant, pointed to the right ovary as the seat of disease. There was, however, a fixity about its upper part that made me hesitate between the two alternatives and recommend an exploratory incision. As soon as the peritoneum was opened, the dull pinky-white colour of the tumour decided me to the view that it was a case of encephaloid cancer of the kidney, probably with cysts; and, passing my hand into the pelvis, I found the uterus and ovaries healthy. The area of attachment of the tumour was the position of the right kidney, and, of course, I closed the wound at once.

I have had two cases where I declined to attempt the removal of tumours diagnosed as ovarian, and where *post mortem* examinations have justified my refusals and the grounds for them.

The first occurred in the case of a young woman of 24 years of age, in whom there existed a multilocular tumour, lying chiefly to the left side of the abdomen and fixed there. She gave a history which showed that, on three or four occasions, cysts had ruptured into the peritoneum, and that the rupture had been followed by some peritonitis on each occasion. She entreated that an operation should be attempted to relieve the sufferings she had to undergo on defæcation. I declined to attempt an ovariotomy, being quite certain that the tumour was so adherent as to render its removal an impossibility, and the contents of the cysts were found to be too viscid to be removed by tapping. She died during an attack of peritonitis due to the rupture of a cyst, which, on *post mortem* examination, was found to be adherent to the bladder. The tumour was found to be so intimately attached to the sigmoid flexure of the colon, some coils of small intestine, to the brim of the pelvis and to the bladder, that its removal would have been impossible.

In October 1869, I saw Mrs. C. in consultation with Dr. Hollings of Wakefield. She had a large oval tumour, solid, hard, and smooth, moving freely in the abdomen, centrally situated, with a similar smaller one to the right side. The larger tumour reached about two inches above the umbilicus, could be felt high in the pelvis, and had no attachment to the uterus. I diagnosed it as a case of solid cancer of the ovary, and declined to operate. The abdomen was free from ascites or other complication. I saw her a second time in a few weeks, and found that the tumours had both increased in size, and then, having made myself more familiar with the subject, I gave it as my opinion that it was an instance of the rarest of all forms of cancer—the fibroid. On December 5th, I found her with symptoms of peritonitis, and a considerable effusion of ascetic fluid. I tapped her, to relieve the breathing, and found a large soft semi-fluctuating mass extending from near the xiphoid cartilage to within three inches of the pubis, masking the outlines of the tumours. This I recognised as possibly a fungoid growth of the omentum. I tapped her again on the 9th, and she died next day. Twenty-four hours after death, I examined the body, and, on opening the abdomen, I found adhesions everywhere to the large deep-coloured fungous mass which I had correctly regarded as growing from the omentum. It was adherent behind to the intestines and to the tumours. The larger of these latter was found to be perfectly loose, save from the omental mass and the right corner of the uterus, to which it was attached by a short thick pedicle; in fact, it was the right ovary, as no other trace of the gland could be found. The smaller tumour was similarly the left ovary, and a still smaller tumour seemed to grow from the same pedicle. Scattered over the surface of the peritoneum were patches very similar to those previously described in a case of cancer of the peritoneum. These patches were also found on the surfaces of the tumours, and were stripped easily off with their investing epithelial coverings. In the right or largest tumour were a few cavities containing fluid, and also some curious cretification at the base and in the pedicle. It weighed probably twelve or thirteen pounds, so that I could not remove it conveniently for preservation. I removed and carefully examined the smaller tumours, some peritoneum, with specimens of the patches and a piece of the omental fungus.

In the piece of omentum, nothing but blood-detritus, a few scant fibres, and some irregular cells were found. The nodules on the peritoneum showed all the characters of cancerous tissue, being composed of large irregularly shaped and irregularly sized cells, containing variously shaped nuclei in varying numbers. There seemed to be no fibrous tissue in them at all, and their elements readily separated by gentle pressure between the cover and the glass slide. A careful section showed the epithelium of the free surface of the peritoneal layer to be undergoing interesting changes. The cells of the upper layer were normal; but, at two or three layers' depth, they were seen to be larger, more irregular, and the number of nuclei increased, the latter fact being most clearly displayed on the addition of acetic acid.

The ovarian tumours removed were ovoid, smooth, and glistening, and here and there the surface marked with the peculiar patches above described. Together, they weighed nearly three pounds. When cut into, no juice exuded from them, and the scant moisture scraped from the cut surface showed no cells. The tissue was pearly white and very tough. Teasing with needles did not give any satisfactory results, and a great many sections had to be made before one thin enough for examination was obtained. I then found that the texture was purely fibrous, there being nowhere, under the epithelial layers, any cells discoverable. The fibres were extremely fine, closely and regularly packed, without any appearance of undulation or interweaving, but seemed to lie parallel with only faint curvings in their general direction. They were readily stained by carmine. Acetic acid showed no nuclei, and did not influence the fibres beyond a slight clearing of the section.

It will be found that this description differs in some important particulars from that given by Sir James Paget of similar structures, especially in the absence of nuclei; but the rarity of opportunities for the examination of such peculiar growths stands much in the way of their proper investigation.*

[*To be continued.*]

THE GAINS DERIVED FROM THE USE OF THE LARYNGOSCOPE.

By GEORGE JOHNSON, M.D., F.R.S.,
Professor of Medicine in King's College; Physician to King's College Hospital.

MR. ARTHUR NORTON, in the last number of the JOURNAL, referring to my paper on the above subject, doubts the possibility of *bilateral* palsy of the laryngeal muscles resulting from pressure on *one* recurrent nerve; and he suggests that in such a case the paralysis on the opposite side "is only apparent, and not real". If Mr. Norton will refer to the history of Dr. Bäumler's case of aneurism of the innominata (*Pathological Transactions*, vol. xxiii, p. 66), and my case of aneurism of the aorta (*Pathological Transactions*, vol. xxiv, p. 42) he will find that in both cases there was conclusive evidence of paralysis affecting both sides of the larynx. There was almost complete immobility of both vocal cords, with such close approximation of the cords during inspiration as to cause stridor and urgent dyspnœa, for which, in my own case, tracheotomy was performed with great relief. The immobility of the vocal cords was almost as complete as in a case which I saw where both arytenoid cartilages had been destroyed by necrosis. This closing of the glottis, and consequent impediment to respiration, is the result which Mr. Norton says he would expect to occur from bilateral palsy of the laryngeal muscles. After death, in both cases, there was found atrophy of the laryngeal muscles on both sides, though to a greater degree, in my own case, on the side on which the recurrent nerve was compressed. In one case, the nerve on the right side only was compressed; and in the other, that on the left side. I cannot accept as satisfactory Mr. Norton's suggestion that, in these cases, the bilateral paralysis was only apparent, and not real. Both cases were carefully observed; and in both the appearance of the larynx during life was quite different from that which is found in undoubted cases of unilateral palsy of the larynx, of which I have seen several examples.

I now venture to suggest an explanation of the bilateral palsy of the larynx which certainly existed in these two cases of aneurism. The laryngeal muscles are pre-eminently bilateral in their action. Every one who has inspected the living larynx knows how impossible it is, in the normal condition, to move one vocal cord without at the same time moving the other in an equal degree. There is evidently, then, a very close central connection between the nerve-supply to the two sides of the larynx. In both Dr. Bäumler's case and in mine, the aneurism compressed not only the recurrent nerve, but also the trunk of the pneumogastric. It seems, therefore, not improbable that, while the muscles on one side of the larynx were paralysed by direct pressure on the recurrent nerve of the same side, the paralysis on the other side may have been the result of a centripetal irritation of the pneumogastric acting on the nervous centre, and through it upon the nerve-supply to the laryngeal muscles on the side opposite to the aneurism. The palsy on one side was direct; on the other, reflex. It is no valid objection to this explanation, that bilateral palsy of the larynx does not occur in *every* case of pressure on one pneumogastric or recurrent nerve, but only in exceptional cases. It is probable that in some cases the centripetal irritation and disturbance are greater than in others.

In fatal cases of traumatic tetanus, we have an illustration of structural changes in the nervous centre resulting from peripheral nervous irritation. In the last volume of the Clinical Society's *Transactions* (vol. vi, p. 38), I have given the history of a case in which a piece of flint in a wound on the cheek caused facial neuralgia and numbness, spasm of the masseter and other muscles of mastication, and palsy of the orbicularis palpebrarum and other facial muscles on the same side. All the symptoms disappeared after the removal of the foreign body from the wound. These results of a peripheral irritation are, I think, fairly comparable with cases of bilateral palsy of the larynx consequent on pressure upon the nerves on one side only.

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* I have fully examined a fibroma of the ovary, in which the ordinary processes revealed nothing but fibres, but which my litmus staining showed to be a compact mass of immature nuclei.

THE GAINS DERIVED FROM THE USE OF THE LARYNGOSCOPE.

By LENNOX BROWNE, F.R.C.S.Edin.,
Surgeon to the Royal Society of Musicians, etc.

MR. NORTON (*vide* JOURNAL for June 20th) might at first sight be thought to be speaking only common sense when he asserts that the occurrence of paralysis of one side of the larynx, due to pressure on the pneumogastric or on the recurrent laryngeal nerve of the opposite side, is apparent rather than real. It can, however, be shown, by the anatomical knowledge which he invokes to prove Dr. George Johnson wrong, that his assumption is not only incorrect, but that it is also exactly contrary to what one would expect after carefully considering the attachments, the nerve-supply, and the physiological action of the muscles of the larynx. Nor do I think Mr. Norton has been more fortunate in his description of the laryngoscopic image of such a case, or in his explanation of the distortion.

Taking the left recurrent laryngeal nerve as the one pressed upon (this being most frequently the case), we see with the laryngoscope that, in phonation, the right cord approaches more or less accurately to the median line, and, as Mr. Norton correctly says and explains, that it is rather tense than otherwise; the left cord, however, is seen not only not to approach, but to have very frequently a distinctly curved appearance, the concavity being directed inwards. In inspiration, the right cord is well abducted, but the left remains immovable and retains the curve. The exact position of the left cord may be generally described as at about one-third or one-fourth the proper distance from the middle line that it would be were its adductive action perfect. The explanation of the impaired abduction is, of course, at once found in the paralysis of the left posterior crico-arytenoid muscle, the sole abductor of that side, and supplied only by the inferior laryngeal nerve. The adduction is less impaired, because, doubtless, some filaments of the superior laryngeal nerve pierce some of the abductor muscles; but why is the left cord so frequently, nay almost invariably, seen to be curved? Our answer will be found by a consideration of the peculiar attachments and physiological action of the arytenoideus proprius. The crico-thyroid muscle, no longer counteracted by the thyro-arytenoid, holds the vocal cord of the affected side in a state of tension; but, the left lateral crico-arytenoid and the fibres of the arytenoideus attached to the left cartilage being also affected, the left cord does not approach in phonation, whilst the fibres of the arytenoideus attached to the right cartilage draw the posterior part of the left cord somewhat towards the median line, and so give a curve to the affected side.

Mr. Norton has admitted that there is increased tension of the cord on the unaffected side, and it is not difficult to understand how weakened innervation of one side of a muscle so intimately connecting and acting on both cartilages as the arytenoideus will cause a want of approximative power of the right cord as well as of the left. I have myself often seen such a condition. The voice of such a patient may be described as both hoarse and shrill. It is *hoarse*, because, as I have stated, there is always an interval between the cords, not, as Mr. Norton says, "because the two cords are not adapted for the same pitch of the voice", for a matter affecting the pitch has nothing to do with the presence or absence of hoarseness. The voice is *shrill*, because there is an undue state of tension of both cords and an impaired and unequal power of modulation.

The foregoing remarks were written before reading Dr. George Johnson's paper, which, owing to absence from town at the time of issue in the JOURNAL, escaped my notice; but they still hold good as to the laryngoscopic appearance and explanation of unilateral paralysis of the larynx. I have since perused Dr. Johnson's article with great interest; and he has been so kind as to give me his explanation of the cause of the bilateral paralysis in his case and that of Dr. Bäumler, where only one pneumogastric and recurrent were pressed upon. It cannot be for an instant supposed that two such careful observers were mistaken in diagnosis; and Dr. Johnson's theory of the condition is no doubt as correct as it is original. The interesting point to note in consideration of his view is that, in both instances, the pneumogastric was extensively implicated; and, if further observation of other cases should confirm the fact now placed on record by Dr. Johnson, we shall have an additional aid in our diagnosis of these affections. If the recurrent laryngeal nerve only be involved, we may expect to see no more paralysis on the unaffected side than I have indicated as usual in such cases; but in cases where there is complete bilateral paralysis of abduction, and the other evidences seem to point to pressure on only one nerve, we shall be justified in concluding that the pneumogastric is injured as well as the recurrent nerve.

ABSTRACT OF LECTURES ON THE SURGICAL TREATMENT OF ANEURISM.

Delivered at the Royal College of Surgeons of England.

By T. HOLMES, F.R.C.S., Professor of Pathology and Surgery.

LECTURE II.

THE second and third of these lectures treated of aneurisms in the groin and in the thigh, affecting the external iliac, common femoral, superficial femoral, profunda femoris, and their branches.

The lecturer first observed upon the different vessels which might be affected in inguinal aneurism, and on the different forms which such aneurisms assume; also on the differences in the collateral circulation after the ligature of the external iliac. There are cases in which that operation is performed strictly after the method of Anel; the artery being tied in the neighbourhood of the sac, no branch intervening between the ligature and the tumour, and the coagulum which fills the aneurism being continuous with that which fills the lower or distal part of the artery. In cases, also, where the collaterals (the epigastric and circumflex ilii) open out of the sac, they often become filled with the coagulum of the aneurism, and the state of the collateral circulation is the same. When the aneurism affects the common femoral, the epigastric and circumflex ilii usually remain open, and an arch of collateral circulation opens into the artery above the tumour; but, when the superficial femoral is the artery affected, the profunda itself forms one of these collaterals, and the anastomosing circulation is sometimes so powerful as to reproduce the pulsation of the aneurism. Instances of this were quoted from a case under treatment in St. Thomas's Hospital, from one mentioned in Mr. Cæsar Hawkins's recently published work, and from a case operated on by Sir B. Brodie, and related by Mr. Prescott Hewett in the *Medico-Chirurgical Transactions.* Then the history of the operation on the external iliac was briefly related, and its results estimated from the statistical work of Norris, and from the records of recent hospital practice, embodied in a table compiled by the lecturer. The mortality seems to have been about one-fourth, and there has been a small proportion of recoveries with loss of the limb.

The next question was as to the desirability of operating on the common femoral when possible, instead of on the external iliac. The opinion of Mr. Erichsen and other surgeons—that this operation is an unjustifiable one, terminating almost uniformly in death from secondary hæmorrhage or gangrene—was combated from the experience of Ramsden, Mott, the surgeons of Dublin, and Mr. O. Pemberton, all tending to show that the operation has been, as far as known, a fairly successful one, though the cases are as yet too few to enable us to compare its success with that on the external iliac. It was shown, however, that the variations in the place of origin of the profunda cause a good deal of uncertainty and danger in the operation. The conclusion seems to be, that the operation on the common femoral may be preferred to that on the external iliac when, in consequence of the patient's obesity, the latter operation will be unusually severe or dangerous; and that, in any case, the judgment of a surgeon who prefers it to that operation is not to be impugned; but that there is no reason for preferring it to the ligature of the superficial femoral in popliteal aneurism, as some of the Irish surgeons do.

The next topic was the success of pressure in inguinal and femoral aneurism. The history of the method was traced, and an attempt made to estimate the relative value of digital and instrumental pressure. Cases were quoted showing the very rapid cure sometimes obtained by well applied digital pressure in femoral aneurism. The experience of our hospitals in the use of pressure without anæsthetics in aneurism in the groin and thigh has hitherto been very unfavourable, the great majority of such attempts having failed. On the other hand, several cases have been treated successfully by the application of "rapid" pressure under anæsthesia. Leaving the latter subject for the following lecture, the lecturer suggested that the results of compression in hospital practice might be much improved by more careful supervision of the persons who compress, or of the instrument by which the pressure is made.

The old operation by laying open the sac and tying both ends of the artery has been practised in ruptured and wounded aneurisms in the thigh comparatively often and comparatively successfully in our hospitals. A series of cases were referred to to show this. This is probably the best practice when aneurism has burst either subcutaneously or through the skin, although a case was referred to, under the care of Mr. Hovell of Clapton, where the Hunterian operation was successfully performed on a femoral aneurism which had burst through an ulcerated opening in the skin.

The remainder of the subject was reserved for the following lecture.

ON CERTAIN IMPROVEMENTS IN THE CONSTRUCTION AND USE OF THE LONG AND SHORT MIDWIFERY FORCEPS.

By THOMAS MORE MADDEN, M.D., M.R.I.A.,

Lately Examiner in Midwifery, etc., in the Queen's University in Ireland; Ex-Assistant Physician Rotunda Lying in Hospital; Physician to St. Joseph's Hospital for Children; Corresponding Fellow of the Obstetrical Society of Edinburgh; etc.

OUR branch of medicine, having for its chief ends the lessening of the dangers and the abridgement of the sufferings of childbirth, has of late years been materially advanced in both respects by the more frequent and timely use of the midwifery forceps. From the period that this instrument was reintroduced into obstetric practice, in 1554, by Jacobus Rueffe, whose suggestion was first carried into effect by the elder Chamberlein in 1647, to the present day, innumerable have been the attempts to improve its construction; and I have ventured to add to the number by certain modifications in the long and short midwifery forceps, which I shall now submit to the Association. Before doing so, however, I shall make a few practical observations, founded on my experience in the Dublin Lying-in Hospital and in private practice, on the employment of these instruments, some of which are also contained in my *Lectures on the Forceps*. As an examiner in midwifery, I have had occasion to learn that, notwithstanding all that has been recently written in favour of the forceps, its application is still regarded with prejudice by many; and that in some of the text-books which are most in vogue with students, its employment is restricted by rules originally laid down by writers whose experience of this instrument was very limited, and who ascribed ill results to the forceps which were possibly caused by want of dexterity or by delay in resorting to it.

A comparatively short time has elapsed since the value of the midwifery forceps, which, according to Drs. Clarke, Labatt, and Collins, upwards of a century ago was as freely used—in Dublin, at least—as it is at present, has again become appreciated. The disuse of this instrument for so long a period must be ascribed to the rules laid down for its application by Denman, Osborne, William Hunter, and other obstetric authorities, whose aphorisms still exercise a certain though unrecognised influence on obstetric practice. The statistical reports of the great hospital with which I have had the honour to be connected afford the most striking illustration of the long desuetude into which the application of the forceps fell, and of the vast saving of human life and suffering which has resulted from its reintroduction into modern practice. These statistics, an abstract of which I compiled and first published in my Lectures on the Forceps, delivered in the hospital five years ago, are interesting in their bearing on this subject. Thus we learn that during the mastership of Dr. Joseph Clarke, from 1787 to 1793, there were 10,387 deliveries in the hospital, only 14 of which were assisted with the forceps, with 6 deaths; whilst no fewer than 49 were delivered by craniotomy, with 16 deaths. In Dr. Labatt's mastership, from 1815 to 1821, the forceps was never resorted to, although 21,867 births occurred in the hospital. During Dr. Collins's time, from 1826 to 1833, the forceps was used in 24 instances, though 16,654 cases of labour occurred. But craniotomy was resorted to in 118 cases.

In the last three years of Dr. Charles Johnson's mastership, from 1842 to 1845, the forceps was used in 18 cases, and the vectis in 11, out of 6,702, whilst the perforator was employed in 54 instances. In Dr. Shekleton's mastership, from 1847 to 1854, the forceps was used in 226 out of 13,748 deliveries. In Dr. McClintock's last three years of office, the forceps was used 56 times, or once in every 60 cases.

Dr. Denham, the late master of the Rotunda, whose tables have not yet been published, was, by precept as well as by example, a strenuous advocate for the timely use of the forceps, as well as a most dexterous operator.

Dr. Johnston, the present master of the hospital, has, however, brought the number of his forceps cases higher than was ever previously the case, and the success of this practice may be seen by comparing the following figures, with those recorded by Drs. Clarke and Collins, by whom the forceps was seldom used.

From November 5th, 1868, to November 5th, 1869, there were 1,159 deliveries in the hospital, of which 81 were delivered with the forceps, and 9 by craniotomy. In 1870, there were 1087 deliveries, with 83 forceps cases with 6 deaths, 2 craniotomy cases with 1 death, and 1 evisceration case. In 1871, there were 1,161 deliveries, 64 being forceps cases, of which 9 died; there were 6 craniotomy cases, with 1 death. In 1872, the forceps was used no less than in 131 cases out of 1193 deliveries, with only 9 deaths, whilst craniotomy was resorted to in 5 cases, with 2 deaths.

In private practice in Dublin, this operation some years ago was still less resorted to than was the case in the hospital. Thus, Dr. J. Clarke, who for nearly forty years enjoyed the largest midwifery practice in the Irish capital, and attended 3,878 cases of labour, once only attempted to use the forceps and failed. Nor, even comparatively recently, does obstetric practice in London appear to have been much better in this respect. For Dr. J. Hall Davis, in his valuable treatise on *Difficult Parturition*, published in 1857, states that he only applied the forceps seven times in 7,371 cases, that is, once in 1053 deliveries.

The great change which has taken place in this respect within the last thirty years may be learned from a comparison of the tables published in Dr. Churchill's work on *Operative Midwifery*, in 1841, with those in the last edition of his *Midwifery*, published in 1872. In the former, the proportion of forceps cases in British practice was stated at about 1 in 351, whilst in the latter we find it has risen 1 in 171.

The mortality in forceps cases is computed by Dr. Churchill—being 1 in 29 of the mothers, and 1 in 5 of the children in hospital practice. In private practice, the mortality appears to be much less than in hospital.

Thus, the same writer, in a paper read before the Dublin Obstetrical Society last session, containing the report of his private obstetrical practice for thirty-nine years, from January 1832, to December 1870, during which time he attended 2,547 cases of labour, tells us that he used the forceps in 42 cases, or 1 in 60, with only 3 deaths, or 1 in in 14 amongst the mothers, and only 4 of the children were still-born. Besides these, he employed the forceps in 80 consultation cases, with only 2 deaths.

I shall now submit to the Association an abstract of some tables drawn up from my own forceps cases, in the Dublin Lying-in Hospital and in private practice. Unfortunately, these tables are not quite complete, as those containing the cases which occurred in the Rotunda during the last half year of my connection with that institution, and those of my extern forceps cases, have been mislaid. These would probably amount to about fifty more. The cases of which I have preserved notes were those in which I myself applied the forceps in the hospital from the 1st of May, 1868, to the 31st December, 1870; and, secondly, those which have occurred in my practice from the 1st January, 1869, to the 16th July, 1873.

These tables which I now place before the Association contain the date of the operation, patient's age, pregnancy, length of labour, duration of the second stage, the reasons for which operative interference was resorted to, the kind of forceps employed, the sex and condition of the child, and the result to the mother, in each case. As these tables which are now shown would be too long to read to the Society, and perhaps may be deemed too long for publication, I shall merely read an abstract of them. The total number of forceps cases reported in these tables is 148. Of these, 88 occurred in hospital, and 60 in private and consultation practice.

ABSTRACT OF DR. T. MORE MADDEN'S FORCEPS CASES IN HOSPITAL AND PRIVATE PRACTICE.

TABLE A.—*Patients' Ages.*

Years	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	36	38	40	48	Not stated.
Hospital Practice	2	5	4	6	8	8	8	9	4	6	10	5	9	1	0	1	2	1	0	1	0	3
Private Practice	2	1	2	4	4	4	4	3	6	1	5	2	6	0	1	0	1	3	1	1	2	10
Total	4	6	6	10	12	12	12	12	10	7	15	7	15	1	1	1	3	4	1	2	2	13

TABLE B.—*Pregnancy.*

Pregnancy	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.
Hospital Practice	57	10	2	5	6	2	2	2	0	0	1
Private Practice	32	12	5	3	3	2	0	1	1	0	0
Total	89	22	7	8	9	4	2	3	1	0	1

TABLE C.—*Hours in Labour.*

Hours in Labour	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Hospital Practice	1	0	1	0	2	2	3	4	6	4	5	6	6	3	5	2	2	0	2	10	2
Private Practice	0	1	0	1	0	1	1	4	1	1	1	3	0	2	1	8	0	0	1	7	2
Total	1	1	1	1	2	3	4	8	7	5	6	9	6	5	6	10	2	0	3	17	4

Hours in Labour	27	28	30	31	32	33	34	35	36	38	40	42	44	48	50	55	60	70	80	84
Hospital Practice	2	2	0	2	0	2	1	1	3	1	0	0	0	1	0	0	0	0	1	0
Private Practice	0	1	4	0	1	0	1	0	2	0	3	0	0	1	1	0	1	1	1	1
Total	2	3	4	2	1	2	2	1	5	1	3	0	0	2	1	0	1	1	2	1

TABLE D.—*Length of Second Stage.*

Length of second stage in hours	Under 1 hour.	Over 1 hour.	2	3	4	5	6	7	8	9	10	11	12	18	36	Not stated.
Hospital Practice	5	7	5	10	11	10	10	8	3	2	4	0	2	1	0	11
Private Practice	0	0	3	3	9	7	5	1	1	0	0	0	4	0	1	24
Total	5	7	8	13	20	17	15	9	4	2	4	0	6	1	1	35

TABLE E.—*Cause of Operative Interference.*

Cause of Interference.	Inertia.	Disproportion.	Rigidity.	Hæmorrhage.	Convulsions.	Ruptured Uterus.	Prolapsed Cord.	Breech. Impacted Head.	Acute Suffering.	Threatened Rupture.	Exhaustion.	Malposition.
Hospital Practice	49	15	4	2	2	0	3	2	1	1	2	7
Private Practice	30	14	3	2	2	1	1	2	1	0	0	4
Total	79	29	7	4	4	1	4	4	2	1	2	11

TABLE F.—*Result to Children.*

	Males Living.	Females Living.	Males Still-born.	Females Still-born.	
Hospital Practice	44	37	4	3	88
Private Practice	28	23	6	3	60
Total	72	60	10	6	148

TABLE G.—*Forceps Employed.*

Forceps employed.	Hospital Long Straight.	Hospital Short Straight.	Madden's Long Double Curved.	Madden's Short.
Hospital Practice	12	35	0	41
Private Practice	11	11	14	31
Total	23	36	14	72

TABLE H.—*Results to Mother.*

	Recovered.	Died.	CAUSE OF DEATH IN FATAL CASES.							
			Pyæmia.	Puerperal Fever.	Metro-Peritonitis.	Shock.	Hæmorrhage.	Secondary Hæmorrhage.	Convulsions.	
In Hospital	82	6	2	0	2	1	0	1	1	88
In Private	57	4	0	2	1	0	1	0	0	60
Total	139	10	2	2	3	1	1	1	1	148

These figures must, I fear, seem somewhat of the driest; nor would I venture to occupy the time of the Association with them, were it not that they demonstrate the fact that, compared with any other operation by which labour may be shortened, the application of the forceps, when judiciously resorted to, is a safe operation for the mother as well as for the child. The comparative advantages of the straight and the curved midwifery forceps have been warmly discussed from the days of Leveret and Smellie, by whom the pelvic curve was respectively claimed, to the present time. In this discussion, in which of late years a host of accoucheurs were engaged, Dr. Barnes has, with characteristic ability, led the onslaught on the straight forceps, which was as strenuously defended by the late Dr. Beatty of Dublin, and within the last few months the same cause has been ably espoused by Dr. Leishman of Glasgow. This discussion, however, appears to me to be interesting only on account of the ability with which it has been conducted; the two instruments being perfectly distinct and applicable to very different purposes.

In the Dublin Hospital, during my connection with it, the instrument generally employed was the short straight forceps, twelve inches in length, or, when a more powerful instrument was required, the long straight forceps, sixteen inches in length, which was improved by Dr. Denham, so as to be very efficient in most cases. Since then, however, Dr. Barnes's forceps has come into use in the hospital.

The instruments now before the Association differ in several respects from any with which I am acquainted; and, from some practical experience of their use, I venture to think that the modifications introduced into each of them, trivial as they may, perhaps, separately appear, will be found to facilitate their application, and to increase their utility.

I must premise that, every midwifery forceps being a compressor and a lever of the first order, as well as a tractor, its powers in these respects are dependent on its length and curvature.

The first instrument before us is a short straight forceps, possessing considerable power as a tractor. Its weight is but eight ounces. The length is ten inches, of which six inches are taken by the blades and four inches by the lock and handles; the latter are checker worked. The greatest space between the blades when locked is two inches and seven-eighths, and between the points one inch and a quarter. Great attention has been paid by the maker, Mr. White of Sackville Street, Dublin, to the avoidance of any sharp edges or points. The curve of the blades is by no means as acute as it is in the ordinary forceps, and commences half an inch above the lock, the interfering shank being bevelled internally and bent outwards, so as to form a space for the finger of the operator. The fenestra extending throughout the blades, and being as wide as is consistent with strength, the scalp protrudes through these openings, so as to cover the rims, and thus, to a great extent, protects the maternal passages from any contact with the instrument during the extraction. The shortness of the handle limits its compressing power, and facilitates its application in any position in which the patient may be. This instrument, which may be regarded as a simple tractor, is intended for cases of delay in the second stage of labour; and, having now used it during the last few years with perfect ease and success in upwards of a hundred cases myself, and also had favourable accounts of the experience of many gentlemen, formerly pupils of the hospital, who are now using this forceps in different parts of the world, I venture to recommend it as being easier of application and as effectual in ordinary cases of delay in the second stage of labour as any of the longer or double-curved instruments in general use.

It has been proved by the statistical reports of the Rotunda Hospital, that the dangers of the puerperal state bear a constant relation to the duration of the second stage of labour, which can neither be materially abridged nor materially prolonged without increased risk to the parturient woman. The proportion of deaths from metritis, puerperal peritonitis, and other diseases to which women are subject during convalescence after delivery, is much larger after long protracted labours than in cases in which delivery has terminated within the natural period.

The most frequent consequence of allowing the second stage of labour to run on for an undue time is uterine inertia; and this, in some few instances that have come within my knowledge, has led to fatal uncontrollable *post partum* hæmorrhage, the result of the complete exhaustion of the contractile power of the uterus, which might have been prevented had the forceps been applied in due time.

Laceration, inflammation, and sloughing of the recto-vaginal walls are also results, of which I have seen deplorable instances, of that morbid dread of instrumental delivery under any circumstances, which still seems to influence some. Rupture of the uterus is another, though fortunately rarer, sequence of labour being obstructed in the second stage. Nor is the child then less endangered than the mother; and due regard for its life, as well as for that of the parturient woman, demands that every accoucheur should be prepared to effect delivery as soon as there is the least indication of danger in the second stage. This he may do with ease and safety in nearly every case by an instrument such as the short forceps, which is so portable that the accoucheur can carry it with him, as I do, in the smallest pocket, and may apply it as soon as its use has been sanctioned by a consultation, without causing the patient the least pain, without altering her position, and even, as I have often done, without her being aware that any instrument was used; and it is so powerful a tractor that it is capable of effecting delivery in any ordinary case of difficult labour, when once the child has entered the pelvic cavity.

The long forceps is applicable to those cases in which it is deemed desirable to assist delivery before the head of the child has passed through the brim of the pelvis.

Dr. Barnes's double curved forceps is, in many respects, an admirable instrument. But it hardly possesses sufficient power of leverage and of compression for some of the purposes for which I consider the forceps applicable. Therefore, I would invite the attention of the Association for a moment to an instrument which possesses greater power as a compressor and as a lever, approaching more closely to the long forceps generally used in France, than to any instrument employed in this country, but differing materially from it. The long forceps now exhibited, though a somewhat formidable looking instrument, is intended to obviate the use of instruments far more formidable, being designed to deliver living children from living mothers in cases which must have eventuated fatally to both, were nature not assisted by art, and in which a few years ago an operation would have been unhesitatingly performed, involving death to the child and greater risk to the mother, for whose sake it would have been destroyed, than attends the application of the long forceps, by which both may be saved.

I regard this instrument as being in great measure a substitute for all child-killing instruments; and by resorting either to it or version, on the indication of premature labour in cases which would otherwise have necessitated craniotomy or cephalotripsy, I have been fortunate enough to escape the performance of either of these operations, which I consider as unjustifiable as well as unscientific when applied to living children.

My long forceps is a double curved instrument, weighing about twenty-six ounces. Its total length is 18 inches, of which 10 inches are occupied by the blades, which, when closed, approximate to within 2¾ inches at the widest point, and ¼ inch at the extremity, 3 inches by the lock, and nearly 5 inches by the handles, which are movable. By the latter arrangement the instrument, besides being more portable, may be applied as a short as well as a long forceps in the ordinary obstetric position. When a greater degree of power is required, the handles are adjusted, and then the instrument must be used in the supine instead of in the ordinary left lateral position. At the extremity of the handles is affixed a screw somewhat like that of the cephalotribe, by means of which the amount of compression exercised on the child's head may be exactly regulated. Strong shoulders are placed beyond the lock to increase the traction-force of the instrument. The shank between the blades and lock is so long that when applied to the head, however long it may be, there is no danger of the soft parts being nipped by the locking. The curves of the blades are by no means as acute as in the ordinary forceps, in some of which their curvature is that of a section of a circle so much larger than that of the average fœtal head that the instrument is in contact with it at only two points on which excessive and injurious pressure must, therefore, be made, and from which the instrument is very liable to slip; whereas in my forceps the blades were carefully moulded on a number of average sized fœtal heads, until a curve was obtained which would allow the most complete apposition between the blades and the child's head to which they were applied, and thus the injurious effects of the compressive power of the instrument, as well as the danger of its slipping, are both reduced to the minimum.

The compressive power of the forceps is generally underestimated; and the experiments of Baudelocque are still quoted as being conclusive on the point.

In my lectures on the forceps, published over four years, and in my edition of the *Dublin Practice of Midwifery*, I discussed this question, and need only repeat that by Baudelocque's own showing he was able to compress the fœtal head as much as half an inch in three out of nine cases; and, as was long since shown by Dr. Rigby, pressure slowly applied by the forceps to the plastic head of a living child will produce very different results from the violent and sudden force applied by Baudelocque to inanimate structures. Nor can any argument be needed to prove this fact, for everyone who has ever seen a case of labour must be aware of the extraordinary degree of compression the fœtal head will bear without the least injury.

Disproportion between the mother's pelvis and the child's head was the cause which led to the use of the forceps in 29 of my cases, and even a very considerable degree of disproportion may be thus overcome.

It should not be concluded, because a woman has some pelvic deformity, and because her medical attendants in former labours delivered her by craniotomy or cephalotripsy, that we should follow this example. I have applied the forceps in several cases in which craniotomy had been previously resorted to on account of some disproportion. It should never be forgotten that a living child may pass through a pelvis scarcely measuring three inches in its widest diameter, and that, therefore, even a considerable degree of pelvic deformity may admit of the delivery of a living child by the long forceps.

I have also used this forceps in cases of breech-presentation, in which the head was prevented from passing the brim by malposition, and also in head-presentations delayed in the same way. Long delay in labour from a rigid unyielding condition of the cervix uteri led to this operation in several of the cases reported in the foregoing table. The other cases in which I have resorted to the long forceps were chiefly instances of labour complicated by convulsions, by prolapse of the cord, by accidental hæmorrhage before the head had entered the cavity, by exhaustion, by threatened rupture; and in one instance I employed this instrument to effect delivery in a case of rupture of the uterus.

In such cases, where the symptoms are urgent, I have not considered it necessary to wait for the full dilatation of the os, and have never hesitated to employ this instrument, when circumstances rendered it necessary as soon as the os was dilatable, or could be sufficiently exposed.

Still, nothing but the most absolute necessity should ever induce us to deviate from the time-honoured rule that the os should be fully dilated before the forceps are resorted to.

Another rule of great value, though now very frequently disregarded, is that, in ordinary cases of difficult labour from inertia, the forceps should not be resorted to until a trial has been given to other means, such as friction over the uterus, change of position, and stimulating enemata of warm water and salt.

These having failed, and the application of the forceps having been first sanctioned by a consultation, and the bladder being emptied by the catheter, the position of the head should be ascertained immediately before the operation, and a dose of ergot should be administered. The patient is then generally placed under the influence of chloroform, and if the short forceps are to be used she is drawn to the edge of the bed in the usual left lateral semiprone position. The operator should sit facing the perinæum, introducing the index and second fingers of the right hand within the vagina behind the symphysis pubis, and feel for the ear of the child. This is deemed unnecessary by some writers; but when the short forceps is used it should be practised, inasmuch as the instrument, fitting better over the sides of the head and face, exerts a more equal pressure, and is less liable to slip than when placed in any other position. The instrument being first warmed and oiled, the upper or pubic blade is to be taken in the operator's left hand as light as a writing pen, and gently insinuated in the axis of the pelvis, by a slight wavy motion, between the two forefingers of his right hand and the child's head until the lock rests on the perinæum. In the same manner, using no force whatever, the second or sacral blade is to be introduced, the operator reversing the position of his hands. As soon as the locking is completed, the head is to be very gently drawn downwards and backwards, and then downwards and forwards until the vertex begins to emerge from the vulva, when the blades should be withdrawn, and the head helped out by pressure with the hand on the perinæum.

With regard to the application of my long forceps, I have only to say that it is most easily accomplished when the patient is placed on her back and draw down to the foot of the bed; but, when she objects to this, it may be readily accomplished by drawing her hips well over the edge of the bed, and following the same course as that directed for the application of the short forceps, with the exception that it is not so essential to be particular about the position of the child's head, as the instrument must be applied in the largest or transverse diameter of the pelvis, one blade being in each ilium; and hence, as I pointed out in a work to which I have before referred, it is a matter of comparatively little importance whether they are applied antero-posteriorly or transversely over the child's head.

The short forceps now exhibited is, I believe, about the safest instrument of the kind that can be employed, and the long double curved one I hold in my hand is, perhaps, the most powerful. But I must add that an instrument so powerful for evil as well as for good, as any long double curved forceps must be, is not to be rashly resorted to. And when we remember that Smellie, who first introduced the long forceps into this country, was so fearful of the possible abuse of its powers as to abstain from recommending its use, or even from exhibiting it to his class, we should at least exercise no ordinary discretion in our freer use of what an old writer terms "this noble instrument".

REPORT OF A CASE OF PARACENTESIS THORACIS.*

By G. H. PHILIPSON, M.A., M.D.Cantab., F.R.C.P.Lond.,
Physician to the Newcastle-upon-Tyne Infirmary, etc.

PATRICK O'NEIL, aged 22, single, labourer, was admitted into the Newcastle-upon-Tyne Infirmary, under my care, March 5th, 1874. He stated that he had been unable to follow his employment for two weeks, but that he had not been well for three months, having suffered from cough; and that, at the commencement of his illness, he had experienced a severe sharp pain in the left side of his chest, which was made worse by breathing.

At the time of his admission, he complained greatly of difficulty in breathing, of thirst, and of general weakness. On inspection of the chest, it was seen that the left side was stationary during forced respiration, and appeared larger than the right; and that the intercostal spaces were widened, the depressions being effaced. On percussion, the left side was found to be wholly dull, in front from the clavicle to the lower boundary of the chest-wall, and behind as high as the spine of the scapula. Respiration, vocal resonance and fremitus, and tussive resonance, were absent. On the right side, the respiratory sounds were puerile in character, accompanied with sonorous rhonchus; while the voice-resonance and fremitus were very distinct. The right side of the chest at the nipple-line measured 16$\frac{7}{8}$ inches, and the left side 17$\frac{1}{8}$ inches; the left being a quarter of an inch larger than the right. The heart's impulse was visible and perceptible two and a half inches to the right of the sternum. The sounds were distinct and without murmur. The pulse was 120, hard and small; the temperature was 103 deg. Fahr. He was much emaciated, the biceps readily starting into ridges upon being percussed. He was of the lymphatic temperament, having dark-brown hair, long eyelashes, dark grey eyes, and thick upper lip. He was ordered quinine, and to have the chest well rubbed every night and morning with the liniment of turpentine and acetic acid.

March 11th. The urgency of the symptoms had so increased as to denote serious interference with the functions of life, and it was determined to afford relief by paracentesis. The operation was performed by Mr. George Rowell, junior house-surgeon, with the aspirator, when five-and-a-half pints of a yellowish-coloured clear liquid was withdrawn, which became semi-solid after a short interval. The liquid continued to flow for one hour and a quarter, and during the time the patient was frequently required to inspire deeply. During the passage of the liquid, the heart was observed gradually to resume its normal position, and finally was seen beating in the fifth intercostal space on the left side, about one inch below, and half an inch within, the left nipple. After the operation, the patient appeared much relieved, and voluntarily expressed his comfort. Respiration was then clearly heard in the left infraclavicular region, as also the vocal resonance. He was ordered ten grains of the compound powder of ipecacuanha at bedtime.

March 18th. For the last three days, he had been able to be out of bed, and to walk about the ward. He expressed himself as able to breathe with ease, but still complained of thirst and weakness. His pulse was 120, and temperature 103 deg. Fahr. Vocal fremitus was distinctly perceptible over the left back as low as the eighth rib. Respiration and vocal resonance were also distinctly heard. The percussion-note was clear from the eighth rib upwards. The respiration on the right side was much less puerile, and unaccompanied with rhonchus. The measurement of the right side of the chest at the nipple-line was 17 inches, and the left 17 inches. He was ordered cod-liver oil in combination with the syrup of the iodide of iron, three ounces of port wine, and the full meat-diet.

March 25th. He appeared stronger, and complained less of thirst. His pulse was 110, and temperature 102 Fahr. Respiration was clearly heard at the left base; also vocal resonance.

April 8th. His weight was 8 st. 3½ lb. Pulse 100, and temperature 100 deg. Fahr.

April 22nd. His weight was 8 st. 5½ lb. Pulse 100, and temperature 98 deg. Fahr. He was able to be out in the garden every fine day, and was taking his food with relish. It was noted that his shoulders were equal in height, and that there was no curvature of the spine.

REMARKS.—This case has been recounted with the view of directing attention to the value of the operation of paracentesis in cases of extensive pleuritic effusion, not only in preventing a fatal result from impending suffocation, but also in expediting the restoration of the patient; the simplicity, painlessness, and freedom from danger of the operation by the aspirator being well exemplified. It also illustrates the necessity of not delaying the operation until the lung has become totally unfitted for free expansion, and displaced organs have become permanently fixed by pleuritic adhesions. The interest of the case is further increased by the considerable and long continued elevation of the temperature, and the prolonged quickness of the pulse. In the chart, extended over a period of five weeks, a range of temperature is indicated between 103.6 and 98 deg. Fahr., and a pulse between 120 and 100. When the temperature and pulse are reviewed together, and with the emaciation and temperament superadded, the deposition of tubercle is indicated, and the fear that the pleurisy was diathetic, and not purely inflammatory, predicated.

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* Read before the Northern Branch.

A CASE OF EPITHELIOMA OF THE BODY OF THE UTERUS TREATED BY DILATATION, THE CURETTE, AND LOCAL APPLICATION OF TINCTURE OF IODINE.

By THOMAS CHAMBERS, M.R.C.P., F.R.C.S.Edin.,
Physician to the Chelsea Hospital for Women, etc.

MRS. T., aged 56, widow of a naval officer, had been married twenty years, but had never been pregnant. Menstruation was regular up to her fiftieth year, when it ceased, without inconvenience or irregularity of any kind. For four years she continued to enjoy good health. About this time, she became subject to sudden and frequently repeated attacks of uterine hæmorrhage, occurring at intervals of six or eight weeks. Sometimes the discharge continued two or three days; at others, six or eight days, or even longer. During the two years that this discharge had continued, she had consulted different medical men, who differed considerably as to the cause of the hæmorrhage.

I saw this lady for the first time on January 10th, 1873. She appeared to be in pretty good general health, though she thought herself thinner than she was three months before. For some time she had had a constant feeling of depression, without being able to account for it—a condition most unusual to her. She had no pain of any kind, excepting an occasional shoot through the groins and along the lower part of the abdomen. These pains were not frequent; and when they did occur, they quickly passed away. Her only trouble was the frequent vaginal hæmorrhages. Pulse 98; temperature 99; no cough, perspirations, or shiverings.

On a careful examination of the abdomen, nothing could be seen or felt save a small round body immediately behind the pubic arch, which could be readily pressed down into the pelvis. There was no enlargement of the glands of the groins. The vagina was perfectly healthy as far as the touch could be a guide. The os and cervix uteri were also healthy and natural to the touch. The body of the uterus was, however, a little larger than it ought to be at the patient's period of life. By placing the right hand on the round body above the pubes, and the left index finger against the os and cervix uteri, the uterus could be accurately measured, and freely moved in any direction without pain or inconvenience, there being no thickening or deposit of any kind in the pelvis. The sound passed with ease three inches and three-quarters. When the fundus was touched by the end of the sound, a sharp shooting pain was experienced, such as she had felt before through the groins. The case being regarded as one of polypus, the sound was gently moved about the cavity without detecting anything beyond a general unevenness of surface. On withdrawing the instrument, the hæmorrhage was so profuse as to necessitate the plugging of the vagina with cotton-wool saturated in tincture of perchloride of iron. This free hæmorrhage, associated with the nodular surface of the uterine cavity revealed by the sound, the occasional shooting pains through the groins and pelvis, and the faintish smell imparted to the finger while examining the uterus, these facts, when in association, pointed to the case as one of probable malignant disease of the body of the uterus, rather than polypus. The loss sustained on this occasion was considerable, and the patient did not recover from its effects for ten or twelve days. As her means were limited, she was admitted into a private room in the Chelsea Hospital for Women on January 22nd, 1873.

January 24th. A tangle-tent was introduced, as large as the os and cervix would admit.

January 25th. On withdrawing the tent, a free flow of blood followed, intermixed with small granular bodies. These, under the microscope, proved to be little masses of cells of a peculiar shape, being for the most part bottle-shaped. These facts supported the opinion as to the malignant nature of the disease. The cavity was washed out with perchloride of iron, and three fresh tents introduced.

January 26th. The cervix being now fully dilated, she was put under chloroform. The anterior lip being fixed with a vulsellum, the left index finger was passed into the uterine cavity, which was lined by nodular growths differing considerably in size, there being no healthy surface recognisable. About half way up the uterus, there could be felt what appeared to be a number of these nodules strung together, forming a band across the cavity from side to side, divided to some extent into an upper and a lower part. My colleague, Dr. Aveling, examined the case with me.

The nodules or vegetations were soft and friable, bleeding freely at the slightest touch. We were both of opinion that this was a well marked case of malignant disease of the body, chiefly submucous, as far as could be made out. Holding the uterus fixed by the vulsellum, I scraped out the cavity freely with Sims's curette until every nodule had been removed, leaving a smooth uniform surface throughout the cavity. When this had been accomplished, all hæmorrhage ceased. The cavity was well wiped out with dry cotton-wool, and then swabbed with the compound tincture of iodine; a suppository was put into the bowel, and the patient removed to bed. She felt faint and depressed for a few hours after the operation, but this soon passed off. For ten days, there was a free discharge of dark grumous fluid from the vagina, which was washed out twice daily with carbolic acid lotion. The patient was well nourished, and had a moderate amount of wine and stout daily. A mixture of quinine, iron, and Fowler's solution, was taken thrice daily; a chloral draught at bedtime when necessary.

February 19th. A month had passed since the operation, without any return of the hæmorrhage; neither had there been any vaginal discharge for the last ten or twelve days. The shooting pains in the groins had not been noticed during the last three weeks. The vagina, os, and cervix uteri, were all healthy, and in much the same state as before the operation. The sound passed three inches without detecting any irregularity of surface, such as was noticed when first examined; and, notwithstanding the freedom with which the instrument was moved about in the cavity, there was no hæmorrhage. The general health had improved; she felt herself again, and was anxious to go to the country. She was discharged at her own request. External palpation showed that the round body, which was noticed behind the pubes when first examined, had to a great extent disappeared.

On a careful review of the whole case, the age of the patient, the sudden appearance of hæmorrhage after menstruation had ceased for four years, the alarming hæmorrhage which followed the examination of the uterus by the sound, the microscopical appearances of the cell-growths, and the general physical signs observed by Dr. Aveling and myself, cannot, I think, admit of any doubt as to the case being one of malignant disease of the body of the uterus. The results of treatment have so far (July 1873) been satisfactory; but there is every reason to fear that time only is necessary for the reappearance of the disease. Should this case again come under my notice under circumstances so favourable—viz., freedom from complication with surrounding parts, the cervix uteri, groin-glands, etc.—I must confess that the question of gastrotomy, with a view to the removal of the entire organ down to the cervix, ought not to be overlooked.

ON THE CONSTRICTOR ACTION OF THE INTERCOSTAL MUSCLES.

By ARTHUR RANSOME, M.D., M.A.,
Late Examiner in Anatomy, Physiology, and Pharmacology to Cambridge University (1868-1869).

AMONGST the various actions which have been attributed by different observers to the two layers of intercostal muscular fibres, no note appears to have been taken of a function which may, I think, be fairly assigned to them, namely, the indrawing or constriction of the walls of the thorax. It is probable that the supposition of the rigidity of the bony levers (the ribs) has in some measure prevented the recognition of this action; and the fact that constriction of the chest-wall takes place only during forced breathing, would prevent it from being remarked in experiments upon the ordinary respiration of animals.

In Traube's remarkable series of vivisections (*Gesammelte Beiträge zur Pathologie und Physiologie*), there are, indeed, indications that, in the difficult breathing produced in rabbits by section of the inferior laryngeal nerve, the lower ribs are drawn inwards, probably by the action of the diaphragm; and the same influence is to be remarked in the cases given by Mr. Le Gros Clark in the *Proceedings of the Royal Society*, vol. xx, p. 125.

I have, moreover, myself brought forward evidence, both from actual experiment and from stethometric measurements, which proves that the upper ribs, as well as the lower, are usually pliable to a considerable extent in living subjects (*Proceedings of the Royal Society*, No. 139, 1872); and the fact that, in forced breathing in man, a distinct change takes place in the chord-lengths of the ribs, may readily be demonstrated by means of measurements with suitable callipers.*

It is important that the fact of this bending of the ribs should be fully recognised before an attempt is made to explain by what forces it is produced, and the discussion of the difficult question of its causation should not be allowed to prejudice the observations upon which it rests. That the ribs do bend in forced breathing, may be seen by any one who will use the suitable instruments; how they are bent, is much more difficult to prove. It is, however, necessary that the subject should be fully considered, and I venture to adduce the following reasons for assigning to the intercostal fibres a large share in the work.

Since the change in the curvature of the ribs takes place, not only in the lower portions of the thorax to which the diaphragm and abdominal muscles are attached, but also as high as the third, or even the second, pair of ribs, it is evident that it must be effected by some of the intrinsic thoracic muscles.

But it is probable that no muscles are so advantageously placed for performing this duty as the intercostal fibres. When the first ribs are fixed by the cervical muscles, and the lower ribs are drawn downwards and even inwards by the abdominal group, then any fibres between the other ribs acting in concert, whatever their direction, will necessarily draw inwards the intervening bony hoops.

The shape of the thorax is such that, if the ribs below the first are capable of being bent, they must be drawn inwards by the contraction of muscles placed between them.

From the first to the seventh, the rib-circuits descend in widening diameters, and the planes of the intercostal spaces, instead of being vertical, are more or less inclined. The force exercised by the muscles in these spaces may therefore be resolved in a vertical and a horizontal plane; and the amount of power drawing inwards along the latter plane will, *cæteris paribus*, depend upon the obliquity of the intercostal plane, and will be greatest in the upper part of the thorax. The tendency throughout, wherever there is any slope at all, will, however, be inwards.

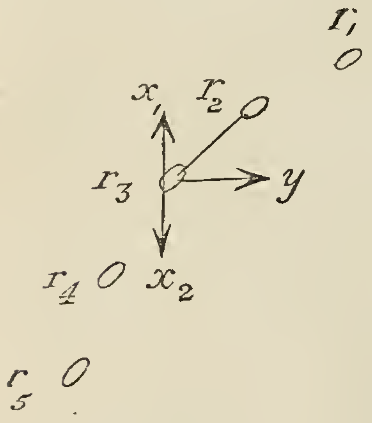

Fig. 1.

Let r_2, r_3, r_4, r_5 (fig. 1), represent transverse sections of the second, third, fourth, and fifth ribs respectively; then any force acting between two ribs, r_2 and r_3, in the direction of the intercostal space, r_2 r_3, may be represented by the lines drawn in the directions x and y, at right angles to one another, and the lengths of these lines will depend upon the obliquity of r_2 r_3.

Moreover, the oblique direction of the fibres of the intercostal muscles adapts them still more especially for a constrictor action.

When two elastic bands (A B and C D) are stretched crosswise between two bars (RP and R′P′) capable of being bent laterally, but not from above downwards, and which can only be approximated to a limited extent, then, when this approximation has been produced, the tendency of the further action of the bands is to draw together the ends of each bar. In the language of mechanics, the forces they exert may be resolved in the directions RR′ and RP, or R′P′ and *vice versâ*. When the bars are quite straight, no moving effect will follow, since the bars cannot then yield to the forces acting along RP or R′P′, but they will be in a position of unstable equilibrium, such that the slightest curvature in the bars will at once permit the bands to contract, and a further bending will take place in the direction of the curvature so introduced.

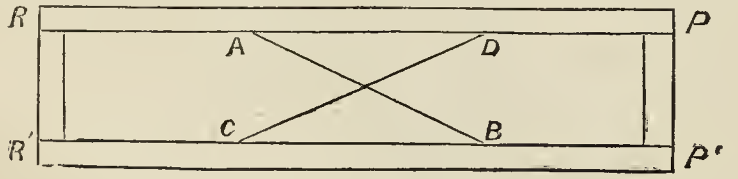

Fig. 2.

Now, this latter case is precisely that of the ribs when acted upon by both external and internal fibres at one time, and since the rib-levers are free to move at their anterior extremities, and are more pliable and thinner at these points, it follows that the chief bending action will take place in the anterior wall of the chest, and a general indrawing of this part of the thorax will be the result. The effect of each fibre, or of each pair of fibres, is necessarily very small, but the aggregate power they can exert is probably quite sufficient for the purpose.

It is interesting to notice that in other parts of the body, wherever constriction of a cavity is required, there we find an oblique arrangement of muscular fibres, generally in two layers, running in opposite directions: in the abdomen, the external and internal oblique muscles; in the pharynx, the middle constrictor spreading fan-like, with its outer fibres directed across those of the upper and lower muscles. In the bladder and stomach, the same arrangement is to be observed; and even in the heart, although the muscles are spiral in their arrangement, their fibres are so placed that they run in a similarly opposed fashion.

Viewed in this light, the intercostals may perhaps be regarded as two large muscles, having, like the rectus abdominis, ligamentous or bony portions placed at intervals in their course, modifying, and in some ways increasing, their power, but not altogether preventing them from exerting a combined influence, and so constricting the cavity of the chest.

This account of the *united* action of the intercostal muscles, working in concert with the external muscles of expiration, does not clash with the received doctrines respecting the inspiratory functions of the external intercostal, and intercartilaginous muscles acting either independently, or together with the cervical and levator muscles of the ribs. The experiments of Traube on rabbits seem to be absolutely conclusive on this point. (*Experimentelle Untersuchungen*, p. 158.)

Again, the rib-depressing power of the internal intercostal muscles acting alone would still be possible, and they might also combine with the abdominal muscles to draw down the ribs after they had been raised by the levatores costarum and the other inspiratory muscles.

It is highly probable, also, that in the upper regions of the thorax the triangularis sterni assists in the process of constriction, and that the diaphragm and abdominal muscles produce some portion of the inbending of the ribs below the sixth.*

The question of the indrawing and constriction of the chest-wall during forced expiration is not without much practical importance, since it bears closely upon the pathology of emphysema, and its production by asthma and chronic bronchitis.

In making stethometric observations upon persons suffering from bronchitis or phthisis, I have often noticed that, whilst the patient has been making forced efforts at breathing, cough has come on, and the ribs have been immediately drawn inwards to a far greater extent than had been accomplished voluntarily, showing that the reflex stimulation of the muscles of expiration, by irritation of the bronchial mucous membrane, was able to accomplish far more than the power of the will.

Now, if in forced expiration, as in coughing, the lung should be compressed by the direct force of the indrawn ribs, then in the natural condition, this pressure will take place at the most favourable moment, when the lung is already partially emptied of air, and when the squeezing effect will be comparatively harmless; but if there be any obstruction to the free exit of air, as in bronchitis or asthma, then the lung will be caught in the position of partial inspiration, and, so to speak, will be taken at a disadvantage, with all its cells distended with air, and ready to be forced into any inequalities in the compressing walls. Here, then, we have an intensification of all the influences which have been considered as the expiratory causes of emphysema.

The subject is not without interest also in relation to the peculiarities in the movements of the chest-wall in pleurisy, emphysema, chronic bronchitis, and phthisis; but on these points I must refer to a paper on "The Respiratory Movements in Man", published in the last volume of the *Medico-Chirurgical Transactions*.

SEVERE HÆMORRHAGE FROM TELANGIECTASIS OF GUM.

By JAMES E. ADAMS, F.R.C.S.,
Senior Assistant-Surgeon to the London Hospital.

THE following case appears to me to be of sufficient interest and importance to justify its isolated publication; and I am the more desirous to place it before the profession, as I believe it to be a somewhat rare occurrence. At any rate, I have never seen another like it; and, in my hasty search through a few books, I can find an account of one case only of the same kind, recorded by Mr. Salter in Holmes's *System of Surgery*.

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* Also the subject of a communication to the Royal Society, but not yet published in the *Proceedings*.

* On these points, I would refer to Mr. Le Gros Clark's "Remarks on the Mechanism of Respiration", *Proceedings of the Royal Society*, vol. xx, p. 122; to a paper "On the Action of the Intercostal Muscles", by Dr. Dwight, jun., in the *Boston Medical and Surgical Journal*: to the first of Professor Humphry's Lectures on "Human Myology", delivered before the College of Surgeons; and to some remarks of my own "On the Action of the Intercostal Muscles", in the BRITISH MEDICAL JOURNAL for October 26th, 1872.

My patient, who was sent to me by Mr. Hewitt of Kensington, was a young man about twenty years of age. When I first saw him, I was struck with his exceedingly blanched and waxy appearance. His face more resembled that of a person actually dead from hæmorrhage, than that of one able to move. Between two and three years ago, he had the first right upper molar extracted. No particular bleeding occurred, and the gum healed. About six months later, hæmorrhage began to occur at intervals from the gum at the site of the cicatrix—first in small quantities; subsequently more copiously and more frequently, until latterly there was hardly ever a space of twenty-four hours without bleeding. It often occurred at night; and, the mouth filling rapidly, he was on more than one occasion nearly suffocated. Having ascertained that there was no history of hæmorrhagic diathesis, I came to the conclusion that there must be some kind of vascular tumour, though I could not see it at the time, as the surface was covered with clot, which I did not remove until I was prepared with the galvanic cautery. This being ready, I wiped away the clots, and discerned a small plexiform nævus on the surface of the gums, between the second malar and bicuspid teeth. It immediately bled from three points in continuous jets, each stream being equal to that of a digital artery at the metacarpo-phalangeal joint. A free application of the cautery at once arrested the bleeding and completely destroyed the growth. There has been no bleeding since. It is somewhat difficult to understand how the patient could have allowed it to go on so long, he having had absolutely no advice until he saw Mr. Hewitt only the day before he was sent to me.

REVIEWS AND NOTICES.

Contributions to Surgery and Pathology. By Cæsar H. Hawkins, F.R.C.S., F.R.S., Surgeon to the Queen, Consulting Surgeon to St. George's Hospital, etc. 1874. (Printed for private circulation.)

All Mr. Hawkins's friends and pupils will rejoice on seeing this volume, to think that what has long been a source of regret to them has at last been remedied; viz., that the numerous papers and clinical lectures from which they derived so much instruction during their early days of learning are no longer scattered about in the pages of various periodicals of widely differing dates, but are collected and accessible in a single work. And all those who cultivate the science and art of surgery will be well pleased to know where to find such ample and such good material as Mr. Cæsar Hawkins's papers furnish on almost every part of surgery and pathology. Our only regret is, that Mr. Hawkins did not give them a wider circulation by publishing them in the ordinary way, instead of merely sending round a limited number of copies to his friends and to the journals and public libraries. We hope, however, that the latter have been freely supplied, so that readers may know where to consult a work which must always be referred to as an important authority upon the matters which it handles.

To give an adequate idea what those matters are is difficult in the compass of a notice like this; they embrace papers, of which the earliest (on the contagion of small-pox after death) was published at the beginning of 1829, whilst the latest seem to be a course of clinical lectures in 1854. These papers are one hundred and six in number, besides three very interesting occasional addresses, and a note "On the Relative Claims of Sir Charles Bell and Magendie to the Discovery of the Functions of the Spinal Nerves", the substance of which appeared in the British Medical Journal so lately as 1868.

Even had these papers no other value than the historical interest which is all that Mr. Hawkins claims for them, the book would be an indispensable contribution to the surgical literature of the present day. But this is far from being the case. Mr. Cæsar Hawkins has long been esteemed one of the greatest masters of the art of surgical diagnosis, and diagnosis is a matter which is not affected by the changes of time and fashion. To instance only two of the many subjects treated of in this work—the observations on the diagnosis of the various forms of ulceration of the tongue, contained in vol. i, pp. 214-217, and those on the diseases of the testes, vol. ii, pp. 274-290—are as fresh and as valuable at the present time as they were at the moment of their delivery, and will well repay the perusal of any practitioner, whatever may have been his experience. There are some subjects which Mr. Cæsar Hawkins made more peculiarly his own; such are the subjects of tumours in cicatrices, and of congenital tumours in the neck, the original papers on which will be perused in these volumes with interest, but are already familiar to all surgical students. The celebrated courses of lectures also on tumours in general, though the description of its subject has now been modified, remains as one of the great landmarks of that department of surgical pathology, and its perusal is indispensable to any exhaustive knowledge of the subject.

It is, perhaps, less known that Mr. Hawkins was for a long while the only surgeon who had performed ovariotomy with success in a metropolitan hospital; and it is very interesting to read his careful and judicious remarks on the then vexed question as to the justifiability of the operation (vol. i, p. 137), delivered in the year 1846, at a time when many surgeons altogether repudiated the proposal. They show that, though no reckless innovator, Mr. Cæsar Hawkins was equally far from being opposed to any novel proposal merely on account of its novelty. Another new operation which he did very much to introduce into general notice and reception by his successful practice is colotomy, and the celebrated paper which he wrote on this topic in 1852 (vol. i, p. 100) forms one of the leading authorities on the subject. Injuries of the head, injuries and diseases of the spine, the surgical affections of the whole urinary tract, are parts of surgical pathology which no one who is not acquainted with Mr. Hawkins's writings can have studied adequately any more than he could know them apart from Brodie's writings.

There is in fact much in common in the career and in the writings of both these great lights of the St. George's school. Both were most distinguished in the highest province of their art, and obtained fame more as correct diagnosticians and judicious practitioners than as mere manipulators, although both could be as daring in the operating theatre, when necessary, as any surgeon should be. Yet, as a general rule, Mr. Cæsar Hawkins was more anxious to teach his pupils how to avoid an operation than how to perform it; how to save the leg rather than how to cut it off. Those who enjoyed the great advantage of his teaching will always look back to him as the model of a sagacious and successful surgeon. Those who had not that inestimable opportunity may, from these volumes, form an idea, however inadequate, of the grounds on which that reputation was based. The whole profession, which looks up to him as one of its highest ornaments, and derives lustre from his extensive attainments and character of stainless honour, will join in congratulating him on his having left in these volumes so worthy a memorial of a long career of distinction and usefulness.

Typhoid Fever: its Nature, Mode of Spreading, and Prevention. By William Budd, M.D., F.R.S. London: Longmans, Green, and Co. 1873.

Although the communicable nature of enteric fever is, to some extent, even in this country, admitted, it is yet believed to be so slight, that in practice it may be disregarded. This has probably arisen from our notion of communicability having been derived from small-pox, measles, typhus and scarlet fevers. The rapid and extensive spread of these diseases has compelled attention to communicability as one of their most important characters. But, although enteric fever may not spread exactly in the same way or to the same extent as the diseases referred to, and though we may think Dr. Budd mistaken in referring enteric fever to the class of diseases which we have just mentioned, we firmly believe that it is more communicable than it is thought to be; that, like cholera, it may be introduced into a house or a locality by a single case, from which the disease will spread as an epidemic. The importance of this doctrine for which Dr. Budd contends—although we may not be prepared to admit, with him, that it is the "master-fact" in the history of the disease—can hardly be overrated; and its almost total disregard by the public and the profession, apart from other obvious considerations, more than justifies Dr. Budd in placing before the profession, in a completer form than he has hitherto done, views of which he has long been the able advocate.

Dr. Budd's contention is, that enteric fever is essentially a contagious disease; that the contagious matter is contained in the intestinal discharges; that this matter reaches the human body by means of air and water, and that its presence is necessary and equal to the production of the disease. In support of these propositions, Dr. Budd gives several illustrations, three of which appear to us so important, that we make no apology for narrating them at some length. The village of North Tawton had enjoyed a marked immunity from enteric fever, when, on July 11th, 1839, a first case appeared. This case was soon followed by others, and, from the last-mentioned date to the beginning of the following November, "more than eighty of the inhabitants had suffered"—truly a mighty epidemic for a small village. But, says Dr. Budd, "during the prevalence of the fever in North Tawton, it so happened that three persons left the place after they had become infected. By a fatality which is but too common under such circumstances, all three communicated the disease to one or more of the persons by whom they were surrounded in the new neighbourhood in which they fell ill. Two of these three persons were sawyers by trade, who had hired themselves for a few weeks to a timber-merchant living in the village. While these men remained in North Tawton, they lodged in a court with a single and a common privy, and next door to a house in which the fever was. In the course of time, both these men sickened for the disorder, and, on the occurrence of the first decided symptoms, both returned to their own homes in the parish of Morchard, about seven miles off.

"The first was a married man with two children. He left North Tawton on August 9th, being already too ill to work. Two days after reaching Morchard, he took to his bed, and, at the end of five weeks, he died. Ten days after his death, his two children were laid up with the same fever, and had it severely; the widow escaped. The other sawyer was a single man, and an aged couple who lived with him were the only other inmates of the house. Like his comrade, he was driven from North Tawton by indisposition, which rendered him unable to follow his employment. He began to droop on July 26th, but did not leave for Morchard until August 2nd. On the 3rd, he finally took to his bed. His attack was severe; but, after a long struggle, he recovered. When this man was at his worst, a friend, who came to see him, was called upon to assist in raising him in bed. While thus employed, the friend was quite overpowered by the smell from the sick man's body. He felt very unwell from that time, and continued to be harassed for days afterwards by a sense of the same pestilent smell and by a fixed impression, which, under the circumstances, was natural enough, that he had caught the fever. On the tenth day from the date of this event, he was seized with a violent shiver, which was immediately followed by an attack of typhoid fever of long duration. Before he became convalescent, two of his children got the same fever, as well as a brother who lived at some distance, but who had repeatedly visited him during his illness.

"The houses occupied by these four men lay some way apart, and, unless underneath their roofs, there was no fever at the time in that part of the country.

"Was this series of events, it may now be asked, the result of chance, or the work of contagion? If any rational person should entertain doubts as to the true answer to be given to this question, the history of the next case may be safely left to resolve them. The subject who was the means of propagating the disorder in this instance was a widow named Lee, residing in North Tawton. She began to droop on August 20th. On the following day, not knowing what was impending, she went to visit her brother, a farmer, who occupied a large farm in the hamlet of Chaffcombe, about seven miles off. On the 23rd, she was laid up. On the 24th, I was sent for to see her, and found her in bed in the first stage of fever." This case, which recovered, presented the enteric eruption and the other known symptoms of enteric fever. A few days after Mrs. Lee's convalescence, "Mrs. Snell, who had nursed her, fell ill of the same fever. Her case was very severe, and, after a protracted struggle, terminated fatally on November 4th. The husband (Mr. Snell), who had spent the chief part of his time in his wife's sick-room, and had sat up many nights by her, was the next sufferer. He began to droop in the last week of October. After having lain for some time in a precarious state, he recovered. While he was yet ill, at the end of three weeks—in fact, from the date of seizure—one of the farm-apprentices was attacked in the same way. Then followed a lad employed on the farm; and then Miss S., who had come to take charge of the house after the death of Mrs. Snell. Next in order came another apprentice; and again, as a last group, a servant-man, a servant-girl, and another young person (a daughter of Mrs. Lee), who, until she was laid up, had acted the part of nurse. As far as external conditions went, the sanitary state of the homestead which had become the seat of this terrible scourge differed in nothing from what it had been for many years before, during which the household had continued to enjoy perfect health. The only new incident in its history was the arrival of Mrs. Lee from the infected village, seven miles off, with the fever upon her. What, perhaps, is still more to the point is, that many other homesteads lay near to this one, which were far worse off in respect of these same conditions, but in which no fever of this or any other kind existed. There was no single case of the sort, indeed, within miles of the place, or nearer than North Tawton, whence the taint had been imported.

"The outbreak, severe as it already was, did not, however, end here. In order to lighten the burden of so heavy a sick-list, the servant-girl already referred to as one of the sufferers, was sent to her own home (a small cottage four miles away) as soon as the first symptoms of illness appeared. Here she lay for several weeks under my care. Before she had recovered, her father, a farm-labourer of the name of Gibbings, was likewise seized, and narrowly escaped with life. A farmer, named Kelland, who lived across the road, and who visited the man several times during his illness, was the next to take the disorder. His case was, in turn, followed by others under the same roof; and the fever, spreading from this to other houses, became the focus of a little epidemic, which gradually extended to the whole hamlet."

The next instance, although, to our mind, not so conclusive as the last, is still very instructive. In November 1853, about one hundred and forty persons attended a ball in the hostel of the little town of Cowbridge, in Wales. Almost immediately after this ball, about fifty of those who had attended it—a truly large proportion, when, as Dr. Budd says, it is probable that many of them did not drink of the water to which the origin of the disease was traced—were seized with fever, and eight of them died. "Among the sufferers (says Dr. Budd) there was a considerable proportion who had never been in one another's company, except in the Cowbridge ball-room. It is clear, therefore, that they had in some way contracted the fever there, and that the typhoid poison was present at this hostel in no common degree of force and intensity. It is not recorded that fever was specially prevalent at the time in the neighbourhood, and, with the exception of one or two persons who lived in the house, those who attended the ball appear to have been alone attacked."

"In the course of" (continues Dr. Budd) "the nineteen years which have since elapsed, I have been consulted professionally by eight persons who caught fever at these balls. From them I learnt that the one peculiarity which distinguished their illness was the extreme shortness of the time which intervened between the reception of the infection and the actual development of the fever. In *four days*" (the italics are ours), "all eight had already taken to their beds; two were laid up on the *second day*, and two others were seized with violent vomiting and purging *the day after* the balls, *and went straight into the fever from that time.* Indeed, so rapidly, in many cases, did the illness supervene, that the outbreak at first was supposed to be, not one of fever at all, but the result of common chemical poisoning."

On inquiry into the origin of this outbreak fifteen months afterwards, Dr. Budd ascertained that there had been a case of enteric fever in the person of a gentleman visiting the hotel, and who had left it hardly convalescent, on account of the approaching festivities, two days before the ball. The diarrhœal discharges of this gentleman passed into a cesspool in such close proximity to the well, used for drinking purposes by the inmates of the hotel, and by those who attended the ball, that, "under conditions of soil and locality, percolation from one to the other was almost inevitable." In a note, Dr. Budd says that the landlady and several members of the household had fever; but it is not stated whether the illness of the household preceded or followed the illness of the gentleman referred to.

The last example which we shall quote is the account of an outbreak of enteric fever in the Convent of the Good Shepherd in Arno's Court, near Bristol. In the summer of 1863, one of the girls belonging to the reformatory of the convent left for service in a town twenty miles off. In November of the same year, she contracted enteric fever, and, on the certification of the physician in attendance that the disease was not dangerous to others, this girl, with the fever actually upon her, was re-admitted to the convent. On January 4th, six weeks after her admission, the first case of enteric fever arose in the convent; on January 11th, there appeared two others, and so on, until, by March 2nd, "more than fifty of the inmates had been stricken, three had already died, and two more, including the chaplain, were lying at the point of death." Such, (continues Dr. Budd) "in an establishment in which hitherto no single case of typhoid fever had ever occurred, were the fruits of the doctrine, that typhoid fever is the result of bad drainage only, and is not in any way contagious."

We have given the history of these outbreaks at some length, both on account of their intrinsic value and as being, in our opinion, the best which can be urged in favour of Dr. Budd's view; but the instances are by no means of equal value as evidence of Dr. Budd's contention. His most determined opponents, we imagine, must admit that the North Tawton case is conclusive in favour of personal communicability; but we do not feel that the same can be said of the other two cases. In reference to the Cowbridge epidemic, the inquiry was made fifteen months after its occurrence, at a time when it is probable that many important details had escaped the memory of the witnesses. Accuracy is difficult even to cultivated persons, much more so to rustic innkeepers and their domestics, more especially when the subject concerning which they are giving evidence is fifteen months old. But an opponent would draw a very important objection to Dr. Budd's conclusions from the Cowbridge report, as it stands. Dr. Budd says, what we can confirm from personal experience, that the most remarkable feature of the Cowbridge cases was the rapidity with which the fever developed itself. In four days, we are told, eight had taken to *their beds*, two were laid up on the *second day*, and two others were seized the *day after* the ball. In other words, the period of incubation was in these cases wanting, the actual disease beginning almost the very moment the poison entered the system. The bearing of this appears to us all-important in reference to the case of the gentleman visiting the hotel; and we think it would not be unreasonable to suggest that the gentleman referred to did not *carry* his disease to the hotel, but *caught* it there with the same rapidity as some of the ball-sufferers—a circumstance which would naturally suggest that he had arrived at the hotel ill—a suggestion which, but for the large number of the ball-sufferers attacked, would have appeared in their case also to be the natural explanation.

The convent epidemic is less open to objection; but we can imagine a hypercritical critic finding strong evidence of the pythogenic theory in the state of the drainage. "Although" (says Dr. Budd) "the fact does not in any way qualify the conclusions suggested by the text, I think it right to state that, after the fever had quite died out, the main drain of the reformatory was examined and found to be considerably out of order. On leaving the building, this drain—a large earthenware pipe—traverses the court already described, receiving the surface-drainage of the court through a well-trapped sink in the centre. It had been the practice to store large quantities of coal in this court, out in the open, and, whenever heavy rain came on, small coal was freely washed into the drain. This coal, mixing with sludge of the sewerage, had formed a concrete, which was literally almost as hard as a stone, and which completely blocked the pipe. On pursuing the examination farther, another defect was found, which in great degree neutralised the effect of the first. Exactly within the boundary-wall of the building, the drain-pipe had come to pieces in such way that the whole of the sewage of that part of the building discharged into a large excavation in the ground made when the foundations were dug. As there had never been any actual regurgitation, either through the sink or further back, the breaking of the pipe must necessarily have occurred either before its occlusion further on, or must have coincided with it."

It might, besides, be fairly urged that the existence of diarrhœa, which appeared in the convent in March 1863, and, in the course of two months, attacked more than fifty of these reformatory girls, was evidence of the existence of grave sanitary defects; and that, although diarrhœa is not usually classed among the recognised infections, there can be little doubt that some diarrhœas, to wit, choleraic diarrhœa, are infectious, and that, in particular, the distinction between diarrhœa and enteric fever is not always clear, and is often impossible. We can imagine an opponent saying, with some show of fairness, taking into consideration the state of the drainage, that some of the cases of diarrhœa which occurred in the convent in March were probably cases of enteric fever, and that the outbreak which followed the arrival of the sick girl in November was coincident with her return, not consequent upon it. Be this as it may, the coincidence, if a coincidence, was a remarkable one.

The general objections to Dr. Budd's views are somewhat as follows. Patients suffering from non-specific febrile diseases are treated with safety in hospital wards containing from twenty to thirty enteric fever patients, and this notwithstanding that the same stools have been used, and that the employment of disinfectants has been neglected. During the year 1872, the present writer treated 183 cases of well-marked enteric fever and 157 cases of non-specific febrile disease together, in the same wards. The non-specific cases would sometimes be in the proportion of three to twenty of the enteric cases; and, although the same stools were used by each class of patients alike, and although disinfectants were neglected, in no instance was enteric fever communicated. We could easily confirm this statement by reference to a wider experience, but we think the statements just made sufficient to show that there is a marked difference, as regards communicability, between small-pox and the contagious diseases which it resembles, and enteric fever and the contagious diseases which it resembles, viz.: diarrhœa, dysentery, and cholera. Granting that the infective matter of enteric fever is in the evacuations, and that these are promptly removed, the immunity of the non-specific patients is rightly explained; but this important practical difference remains, viz.: that non-infectious diseases may be treated with safety in conjunction with enteric fever, and we may also say, with diarrhœa, dysentery, and cholera, if scrupulous cleanliness, free ventilation, and prompt removal of all excrementitious matter are carried out, but not, the same precautions being observed, in conjunction with small-pox, typhus fever, scarlatina, and measles. Place two or three patients suffering from non-contagious diseases in a ward filled with either typhus, small-pox, scarlatina, or measles patients, and, unless the former have already had the diseases of the latter, they will almost surely take them; but the same patients placed in an enteric fever ward would just almost as surely not take enteric fever. Our experience as to the latter disease enables us to speak with confidence, but we believe that the same would be found true of cholera and bowel-diseases generally. All this does not prove that enteric fever is communicable, but we think it does prove that it is not communicable in the same way, nor in anything like the same extent, as the diseases of which small-pox may be taken as the type, and that it is far less dangerous to the community, if only from the facility with which its contagium may be destroyed.

The immunity of attendants has been often urged in proof of the non-contagious nature of the fever in question. Most of these have been, however, adults; and it occurs to the present writer to ask in how many instances adult immunity is really due to a previous attack in infancy. No disease is more likely to be overlooked in a child than the one in question, and our recent experience has suggested this as a likely explanation of adult immunity. The immunity spoken of, however, by many competent observers, and with which our own earlier experience was in complete agreement, has, in our recent experience, been wanting. Within the last two years, we have treated eleven cases of well-marked enteric fever, with two deaths, contracted by those (all under 30 years of age) either actually nursing the sick, or engaged in the menial work of the ward. These occurred not at one time, or in one ward which would have suggested a local cause, but at different times, and in wards widely separated from each other. In nearly all the cases, the persons attacked were seized soon after exposure. One was attacked apparently as early as four days after exposure, and died; two, one of whom had had a previous attack, traced their illness to the very offensive smell of one patient's stools; the one who had previously had the disease recovered, the other died. One was seized within ten days of exposure, and another within one or two weeks. Facts like these, and those related by Dr. Budd, we think, prove that enteric fever is a contagious disease, and that it ought to be so treated. As a consequence of this, whilst not believing it has yet been proved that there exists a disinfectant which can be practically used, excepting what can be boiled and subjected to a dry heat of 250 degs. Fahr., we think those will err on the safe side who carry out Dr. Budd's instructions.

Dr. Budd ignores the pythogenic theory, on the ground that it is irreconcilable with the frequent absence of enteric fever where noxious emanations are common, and he cites, as a striking instance of this, the condition of the Thames in 1858. He relates how Parliamentary committee-rooms were rendered barely tolerable by the use of chloride of lime, how law-courts were broken up, and the river-steamers lost their accustomed traffic, and yet that there was no enteric fever. To this it may be replied, that it is not contended by those who maintain the pythogenic theory, that all kinds of sewage decomposition at all times will produce enteric fever. Moreover, when enteric fever has been traced to its origin in sewage, the effluvia therefrom has been shown to have passed into confined spaces, and not into the open air, as the effluvia from rivers does, and, of course, as the effluvia from the Thames did. Besides, odour has not been shown to be a measure of the strength of the particular sewage product which is said to generate enteric fever. It may be fairly said, too, that Dr. Budd's objection to the pythogenic or sewage-theory applies equally to his own; for, if it be true as he says, to use his own word, that "floods" of intestinal discharges pass yearly into our rivers, how, it may be asked, do the inhabitants of our rivers and river-banks—for example, the Thames—show no special liability to contract enteric fever? As Dr. Murchison says, speaking of the condition of the Thames, just referred to, "the many writers who have appealed to the fact last mentioned to prove that decomposing sewage cannot produce enteric fever, seem to have forgotten that it cuts both ways. The Thames receives annually the excreta of thousands of typhoid patients, those of one patient being sufficient, it is said, to give the disease to a whole community; yet we do not find enteric fever constantly raging on its banks." The numerous instances in which enteric fever has arisen, where, after searching investigation, no trace of importation could be made out, strongly favour the theory of spontaneous origin, and the outbreak of enteric fever described by Dr. Maclagan of Dundee (*Enteric Fever in Dundee and its Neighbourhood*) appears to us to be as conclusive in favour of spontaneous origin as the North Tawton case appears to us conclusive in favour of contagious origin. Dr. Maclagan, after giving a description, which we regret we have not space to transcribe in full, says, "Were these cases in an isolated farm-house, situated in a locality in which enteric fever was formerly unknown, we have the direction and course of a drain altered, so that, instead of emptying itself on a field as formerly, it pours its contents into a stagnant cesspool, and, within three weeks, enteric fever breaks out. Can the two events be regarded otherwise than as cause and effect. To my mind, it seems impossible to regard them in any other light. The possibility of importation of the disease seemed excluded; all the servants and residents had been there for some months at least; no one had been in any locality in which the fever existed, and no one had visited the place who was in the least degree likely to have brought infection with them."

Whilst, with such facts before us, we hesitate to subscribe to the whole of Dr. Budd's proposition, we think he has proved that enteric fever sometimes arises from contagion—a mode of origin we believe to be more frequent than is at present believed; and Dr. Budd will have rendered one more service to the other important services he has rendered to humanity and science, if he succeed in rousing the profession to an appreciation of this truth.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 22ND, 1874.

PRESCOTT HEWETT, F.R.C.S., President, in the Chair.

Loud Bruit caused by Ruptured Valve of Heart.—Dr. BURNEY YEO exhibited the patient, a railway clerk, aged 45, who had suffered from winter cough for fifteen years, and for eighteen months from rheumatic pains in the limbs. He had had no other illness, nor venereal disease, save a slight gonorrhœa twenty years ago. Three weeks before the meeting, he had slipped in coming downstairs, had slidden over a flight of stone steps, whilst holding on all the while to the iron railing, and finally had fallen on his back at the bottom of the flight. Soon afterwards (he did not remember if it was the same night), he heard a "singing noise" in his chest on lying down in bed, which kept him awake. This continued to trouble him, and finally he came to the Brompton Hospital, complaining of slight cough and this noise in his chest. On examination, the chest gave evidence of cardiac hypertrophy. The apex beat an inch and a half outside and two inches below the nipple line. There were evidences also of emphysema—viz., weak respiration generally, patches of dilated capillaries at costal margins, and exaggerated pulmonary resonance. The heart's impulse was increased, and there was a marked thrill at the apex. A loud vibrating musical sound was heard preceding the impulse at the apex; it became louder towards the base, and was loudest over the second right costal cartilage. The sound at the base appeared diastolic, but probably continued with less intensity through the systole. This sound was heard along the vessels and over the whole chest through the stethoscope, and even at a distance of three feet from the patient, in a quiet room. The radial pulse was small and collapsing; the arterial walls were soft and uniform.—Dr. ANSTIE inquired what was the experience of the members respecting the curability of ruptured valve. A patient, who years ago had been very ill, for some time under the care of Dr. Walshe, was said then to have ruptured valve; but at the present time there was no sign at all, stethoscopic or sphygmographic, of the lesion. Yet ruptured valve was usually considered to be incurable.—Dr. YEO remarked that he had also lately seen another patient besides the one now exhibited, who had the same affection; and that both men suffered very little from dyspnœa or inconvenience of any kind.

Hæmatoma Auris.—Dr. SUTHERLAND exhibited a patient with a well marked "insane ear", produced by violence. The patient was a prize-fighter who had always been sane and healthy, nor was there any hereditary history of insanity in his family. Seven years ago, he was engaged in a fight, which lasted more than three hours, and in which the ear received about twenty severe blows. After the fight was over, the ear was found to be swelled and as large as an egg, it was red, very painful, and full of fluid. In about two months, the tumour was reduced to its present size. The helix, fossa of the helix, and antihelix were wholly, and the fossa of the antihelix was partially obliterated. The tumour was very hard, and the skin moved freely upon it. It was a typical instance of the "insane ear" being produced in a patient in whom there was no insane diathesis.—Dr. DYCE DUCKWORTH inquired why the tumour was diagnosed as hæmatoma.—Dr. SUTHERLAND stated that it resembled in appearance and feeling a hæmatoma in an old insane patient. Usually a person with such an ear had an attack of insanity.—Mr. TREHERN NORTON said it seemed to be a cartilaginous mass; that it was composed of two or three parts; and that it had apparently arisen from subacute inflammation of the cartilage of the ear.—Dr. SUTHERLAND had dissected some specimens of "insane ear", and found them to be composed of a yellowish cheesy mass, hard or soft, lying between two plates of cartilage in the ear, sometimes perhaps between the perichondrium and the cartilage. They sometimes contained fluid, yellowish or red, in company with an organised blood-clot.

Favus of Scalp.—Dr. DUCKWORTH exhibited a child, a year old, who was first brought to Dr. Church, at St. Bartholomew's Hospital, on account of whooping-cough. The disease had begun three months previously. No history whatever of contagion could be obtained. The only cat in the house was examined by Dr. Duckworth, and found to be free from favus. (Specimens of the fungus—*Achorion Schönleini*—were placed under the microscope.) Several masses of favus-crust were found upon the head, varying in size from that of a split-pea to a shilling. Dr. Duckworth mentioned that favus was of extreme rarity in London and in England generally. Out of about 5,000 cases of skin-disease of all kinds seen by him in the skin clinique at St. Bartholomew's during the past four years, only six cases of favus had occurred. Of these, three were instances of the disease situate upon the body in two brothers and a sister; and another of the cases was favus of the scalp in a boy recently arrived from Germany, where the disease is more common. In Edinburgh and Glasgow, favus was frequently met with. In 10,000 dispensary cases of skin-disease in Glasgow, Dr. M'Call Anderson saw no fewer than 156 patients suffering from favus. It was alleged that the disorder was becoming more rare in Edinburgh than formerly. The treatment consisted in poulticing and the application of suitable parasiticides.

Diabetes Mellitus successfully treated by Skimmed Milk.—DR. DONKIN read particulars of a case. T. S., a farmer, aged 37, married, much accustomed to out-door exercise, and a total abstainer from alcoholic drinks for fourteen years, had always been healthy until about seven months previously, when, in May 1872, he began to suffer severely from dryness of the mouth, excessive thirst, listlessness, debility, and great fatigue after exertion; he rapidly lost flesh to the extent of a stone and a half in a few weeks, and his urine increased in quantity to about six or seven pints daily. In August 1872, he was found to be suffering from diabetes mellitus, and a physician, being consulted, ordered a restricted diet of beef, mutton, gluten-bread, wheat-meal biscuits, bran-bread, two eggs and two pints of skimmed milk daily. Under this regimen the symptoms of the disease were somewhat mitigated, but the specific gravity of the urine continued to range so high as from 1030 to 1050, the daily quantity being from four to five pints. On December 13th, 1872, the patient came under Dr. Donkin's observation, when his urine had a specific gravity of 1040, and contained 25.340 grains of sugar to the ounce. On the day following, he was placed under the skimmed milk treatment. At first, seven pints, and subsequently eight pints, were taken daily, divided into four meals. No other food was allowed, and no medicine prescribed. At the end of seven days of the treatment, the specific gravity of the urine had fallen to 1020, and contained 6.345 grains of sugar to the ounce, there being a diminution of nineteen grains. On the fourteenth day, the urine sugar had fallen to 0.792, or three-quarters of a grain to the ounce. On the sixteenth day of the treatment, not a trace of sugar could be detected in the urine, of which the specific gravity was 1012. From that date, the urine continued entirely free from sugar. The patient now felt quite well, and free from every symptom of the disease; his strength had wonderfully improved, and the feeling of chilliness, of which he formerly complained, especially at night, had entirely left him. He was ordered nine pints of skimmed milk daily, five or six of which were taken in the liquid state, and three or four in the shape of curd prepared by the essence of rennet. On the thirty-ninth day of the treatment, the sugar having been absent from the urine twenty-two days, the daily allowance of skimmed milk was reduced one pint, and, in addition to this regimen, he was allowed a half-pound of mutton chop with greens, in the middle of the day. This change in diet caused the specific gravity of the urine to rise to 1018 and 1020, but without any return of the sugar. On February 14th, 1873, two months from the commencement of the treatment, the patient had regained eight pounds in weight, and a corresponding increase of strength. On April 9th, he had gained a stone in weight, and felt much stronger and better than he had done since the commencement of his illness; in short, he was in excellent health and spirits. At this date, his urine had a specific gravity of 1020, and was free from sugar; his diet now consisted of about six or seven pints of skimmed milk with plenty of solid animal food and green vegetables. On February 17th, of the present year, 1874, fourteen months after the commencement of the treatment, the patient still continued quite well, his urine being free from sugar; he had increased considerably more in weight, and, for some time previously, he had been taking ordinary bread at his meals, and living under very slight restriction as to diet, but still abstaining from alcoholic drinks; he still continued well. This was a case of severe confirmed idiopathic diabetes, and pronounced such by his medical advisers, in which a restricted diet, excluding, in a great measure, vegetable sugar and starch, was persevered in for four months, at the end of which period the patient was passing from 2500 to 3000 grains of sugar daily, and had received only slight improvement in his condition. But, under the skimmed milk treatment, the glycosuria disappeared entirely within sixteen days; this effect being followed by a complete restoration of health, flesh, and strength. The patient continued to live by rule, excluding starch and vegetable sugar as much as possible from his food for several months, but taking, after some time, a large quantity of lactine, or milk-sugar, in the skimmed milk. The result was that, within a year after his recovery, he began to take an almost ordinary diet with impunity. The case had, moreover, before the commencement of the treatment, passed into the advanced stage in which the albuminous constituents of ordinary solid nitrogenous food undergo saccharine metamorphosis, the result being the development of rapid emaciation and a cachectic condition, soon ending fatally if the disease be not arrested. It was in such cases that the superior efficacy of the skimmed milk treatment was so conspicuous. In such cases, if even the glycosuria could not be completely removed, and the disease altogether arrested on account of being too far advanced, or complicated with some of the necessarily fatal affections which became developed in the course of its progress, the subjugation of the most distressing symptoms, and a wonderful improvement in the strength and general health of the patient, could generally be effected. A remarkable instance of this description had recently been recorded in the Army Medical Reports for 1871 (page 278, No. IX); that of a soldier treated in the Netley Hospital, by Dr. W. J. Fyffe, Assistant-Professor of Medicine in Netley College. Dr. Donkin had since been informed by Dr. Fyffe, that, in two other cases, the treatment had been equally beneficial under his care. Two circumstances, he said, had struck him; first, the rapid diminution in the quantity of the urine, and, secondly, the rapid improvement of the health of the patient. A still more remarkable case had recently been reported in the *Transactions* of the Medical Society of the State of Pennsylyania (vol. ix, p. 194, 1872); the patient, though bed-ridden, and passing thirty pints of urine daily of a specific gravity 1050, completely recovered. In cases in which the glycosuria could not be completely removed by a strict skimmed milk regimen, the addition of solid animal food to the diet of the patient almost always increased the quantity of urine sugar, and aggravated the disease. —Dr. GREENHOW had previously brought a case before the Society, which seemed to show that the skim-milk was not quite a curative mode. That patient had remained well for a time upon general diet; he then had a relapse, and again skim-milk cured him. He had since remained quite well. In another patient, who had lost the sugar entirely from his urine, under the milk treatment, it returned after an absence of eight months. Still the skim-milk was a valuable dietary mode of treatment.—Dr. DICKINSON required more facts concerning the cases cured and others whom the treatment did not cure. Two patients so treated in St. George's Hospital had died, and at the autopsy grave pathological changes were discovered, which were not likely to be cured. Even if a cure were possible, was it likely to be effected by skim-milk? —that is, milk deprived of what was beneficial, and containing sugar, which was prejudicial. The milk treatment was simply starvation-diet; it promoted inanition. Where the glycosuria depended upon malassimilation by the liver, starvation might cure; not so in diabetes due to grave nervous changes. In Dr. Greenhow's case, he believed some error had crept in, for the urine passed was much less than the amount of skim-milk drunk.—Dr. ANSTIE asked what was Dr. Donkin's theory, and in what respect skim-milk formed a non-nitrogenous diet.—Dr. DONKIN stated that, in diabetes, vegetable starch and sugar were malassimilated; whilst milk-sugar was capable of assimilation.—Dr. GREENHOW said his patient perspired very copiously. He considered the milk formed only a dietary treatment; it simply relieved symptoms. —Dr. DUCKWORTH inquired if the patients gained flesh or wasted under the treatment. A patient of his had lost almost all the sugar, but wasted at a very rapid pace.—Dr. DONKIN said that certain documents in his possession disproved that statement. According to Dr. Dickinson, diabetes was due to wasting of the white substance around the blood-vessels of the brain and spinal cord; but one should search for the cause at the beginning of the malady, not after death. It would be just as logical to search in the ruins of the Pantechnicon for the cause of the recent fire. It must be remembered that three parts of skimmed milk was casein, or, as it might be called, fluidised muscle. Lactine was not converted in a diabetic patient into diabetic sugar, but into lactic acid, which again became changed into carbonic acid, etc. It had been proved that, if an animal were fed entirely upon a nitrogenous diet, three parts of the food were converted into sugar; only two parts were retained for the nutrition of the body. He (Dr. Donkin) merely recorded the fact of the cure by skim-milk; he was not there to say how it came about. He thought, however, that the facts he had brought forward went far to prove that diabetes was not a neurosis. Bernard said now that he knew nothing of the disease.

Tumour in Cerebellum and Medulla Oblongata.—Dr. BUZZARD related the case of a boy, aged 10, who had been admitted into the National Hospital for the Paralysed and Epileptic, on December 17th, 1873, with pains in the vertex and occiput, attacks of vomiting, paresis of all four limbs, especially those of the left side, and double optic neuritis. It seemed that he had never regained health after an attack of scarlatina followed by dropsy, at the age of eight years; and that about six months before he applied, he had begun to have pains in the head and convulsive seizures ending in vomiting. Three maternal uncles had died of phthisis. A tubercular tumour of the cerebellum was diagnosed. After admission, deviation of the tongue to the right side was noted. He became progressively weaker, and lost his sight. Symptoms of meningitis betrayed themselves in March; and death took place on April 7th, after a few days' delirium and coma. The necropsy disclosed a mass of tubercle, of the size of a Maltese orange, in the left cerebellar hemisphere, a smaller tumour of the same character involving the right anterior pyramid and olivary body of the medulla oblongata, and a collection of yellowish lymph beneath the arachnoid at the base of the brain about the interpeduncular space. Dr. Buzzard remarked upon the interesting fact that the boy, on his admission, could read the smallest type and name colours accurately with the right eye, at a time when its disc presented well marked optic neuritis. The greatest want of power had been experienced in the limbs of the same side of the body as that occupied by the tumour, but no anatomical inference was fairly deducible from this fact, as the presence of the second tumour in the right half of the medulla oblongata might account for it.

Acute Rheumatism attended by Cerebral Symptoms, without Hyperpyrexia.—Dr. GREENHOW related particulars of the case. A police-constable, aged 23, two years ago suffered from an attack of acute rheumatism, during which, according to his own account, his head had been affected, so that he could not remember what had taken place during the time of his illness. Six days before admission, his present attack had commenced with headache, sickness, and pains in the left ankle. When admitted, he presented the ordinary symptoms of rheumatic fever, with a soft friction-sound over the apex of the heart. In the course of a few days, the pains subsided; but there was profuse sweating, and the temperature once reached 103.3 deg. Fahr., the highest temperature recorded throughout the case. On the ninth day after admission (the fifteenth of the disease), the patient became delirious, incoherent, and wandering, with much jactitation of the body, constant choreal movements of the fingers of the left hand, tremor of the right hand, and subsultus. These symptoms continued for five days, and then began to subside; but, even after the delirium had left him, he remained for some days incoherent and childish in manner, and the choreal movements of the left hand continued. These, however, gradually disappeared, and he was discharged convalescent. The treatment consisted mainly of hemlock-juice and bromide of potassium. Dr. Greenhow remarked that there was a great resemblance between this case and others which had been brought before the Clinical Society; but at the same time there was a marked absence of the hyperpyrexia which had been supposed by some authorities to give rise to the cerebral symptoms. The case was, therefore, of importance in showing that the hyperpyrexia in cases of this class was not the cause, but the effect, of the brain-paralysis; and that it was an effect not invariably produced.

Acute and Chronic Catarrhal Tonsillitis.—Mr. ARTHUR T. NORTON read notes of two cases which he considered typical instances of inflammation of the secreting tissues of the tonsil, and lining membrane of the crypts and the channels connected with them, in contradistinction to inflammation of the parenchymatous structure of the gland. These two forms of inflammation of the tonsil, he said, were totally different in cause, in every symptom, in treatment, and results. The diagnostic symptoms were compared as follows.

Catarrhal.	*Parenchymatous.*
A mucous inflammation, three or four days' duration. *Causes:* Exposure, draught, damp, cold, etc.	A fibrous inflammation, two to four weeks' duration. *Causes:* Often neighbouring inflammation, cutting wisdom-teeth, etc.
Prostration, and often profuse perspiration. Pulse small and quick. Never runs on to abscess.	High fever, with hot dry skin. Pulse strong, hard, as in fibrous inflammation. Commonly forms an abscess.
Both tonsils affected.	Rarely both affected.
Lacunæ filled with masses of morbid secretion, resembling ulcers.	Often covered with lymph, but no collection of secretion in lacunæ.
No œdema around.	Extensive œdema around.
Treatment: Tonics and stimulants from first, and astringent gargles.	Antiphlogistics and depressants, but never gargles, except in the form of warm water.

With regard to the pathology, it was shown, by means of drawings, that the lining membrane of the crypts and channels of healthy tonsils was covered with papillæ of large size, not unlike the villi of the small intestines. Each papilla was somewhat conical, attached by its apex, covered with a spherical form of epithelium, and contained capillary blood-vessels. In chronic catarrhal tonsillitis, these papillæ increased in size twice or threefold; the lining membrane assumed the form of nodular elevations, not unlike grains of sago, and the cavities of both crypts and channels became greatly dilated. Secondarily to these conditions, if subacute inflammatory action continued, the parenchymatous tissue increased in thickness by proliferation, and thus permanent hypertrophy of the gland was produced.

MEDICAL MICROSCOPICAL SOCIETY.

FRIDAY, MAY 15TH, 1874.

JABEZ HOGG, Esq., President, in the Chair.

Molluscum Fibrosum (? Cheloid).—Dr. PRITCHARD mentioned the case of a negro, who for twenty years had been subject to a growth, originating behind one ear and gradually extending over nearly all the body. After death, a portion of the skin, with growth, was forwarded to him (from America) as illustrating "cheloid simulating molluscum fibrosum". Microscopically, the cutis vera was found hypertrophied: here and there masses of cells between the fibres of the areolar tissue. The epidermis was much thickened. The hair-follicles were normal. The papillæ had grown irregularly and sideways, and not vertically as normal. He considered it simply a case of molluscum fibrosum, not of cheloid. Engravings of the patient, with specimens of the disease, were exhibited.—The PRESIDENT inquired if any fungus had been noticed; it was by some believed to exist in molluscum.—Mr. NEEDHAM thought the condition of the papillæ normal in the negro.—Dr. PRITCHARD had observed no fungus.

Perivascular Spaces in the Brain.—Mr. KESTEVEN read a paper on this subject, illustrated by drawings and specimens. These spaces had been considered normal structures intended to relieve intracranial blood-pressure; but Mr. Kesteven had never seen them in a really healthy brain; had often noticed them associated with chronic cerebral mischief; and hence concluded they were owing to absorption of brain-substance by the irregular circulation that goes on in chronic disease: the vessels being at one time full, at another nearly empty. Though the mode of preparation in chromic acid might render these spaces more evident by the shrinking of the blood-vessel, he did not think it sufficient to account entirely for them. He could find in the perivascular spaces no resemblance to normal lymphatic structure, while Dr. Batty Tuke had now abandoned the idea that they denoted a healthy condition of brain.—Dr. PRITCHARD considered them entirely owing to the mode of preparation in chromic acid; he had never found them in sections made by freezing the brain.—Mr. NEEDHAM believed that they belonged to the lymphatic system, though not strictly speaking "lymphatics".—The PRESIDENT explained them in some cases by the giving way of the capillaries around which they were found; he had seen the brain-substance stained with hæmatin in their vicinity; hence an explanation, perhaps, for some of the anomalous convulsions of childhood; thought proof was wanting of their connection with the lymphatic system.—Mr. TOIRARD asked if in injected brains these spaces were seen, or were obliterated by the distension of the vessel.—In reply, Mr. GOLDING BIRD had never seen them in injected specimens.—Mr. GROVES asked if Mr. Kesteven had ever examined the spaces by staining with nitrate of silver.—Mr. KESTEVEN, quoting Dr. Batty Tuke, stated that the spaces had been found in the lower animals (*e.g.* cats) after strangulation; and that, though the vessels thus remained full, a space could be seen beyond. He had never seen anything to warrant the supposition that they were owing to hæmorrhage. He knew of no anatomist having traced these spaces into lymphatics; they had been injected by His by the puncture method.

Multiple Cystic Tumour of Breast.—A specimen of this, exhibited by Mr. NEEDHAM, seemed to show, from the excess of epithelium in the mammary tubules, and the epithelial infiltration of surrounding parts, at once a cystic, adenomatous, and cancerous nature.—Mr. NEEDHAM founded his idea of cancer on the arrangement, and not on the intrinsic form of the cells composing it.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

WEDNESDAY, JUNE 3RD, 1874.

RUTHERFORD HALDANE, M.D., President, in the Chair.

Exhibition of Pathological Specimens, etc.—Dr. MATTHEWS DUNCAN showed a Kidney affected with Cystic Degeneration, removed by Dr. Campbell of Dundee, with success.—Mr. LISTER showed: 1. Some portions of Fat, which he had removed from a Tumour, supposed to be an irreducible inguinal hernia, which had resisted other means of treatment, and gave the patient much annoyance. At first, he thought the fat was omentum, but now he believed it to be subperitoneal fat, as it contained scarcely any of the yellow elastic fibres in which, Kölliker says, the fat of the omentum is rich. 2. Half of a large Fibrous Tumour, which he had removed by amputation of the thigh from a woman aged 27. It had grown for ten years. He used Esmarch's bandage round the waist, as had been done by Dr. Gibb of Newcastle. The flaps did not unite well, and bone was tending to protrude, so he applied a weight and pulley to the flap. 3. A fibrous Tumour, removed from the popliteal space. 4. A small Steam-Apparatus, which he had devised for producing an antiseptic spray, worked by a spirit-lamp.—Dr. JOHN DUNCAN showed, for Mr. Spence, some Hydatid Cysts and Fluid, removed from a Tumour in the adductor region of the thigh. The patient had been a sheep-farmer in Australia.—Dr. P. H. WATSON showed a very large Thyroid Gland, which he had recently removed by the operation he had devised and described. It had been adherent to the larynx and trachea; on dissecting it up, a vein was opened, the bleeding from which was easily checked by a sponge; but on attempting still further to clear the trachea, an opening was accidentally made in its posterior surface, where it was turned up from its bed by the traction on it. As the bleeding made its way into the air-passages, respiration was much impeded, and the patient died in the course of the afternoon.—Dr. JOSEPH BELL showed the Handle of a Parasol, carved and ornamented, which he had recently removed, after a sojourn for four days, from the bladder of a young lady. It had been inserted to relieve a supposed difficulty in micturition. He rapidly dilated the urethra, introduced his forefinger, and felt and secured the foreign body. No incontinence nor any bad symptom followed.—Dr. ARGYLL ROBERTSON showed an Eye, which he had recently removed from a man, aged 54. It had been blind for twenty years, and exhibited beautifully a very great amount of calcareous degeneration.—Dr. MCKENDRICK showed a Rabbit under the influence of Hydrochlorate of Chinoline, prepared from cinchonin. The animal was in a state of complete anæsthesia, with relaxation of all the muscles, and remained so for a period of about two hours. The subject of the physiological action of the chinoline and pyridine series of homologous compounds is being investigated by Mr. James Dewar and Dr. McKendrick, and the results will shortly be made known.

Physiological Action of Chloral and Bromal Hydrates and Iodoform.—Dr. MCKENDRICK read a paper on this subject. After referring to the researches of Rabuteau, Steinauer, and Dougall, he gave the results of his own experiments, which were made with the view of ascertaining the precise physiological action of bromal hydrate. He showed: 1. That the action was first on the cerebral hemispheres, afterwards on the ganglia at the base of the brain, and, finally, on the spinal cord; 2. That the extreme contraction of the pupil was the combined effect of paralysis of the sympathetic and irritation of the third cranial nerve; 3. That the action on the heart was caused, first, by irritation; and, secondly, by paralysis of the sympathetic; the substance also acted on the intrinsic ganglia of the heart; 4. That the action on the blood-vessels, causing dilatation, was the result of paralysis of the sympathetic; 5. That the action on the salivary glands, causing very profuse secretion, was the result partly of paralysis of the sympathetic, and chiefly by irritation of the vaso-inhibitory and secretory filaments in such nerves as the chorda tympani. He then compared the action of chloral with bromal, and finally described the result of a few experiments made with iodoform, which he employed in place of iodal, a compound he could not obtain, and the existence of which is doubted by many chemists. Into the question of the chemical changes insuing in chloral and bromal hydrates while in the blood, Dr. McKendrick did not at present enter. He also showed that atropine arrests the excessive secretion of saliva, by paralysing (as Heidenhain has shown) the chorda tympani.—The PRESIDENT, in thanking the author for his paper, remarked that its physiological interest was only equalled by its probable therapeutical value. A new era in the treatment of disease was dawning, as we were learning that the first stages of many diseases were really affections of the nervous system acting on the vessels, which conditions such experimental researches may enable us to treat.—Dr. MATTHEWS DUNCAN had tried iodoform in a bad case of ulceration of the anal region, without the slightest benefit either to the disease or its factor.—After remarks from Dr. Argyll Robertson and Mr. Lister, Dr. CRAIG related a case of a lady, who suffered from profuse salivation during two pregnancies, which condition was cured by the use of belladonna.

Cholera.—Dr. ROBT. PRINGLE, Surgeon-Major, Bengal Army, read a paper on Asiatic cholera, in which he advocated an eliminative treatment, consisting of large drinks of tepid water, use of castor oil, and avoidance of all alcoholic stimulants. He especially insisted on the great importance of good nursing.—The PRESIDENT, in thanking Dr. Pringle, alluded to the value of all conclusions based on large personal experience. He agreed in the main with Dr. Pringle's conclusions, except that he was doubtful as to the utility and safety of castor oil.

Dr. McKendrick showed an apparatus which he had constructed, by which one could measure with accuracy the interval of time between the impulse of the heart and the impulse of various arteries. It consists of arrangements by which the pulse is caused to form an electric current, affecting an electro-magnet. The keeper of the magnet is caused to mark on a cylinder, or glass plate, moving with uniform velocity. By these arrangements, the 1-500th or 1-800th of a second may be readily observed.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Wednesday, April 14th, 1874.

Joseph Coats, M.D., Vice-President, in the Chair.

Wheals of Urticaria on Local Irritation.—Dr. Finlayson showed two children, sisters, whose skin rose in wheals resembling urticaria on any slight irritation, so that their names, for example, could be thus written. In the elder of the two (aged 9 years), this peculiarity had been noticed by him two years ago; in the younger (aged 7 years), it did not then exist, but was now very marked. They did not seem subject to urticaria apart from local irritation. Dr. Finlayson thought these cases of importance, as showing a family tendency to this peculiarity, and that it was not congenital. Several members referred to cases more or less similar, in some of which the peculiarity was known to have passed off.

Aneurismal Dyspnœa.—Dr. Gairdner showed the dissection of an aneurism. The patient had suffered from hoarseness, with imperfect closure of the glottis in coughing, and there had been some difficulty in swallowing. A pulsating tumour was found at the first and second ribs, below the left sterno-clavicular articulation. The respiratory murmur was feeble on the left side, and puerile on the right. The pulses were at first equal, but the right became weaker. There was at first no orthopnœa, but this afterwards appeared to some extent; and some approaches to insensibility had been noticed. At first, there was no blood in the spit, but some streaks appeared later. The pupils were large, the left perhaps larger. The patient died rather suddenly on rising to smoke. Some blood came from the mouth. The dissection of the tumour was made by Dr. Samson Gemmell. The aneurism involved the transverse arch arising from its posterior and upper aspect. It had burst into the trachea just above its bifurcation. The opening was blocked with clots. The left bronchus was much pressed on. The œsophagus was adherent to the tumour, and also pressed on. The left pneumogastric was free; but the left recurrent became lost at the back of the tumour, apparently running into the aneurism, but traceable above this to its usual distribution. The branches to the superficial cardiac plexus were so adherent that they could not be dissected, and the branches to the deep plexus were also much involved. The pericardium was firmly adherent to the left pleura; but the anterior and posterior pulmonary plexuses seemed normal. The innominate artery was adherent to the sac of the aneurism, but quite patent; the left carotid was impervious. Dr. Gairdner contrasted the dyspnœa and nervous lesions in this case with a more complex case previously shown to the Society.

General Paralysis.—Dr. Alexander Robertson presented a patient with general paralysis, and, in some remarks, referred to the great impairment of electric irritability of the muscles in such cases as indicating an implication of the whole nervous system. He also gave various reasons for dissenting from the notion of this affection being usually due to sexual excesses.

Glioma of Retina.—Dr. Thomas Reid showed a preparation and microscopic sections of a glioma of the retina. A girl of 3½ years was admitted to the Eye Infirmary in April 1873, unable to distinguish light and shade with the left eye. The defect had been noticed for three months. The pupil was found dilated and fixed; and, on examination, there was a yellowish reflection from the posterior and lower part of the fundus. This was evidently an exudation behind the retina, and was supposed to be probably cancerous; but, as the parts were quiescent, a trial of treatment by tonics (iodide of iron) was decided on, and for six months little change occurred. In November, evidence of increase in the growth appeared, as it seemed then to occupy the whole posterior half of the fundus, and to approach even to the lens. Increased tension and distension of the coats of the eyeball supervened, and the general health suffered. Enucleation was therefore determined on, and performed under chloroform in the middle of December. On examining the eye, the disease seemed to have extended along the optic nerve for about three lines, giving this part of the nerve a bulbous appearance, its diameter being nearly doubled. The nerve had been cut behind the diseased portion. After hardening in chromic acid, the cavity of the vitreous body and the retina were found occupied by a semifluid substance abundantly supplied by blood-vessels. The fluid presented brain-like cells characteristic of glioma of the retina. Only a trace of the retina was found at the optic nerve entrance; the fibrous structures being considerably hypertrophied, and projecting inwards. At various parts, but chiefly at the anterior part of the ciliary region, the choroid was found hypertrophied, showing encroachment of the glioma and traces of inflammatory action. Longitudinal sections of the hypertrophied part of the optic nerve showed the connective tissue to be replaced by gliomatous cells. After the operation, the fever subsided, and the child's health improved; but in fourteen days there was an enlargement of the submaxillary gland, but this subsided under the use of iodide of iron. Still later, there was some swelling, with pain and tenderness, at the stump; but this also passed away in a week, the child's health improved, and no appearance of recurrence could be detected when last seen (May 7th).

Dr. Reid also showed a patient, and described the ophthalmoscopic appearances, in a case in which he had diagnosed tumour of the brain.

May 8th, 1874.

W. T. Gairdner, M.D., in the Chair.

Syphilitic Paralysis.—Dr. M'Call Anderson showed a man whose skin presented the cicatrices of a tubercular syphilitic eruption, and who had had various paralytic lesions of the face and limbs, which had all yielded, except a slight paralysis of the face, to antisyphilitic treatment.

Fatty Tumours.—Dr. Alexander Patterson showed a specimen of simple fatty tumour.—Dr. William McEwen showed a fatty tumour which had undergone calcareous degeneration in some parts, and perhaps fatty degeneration in others.—Dr. Hector C. Cameron showed a fatty tumour which had ulcerated at the surface.

Tube-Casts in Jaundiced Urine.—Dr. Finlayson showed a specimen of jaundiced urine loaded with tube-casts. Since reporting on this subject in the *Glasgow Medical Journal* for January 1874, he had examined the urine in twelve cases of jaundice. In only two did he fail to find casts; and in one of these the jaundice was passing away, and in the other the search was not quite satisfactory. In two of the cases, traces of albumen seemed to be present; but in eight cases the casts were more or less abundant, without any albumen being appreciable. Dr. Finlayson referred to Professor Nothnagel's paper on this subject as the first in which this subject was prominently discussed, although references had been made to it by Dr. G. Johnson and others. Nothnagel first announced the almost invariable presence of tube-casts in the urine if it were deeply jaundiced, and likewise the curious fact of the absence of albumen in about three-fourths of such cases. Dr. Finlayson's observations, although on a much smaller scale, had confirmed Nothnagel's statements; and the occurrence and abundance of the casts seemed due to the depth of the jaundice *per se*, apart from any special cause of this affection. In discussing the cause of the occurrence of these casts, Dr. Finlayson said he thought the small coloured particles found in the urinary sediments might irritate the tubules and cause local exudations sufficient to form casts, although insufficient to cause albuminuria; and he referred to a case of renal calculus which he had recently observed, where, during the renal irritation, desquamation of epithelium and moderately abundant casts were associated with no albuminuria at first, and but little altogether.—Dr. M'Call Anderson thought it would be important to study this question in relation to the different causes of jaundice, and particularly in those cases due to passive congestion of the liver from heart-disease.

Large Calculus spontaneously passed.—Dr. Donald Fraser of Paisley showed a large calculus passed *per urethram* without any assistance by a widow aged 39, after nine days' severe suffering. It was tapering and pear-shaped, and measured about three inches in length, and three inches and five-eighths in diameter at its broad end; it weighed one ounce. For several months, she had suffered from incontinence of urine. This symptom had become much diminished since the passage of the calculus, as she was now able to retain her urine for an hour or so. Dr. Fraser referred to a somewhat similar case recently recorded in the Journal.

Specimens.—Dr. Joseph Coats showed microscopic specimens of calcareous degeneration in the middle coat of the femoral artery, observed in a case of aneurism.—Dr. Hector Cameron showed a large pear-shaped highly vascular tumour, removed from the labium pudendi. He also showed an interesting specimen of recurrent tumour which he had removed, a notice of which is reserved till a committee, suggested by the President, makes its report on the case next session.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

WEDNESDAY, APRIL 8TH, 1874.

JAMES F. DUNCAN, M.D., President, in the Chair.

Malignant Disease in the Thorax.—Dr. GORDON detailed the following case. A girl, aged 20, was admitted to hospital on February 20th, 1874, with a history of five weeks' illness. She had previously enjoyed good health. Symptoms and signs of an extensive pleural effusion on the right side were present. A small trocar and cannula were inserted between the left fifth and sixth ribs, and ninety ounces of a reddish serum were drawn off. The respirations now fell to 28, and the heart returned almost to its normal situation. The urine was scanty, loaded with urates, but free from albumen. On March 7th, thoracentesis was again performed, and sixty ounces of a similar fluid were evacuated. On March 14th, a third operation brought away fifty ounces; and on March 21st, seventy-five ounces were drawn off. The tapping on each occasion relieved the breathing, and lessened the lividity and strain upon the heart. It was found impossible to mercurialise the patient, diuretics also failed, and she died on March 30th. At the *post mortem* examination, eighty ounces of the same reddish serum were found in the right pleura. A large mass of cerebriform matter filled the anterior mediastinum, and many tumours of the same substance existed in the pleura, compressing the lung, which was free from disease. The heart and pericardium were also subjected to pressure. The left pleura and lung were intact. The cancerous growths were extremely vascular, and the compressed right lung in places resembled a spleen. Dr. Stokes had described two forms of cancer of the thorax: one, cancerous infiltration of the lung, the diagnosis of which was attended with great difficulty; the other, a development of cancer externally to the lung, in which case he believed the diagnosis should be made especially from the evidences of pressure on surrounding organs and vessels. But, in the case detailed, there was no evidence of pressure on the larger bronchi, or on the veins. The vena cava was not compressed, and was normal in calibre. The reddish serum was at first thought to depend on a hæmorrhagic diathesis, but this view of the case was soon given up. Trousseau had dwelt on the significance of a sero-sanguineous exudation, in arriving at a diagnosis of cancer in the pleura; but, at the same time, he did not regard it as by any means pathognomonic. Dr. Gordon laid stress upon the youth of his patient, and on the rapid course pursued by the disease.—Dr. MACSWINEY detailed a similar case, also in a young girl, not more than 14. The left pleura was filled with a large mass of cancer. There was no red coloration of the fluid, or on the surface of the tumour.—Dr. FITZPATRICK had seen a case of cerebriform tumour in the posterior mediastinum, wherein the pleuræ absolutely escaped. This patient died of exhaustion.—The CHAIRMAN believed that thoracentesis was perfectly justifiable in Dr. Gordon's case.—Dr. H. KENNEDY could not have diagnosticated cancer in the case detailed before the first operation. Serum, tinged with blood, might be poured out in acute inflammation. This form of cancer might occur in the very young.—Dr. HAYDEN narrated the case of a young man, aged 22, healthy, until he met with an accident to his chest. Pleuritis supervened, and he died in a few months. The diagnosis of cancer was not made. Reddish serum was found in the pleura after death. The right lung had become attached to the pericardium.

Diagnosis of Contraction of both Auriculo-Ventricular Openings of the Heart.—Dr. HAYDEN exhibited a specimen. He believed that the lesion could be diagnosticated during life. Only eight cases were on record, six occurring in females, and seven of the patients being between 20 and 30 years of age at the time of death. Three of the eight cases had been laid before the Pathological Society of London. The first, by Dr. Quain, was one of pulmonary tuberculosis, in which no suspicion of cardiac disease arose. In the second, a systolic apex-murmur existed, to which a second diastolic murmur was added shortly before death. The third case was reported by Dr. Pye-Smith. An apex-murmur was audible, as well as a diastolic murmur at the middle of the sternum. Five examples were exhibited at the Pathological Society of Dublin. In 1862, Dr. Stokes showed the heart of a girl, aged 20; the aortic valves were diseased, and both mitral and tricuspid orifices were constricted. A presystolic murmur, predominating at the right side of the heart, had been observed, and the carotid arteries had visibly pulsated. In 1868, Dr. James Little presented another specimen, from the body of a female who died suddenly. In 1870, Dr. Cryan brought forward the case of a woman, aged 25. In 1871, the author himself showed the heart of a man, aged 23, of whose clinical history a full account is given in the BRITISH MEDICAL JOURNAL, January 28th, 1871, p. 91. Lastly, in 1872, Dr. Cryan brought forward a specimen case, in which there was extreme constriction of the tricuspid and mitral orifices, unattended by presystolic murmur. Dr. Hayden then detailed the following case. On March 11th, 1874, a woman, aged 25, was admitted to the Mater Misericordiæ Hospital. At sixteen, she had suffered from a severe attack of measles, during convalescence from which she caught cold. Subsequently there was dyspnœa, with vertigo. Five years ago, she spat blood. Menstruation ceased last Christmas. The quantity of urine diminished, her feet began to swell, and among other symptoms were turgescence of the venous system, lividity of the face, dyspnœa running into orthopnœa, and subnormal temperature. The lower extremities became anasarcous, and there was œdema at the base of both lungs. At the apex of the heart, of which the pulsation was heard in the fifth intercostal space, and on a line with the nipple, a rough presystolic murmur was heard. Immediately to the left of the sternum, another presystolic murmur was audible, but of a softer character than the first, with which, however, it coincided in rhythm. In the intervening space neither sound was so loudly audible. Gangrene of the legs occurred, bullæ formed, and extensive sloughing resulted in death. The heart was globular, and weighed eleven ounces. Its right ventricle was neither dilated nor thickened, its right auricle was both thickened and dilated. The tricuspid orifice admitted only the middle finger. There was also mitral stenosis, the orifice barely admitting the point of the index finger. The curtains of the mitral valve were fused, leaving a button-hole slit between them. The walls of the left ventricle were thinned. The points of diagnosis of the lesion were: (1) The existence of two centres of murmur, separated by (2) an intervening space, wherein the intensity of the *bruits*, as it were, "faded off"; (3) a difference in degree of harshness in the two murmurs, and in their duration; (4) the presence of general venous turgescence (pointing to tricuspid obstruction); and (5) the absence of that intensification and reduplication of the second sound, so often observed in simple mitral stenosis.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, MARCH 7TH, 1874.

ROBERT D. LYONS, M.D., President, in the Chair.

Pulpy Degeneration of Synovial Membrane of Knee-Joint.—Mr. TYRRELL showed the parts which he had removed by resection from the knee-joint of a girl, aged 26. The joint presented the appearances of the affection termed by Sir Benjamin Brodie "pulpy degeneration". Accordingly, on examining the structures after the operation, the synovial membrane proved to be enormously thickened. The cartilages were in process of ulceration, but the bones were tolerably healthy, a fact which, of course, rendered the prognosis favourable.

Ankylosis of Hip-Joint, with subsequent Fracture.—Dr. BENNETT exhibited the os innominatum and upper part of the left femur of an individual of whose clinical history there was no account, but who had apparently become the subject of morbus coxæ after puberty. Caries of the head of the femur and of the acetabulum had eventuated in firm bony ankylosis of the thigh-bone and os innominatum. At some later period, the patient had fractured the femur through the neck. In the *Museum Anatomicum* of Sandifort, Dr. Bennett had found a drawing of a specimen identical with that exhibited by him, but which was described as being a fracture of the neck of the thigh-bone, followed by ankylosis. With this view Dr. Bennett could not agree.

REPORTS AND ANALYSES

AND

DESCRIPTIONS OF NEW INVENTIONS

IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

LANDING-NET FOR REMOVING A STONE OR STONES FROM THE BLADDER.

By RICHARD DAVY, F.R.C.S., Surgeon to the Westminster Hospital.

DURING the operation of lithotomy, I have been often hurt to see a stone crushed by removal by the forceps (and thereby a specimen lost), or have waited expectantly to see fragments removed by the scoop; so I venture to suggest that we may gain a wrinkle from fishermen, and use a net for extractive purposes.

The net (of silk or canvass, according to the size of the stones) is made to slide on a curved wire, bent on the principle of midwifery forceps. After the cut has been made into the bladder, the net is introduced through the wound to the side of the stone or fragments; and, by gently tickling the stone and manipulating the net, the stone or fragments (coaxed in) are caught on withdrawal. These stones *plus* silk are the occupants of the perineal wound instead of stone *plus* forceps or scoop. From the dead bladder I have removed stones fifty times by the net; yet, useful as this net is, it is not so important an ally as the law of gravitation. Savigny and Co. will show this net to surgeons.

BRITISH MEDICAL JOURNAL.

SATURDAY, JUNE 27TH, 1874.

THE OUTBREAK OF ENTERIC FEVER IN CAIUS COLLEGE.

It will be remembered that enteric fever was fatally prevalent in Cambridge during the months of October, November, and December of last year, and that the outbreak attracted considerable attention, mainly on account of the special manner in which the disease attacked Caius College, but also because many different and somewhat unsatisfactory explanations were at the time offered as to the immediate cause of the prevalence.

During the course of last January, Dr. Buchanan was instructed by the Local Government Board to make an official inquiry into the circumstances under which the disease had prevailed; and his report, which has been communicated to the Cambridge Sanitary Authority, and which refers mainly to the outbreak in Caius College, deals with the subject in an unusually instructive manner. From statistics which are tabulated at the commencement of the report, it is evident—firstly, that the fever attacked Caius College with a very special incidence; secondly, that it attacked the students resident in the College, and not those resident in town lodgings; and thirdly, that it attacked various parts of the College with various degrees of violence, the residents in Tree Court being specially attacked. With the assistance of the Rev. N. M. Ferrers, tutor of Caius College, Dr. Buchanan next makes use of his statistics in a manner resembling that to which he some time since drew attention in a paper communicated to the Epidemiological Society, entitled “The Arithmetical Study of Disease”, and he is thus enabled to render more trustworthy the statements he subsequently makes as to the peculiarities of incidence of the fever. Thus he is able at once to dismiss as entirely out of the question any notion that the observed incidence upon the College may have been due only to the same causes that produced fever in other infected parts of Cambridge; he also finds that the chances that the cause is to be found in some condition peculiar to the class of College residents, as opposed to the two classes of Caius students, to be as 375 to 1. And, again, it becomes clear that the distribution of the fever in the several localities within the College had been very uneven, for, whereas there were 15 cases amongst the 112 residents in the whole College, as many as 12 of these were amongst the 63 residents in Tree Court; and since the chances against this latter event, as a matter of *à priori* probability, were so large as 24 to 1, it became necessary to seek the cause of the fever in some condition peculiar to Tree Court, and not operative, or greatly less operative, in other parts of the College. The College is stated to have an excellent supply of water on the “constant service” plan; the sewers and drains have been laid with considerable forethought and care; the rainwater pipes—regarding which, in their supposed association with the outbreak, there have been some misapprehensions—all enter the sewers by means of a trapping bend, and it is all but impossible that any injury to health could have occurred from mischances connected with them; and with an exception, to be referred to hereafter, the water-closets are isolated and of approved construction.

The fact that ever since July of last year there had been an unusual amount of enteric fever in the town of Cambridge, and that it would hence have been quite impossible to say, as regards any collection or derivate of excrement, or anything contaminated with excrement in the town, that it had not in it the contagium of enteric fever, rendered it useless to seek for an independent *de novo* origin of the disease in Caius College; but it was essential to ascertain how excremental matter of any description could have been presented to the lungs and stomachs of the persons attacked in the College; and, holding this prominently in view, every circumstance was carefully examined by which such a result could have been brought about. The ordinary methods leading to excremental poisoning of air or water, including the escape of foul air up the rainwater-pipes, and the use of contaminated milk, were all inquired into; but, with the full concurrence of Dr. Paget and Dr. Bradbury, they were set aside as not affording a satisfactory explanation of the circumstances as they had occurred.

The water-supply for Tree Court, though drawn from the mains of the Waterworks Company, was found to be practically independent of that provided generally throughout Caius College, and this fact was suggestive of the possibility of some *local* water contamination; besides which, whereas each water-closet in the old part of the College was provided with a cistern proper to itself, the closets for Tree Court were supplied direct from the high pressure constant service pipes. Here there was a means by which this particular water-service might, through its direct connection with some closet, have become mixed with the foul emanations from a water-closet or from the sewer. And, following out this idea, it was further ascertained that the “constant” water-service had at times been intermittent, that water had occasionally been absent from the pantry-taps, and that after such absence the supply would come on again “with a vengeance”, “like soda-water”. Air, then, had clearly been drawn into these pipes—a circumstance which of course could not have happened had a really constant system of high pressure water-service been in use. But as the fever had prevailed from one end of Tree Court to the other, foul air must have gained access to the entire horizontal service-main of Tree Court; that is, there must have been complete intermission of supply, a circumstance which was subsequently ascertained to have actually taken place on two occasions, both occurring about a fortnight—in other words, about the required period of incubation—before the first two groups of cases. But even this accidental admission of sewer-air into the water-pipes had apparently been guarded against, for a series of automatic valve-taps had been placed on the water-pipes throughout the College, and these, it was believed, presented a physical obstacle to such emptying of the water-main as must have occurred if the supposed pollution had taken place. Testing the matter experimentally, however, Dr. Buchanan found that one of these valve-taps had been laid on its side in such a way that gravitation could not move its internal plug, and that it therefore failed to carry out the object for which it had been constructed; and it was further found, on intermitting the supply, that air could be sucked into the water-pipes with considerable force, and that, on restoring the water-supply, water mixed with air rushed out at a certain tap with much force and splashing. Therefore, if sewer-air could once pass a water-closet supply-valve, the circumstances favourable to its passing into other parts of the water-system were present, and that it did so owing to the opening of the closet-valve during intermission of water pressure is clear. But there are two other institutions in Cambridge where there was a similar direct supply to the water-closets; and with regard to the special incidence of the outbreak at Caius College, it is therefore interesting to know that there was in Tree Court a special risk of dangerous matters being introduced from water-closets into drinking-water which did not obtain in the other instances. Up to the under surface of the D-trap of one of the Tree Court Closets in which special interest centres, there is no attempt, either by an opening or a trap, to keep back the foul air from one of the principal sewers—due charges of water into the D-trap, and also in a smaller S-bend-trapping, filled by means of a “weeping-pipe” from the water-service, being relied on as sufficient for this purpose. Through the former of these traps sewer-air could probably not enter to any noteworthy extent, except after being absorbed by, and evaporated from the surface of, the water; but a very small excess of pressure in the down soil-pipe over the interior of the house, or some aspirating or syphon action, would have rendered the entrance of foul air by means of the smaller trap a certainty. From the construction of this closet, whatever foul air passed by means of the S-bend and the “weeping-pipe" into the water-pipes, must have been essentially sewer-air; and, since filth was found about the S-bend, it appears more than possible that some liquid foulness may also have been drawn up the "weeping-pipe." Then, again, any sewer-emanation here in question would have been actually contaminated with the specific matter of enteric fever; for, according to Drs. Paget and Bradbury, the sewer in Tree Court must have been so contaminated in October last, and therefore its emanations would abundantly suffice to cause the outbreak in question. But every doubt must be finally set aside by the results which followed Dr. Dupré's chemical examination of a peculiar deposit which was found inside both the "weeping-pipe" and the water-supply pipe, and which was ascertained to contain phosphoric acid and a large proportion of nitrogenised organic matter. A similar deposit was also found on the outside of the lower end of the "weeping-pipe"; and concerning these deposits, Dr. Dupré not only says that water impregnated with fæcal matter must have entered the pipes in order to produce them, but, as regards one portion of it, he expresses the belief that it had been derived from water strongly impregnated with such matter.

Thus it is evident that this serious prevalence of enteric fever was due to water-poisoning, and that the actual pollution took place by foul air and foul trapping water being sucked into the water-service pipes of Tree Court; the special poisoning being brought about by the intermittent action of a so-called "constant" water-supply system, aided by the absence of any service-box or cistern to prevent foul air from being drawn from a closet into the water-mains.

Accompanying the published report is a plan of Caius College, with its sewers, drains, water-closets, and water-pipes; and in concluding our observations on it, we would specially refer to the care and skill with which its author sought and found the source of the outbreak with which he deals.

AMENDMENT OF THE SANITARY LAWS.

It was probably with some surprise that those who take an interest in sanitary legislation learned a week or two ago, from an inconspicuous paragraph in the record of that portion of the proceedings of Parliament which is transacted during the small hours of the morning, that the President of the Local Government Board proposed during the present session to bring in a Bill for the extension and amendment of the sanitary laws. We say with some surprise, because, in the circumstances under which the present Government took office, even the warmest advocates of sanitary progress could scarcely have found fault with them had they asked for time to mature their legislative projects in sanitary as well as in other matters; and we were, therefore, quite prepared to see this session pass by without any further contribution being made by the Local Government Board to the business of Parliament than would be offered by the Provisional Orders Bills, which are part of the routine of every session. Mr. Sclater-Booth appears, however, either to have come into office with pretty well defined views as to what the country requires in the shape of sanitary legislation, or to have mastered the subject very rapidly since his accession to office, or, which is possibly the more correct hypothesis, to have found a Bill in the pigeon-holes of his predecessor, ready cut and dried to his hand. That Bill is now printed, and we are thus enabled to form an idea of the amendments and extensions which the Local Government Board considers to be essential as the finishing stroke of sanitary legislation before the grand climax of codifying the various sanitary statutes, which Mr. Stansfeld promised last year, is put in force.

So far as the Bill goes at present, it might be appropriately described as in the main an office-bill to rectify defects in the Act of 1872 in regard to the machinery for elections and carrying on the routine duties of sanitary authorities. Out of fifty-six clauses in it, scarcely a dozen deal with defects in existing sanitary legislation of what may be called prime importance. When we say that the Bill is entirely silent on such subjects as any provisions to compel sanitary authorities to provide places of reception for persons suffering from infectious diseases; or to facilitate the combination of authorities for this purpose; or to enable rural authorities to provide water for limited portions of their districts; or to deal, even by the restricted powers of the Artisans' and Labourers' Dwellings Act, with the crying evil, in rural districts, of dilapidated and uninhabitable houses; or to give a recognised status to the central committee in combined districts; to say nothing of numerous other matters with regard to which clear statutory powers are urgently required—we think that we are not doing injustice to Mr. Sclater-Booth's Bill in describing it as a very modest attempt indeed to "amend and extend the sanitary laws".

The Bill has, as we have observed, been brought in rather unexpectedly; and signs are not wanting that it may be pushed through the House of Commons with as much haste as can be decently shown. It was down on the notice-list for committee on Monday last; and possibly before these lines meet the eyes of our readers, material progress may have been made in getting it through this stage. Under these circumstances, it is evident that no time is to be lost in endeavouring to make up for the existing deficiencies of the Bill by getting such clauses added to it as will deal with some at least of the more urgent wants to which we have referred. The Government have on more than one occasion already exhibited a somewhat surprising readiness to accept "suggestions" in shaping their attempts at legislation; and, if the President of the Local Government Board should only prove as accommodating in this respect as his colleagues at the Home Office and the Exchequer have shown themselves, there is some hope that his puny bantling may with care be "educated" into something of a robust form.

The importance of making the most of the present opportunity is the greater, as it may not occur again for some time to come. It is neither likely nor desirable that a Sanitary Bill should be brought in each session of Parliament. It is piecemeal legislation of this kind which has already produced the almost hopeless confusion of sanitary statute law; and we do not hesitate to say, for our own part, that we should much prefer that the present Bill should be withdrawn and made the nucleus of a much more comprehensive and satisfactory one next year, than that it should pass in its present form, and thus cut off all immediate prospect of dealing with defects which stand as insuperable obstacles to all sanitary progress.

As we have referred to the defects of Mr. Sclater-Booth's Bill, it is only fair that we should indicate, though we can only do so very briefly, those provisions in it which are of value as contributions to sanitary law. Amongst these is one extending the power of sanitary authorities, in respect of sending infectious cases to hospitals, to those which are situated "within a convenient distance" of their district, and providing that a justice's order shall be addressed to a "police or such other officer" as the justice shall consider expedient. The power of making bye-laws in regard to the walls of buildings is extended to their roofs, foundations, and spouts, "for purposes of health, as well as for the purposes of stability and protection against fire". The Local Government Board may proceed by writ of mandamus against any sanitary authority which neglects to perform "its duty" after being ordered by the Board to do so under the forty-ninth section of the Sanitary Act, 1866. A very good clause authorises the Local Government Board to direct *urban* sanitary authorities to make proper provisions for scavenging in their districts, and gives occupiers in it a summary remedy against them in case of default. We should like to know why this clause should not apply to *all* sanitary authorities in respect of whom the Local Government Board may give such directions. Some useful provisions are inserted in the Bill on the subject of bye-laws prohibiting the erection of buildings before approval; and a long clause deals with the closing of polluted wells and pumps, but in such a way as appears to us to scarcely, if at all, extend the powers which a sanitary authority already possesses under the Nuisance Removal Acts. We may say much the same of a clause imposing a penalty on any person knowingly concealing the fact that a house, or part of a house, which he shows for the purpose of letting, has been previously occupied by a person suffering from infectious disease, *if he be questioned on the subject by the in-*

tending hirer. The clause would be of some value if it made concealment by a person thus letting a house liable to heavy penalties, unless the person so letting were provided with a medical certificate that every possible precaution had been taken to eradicate the infection. In addition to the foregoing, there are a few other provisions of a sanitary nature, but they are of subordinate importance in a practical point of view.

PASS AND PLUCK AT THE COLLEGE OF SURGEONS: THE "PRIMARY" FOR THE MEMBERSHIP.

THE results of the recent examinations at the Royal College of Surgeons for the several degrees of Member and Fellow have naturally given rise to a great deal of discussion and speculation amongst all members of the profession, from the professor of eminence and the all-defiant "grinder" to the junior student, anxious for his own future, and laudably desirous of his school's position. Grave stories have reached us of high honour men, scholars, and prizemen coming to grief, not only at the severer ordeal of the Fellowship, but even at the ordinary examination for the primary for the Membership, and of other men whose success has been equally unexpected. We are fully aware that more has been required, and very properly so, from the candidates, and we were not surprised to notice a considerable diminution, at all events at first, in the percentage of passed men; but for some as yet unsatisfactorily explained cause, at the recent examinations in particular, some extraordinary fatality has followed those who offered themselves. The list of averages has not as yet appeared, but we shall be interested to notice whether the position taken by any one particular school has improved or deteriorated from that of last year, as perhaps some clue towards an explanation may be thus obtained. That we may endeavour to arrive at some reasons which have led to the recent lamentable failures, it is obvious that we must consider the position, as far as we are able, of those concerned—viz., on the one side, the student and his teachers; on the other, the Examining Board and their examination.

In the first place, then, with regard to the student, the following questions suggest themselves: Is the medical student as diligent, as capable of work, as attentive during his first two years, as his predecessors of a year or two ago have been, who have been successful? We are bound to say that, from our own experience, he is highly appreciative of the efforts made to assist him, and thoroughly understands that more and more is expected of him. He may have some little tendency to "cram", and in some cases be inclined to shirk hard labour in the dissecting-room—a condition, in our opinion, as conducive to the fatal "nervousness" at the College as anything else; otherwise, we think that the generality of men do their work as well, and better perhaps, than before. Certain "plucks" exist in all schools, men absolutely stupid, far better out of the profession than in it, and incorrigibly lazy men, who now, fortunately, in most schools, are quickly recommended to alter their ways or to retire.

With regard to the teachers of anatomy and physiology, we are assured that at no period have they been more assiduous or "better up" than they are now—determined, as far as in them lies, not only to teach, but to pass their pupils. The teaching is undoubtedly more *tutorial;* there are more demonstrators, and, after all, it is with them that the backbone of the teaching is; they hold regular and frequent examinations, both written and *vivâ voce* (at least in London); and, moreover, "test examinations" of severity are instituted, and students considered by a staff of teachers incompetent for the College are, as far as possible, prohibited from going up. We are almost tempted, however, to wonder whether this influences the result as much as is supposed. As a matter of fact, we understand that by far the larger proportion of bad marks are gained in the physiological portion of the examination. So much for the position held by teachers and taught in this inquiry for the present. Now, with regard to the nature of the primary examination itself. The questions submitted to the candidates to answer on paper were, we consider, very fair, not at all too stiff, and requiring but little headwork—in fact, little more than a plain statement of facts. The *vivâ voce* examination on the dissected subject, bones, preparations, and microscopes, however, has appeared to some to be somewhat unequally conducted, although we have heard nothing proposed that ought not to have been answered by the student; yet in one or two instances we are told there was a little disposition to cavil, and some expressions of irritability, doubtless provoked by the nature of the reply. We are inclined to think that by far the greater number of men lose a good mark at the *vivâ voce* from being suddenly brought to bear upon some one of the singularly clean, spirit-bathed, blue-plaster bedded "pickles," representatives of which, however well they may be made and put up in their own museums, somehow do not work the same; and we might here suggest that instead of time being wasted in providing permanent specimens of such regions as are always displayed in the class, their teachers should copy some of the more puzzling looking, and put them up exactly in the same style. Again, the candidates appeared less at home in physiological than in anatomical questions. As far as the mode of examining itself is concerned, it would be difficult, or indeed unnecessary, to suggest any other; but whether it is "equably" conducted by the examiners, is open to doubt. We say unhesitatingly, that to ensure every chance for the candidate's success, if he be *well* prepared, and to ensure his rejection if *un*prepared, every examiner holding office as such should be a present or recent teacher on the subject in which he examines, and engaged in lecturing upon it, thus necessitating his keeping *au courant* with modern research and ideas; and we have over and over again noticed, contrary to the accepted opinion, that the more modern examiners are by far the best for the student to encounter, as they recognise a correct answer, after having put such a question as shall test a pupil's knowledge, and do not hark back to stock queries requiring stock replies, or doubt the correctness of a proper reply, as has occurred. We are of opinion, and in the student's behalf we say it, that when a more even gauge in the qualifications for examinerships is formed, and on a somewhat different principle, we shall not hear of these wholesale failures, for they doubtless point to other elements than idleness on the part of the pupils, or of neglect on that of their teachers.

We shall reserve our remarks on the Pass and Fellowship examinations till a later date.

THE Baroness Meyer de Rothschild and her daughter have contributed £150 to the North-Eastern Hospital for Children in memory of the late Baron Meyer Amschel de Rothschild.

DR. EDWARD C. SEATON, and Dr. Dickson, Physician to the British Embassy in Constantinople, have been appointed to represent England in the International Cholera Conference in Vienna.

DR. JULIUS POLLOCK has been appointed Lecturer in the Principles and Practice of Medicine, and Dr. Silver Lecturer in Clinical Medicine, at Charing Cross Hospital Medical School.

ON the arrival of the steamship *Atrato* at New Zealand, after a voyage of fifty-nine days, she was placed in quarantine on account of an outbreak of measles on board, which had caused thirty-two deaths.

THE General Medical Council is convoked for July 10th. It will have chiefly to consider the reports of the visitors to examinations. These will be found to be very candid and fairly complete. Generally, it is thought that the suggestions made will be well received by the bodies which they concern.

THE HUNTERIAN MUSEUM.

ONE of the most interesting features in connection with the annual election of Fellows into the Council of the College of Surgeons, is the exhibition in the theatre of the College of preparations, instruments, etc., about to be added to the museum. On the present occasion, they will be on view to the Fellows and members a full week before the day of election, viz., on Tuesday next, and so remain until Thursday, July 9th.

THE COLLEGE OF PHYSICIANS OF LONDON.

THE unusual festivity of a Fellows' dinner marked this week the proceedings at the College of Physicians of London. The dinner was, except in the gastronomic sense, a very brilliant one, and was attended by many visitors of distinction (including the Bishop of Ripon, Lord Denman, the Master of the Rolls, Dr. Carpenter, Professor Owen, Mr. Curling, and others), as well as by many distinguished Fellows in town and country. The occasion was, however, one of a social character not inviting report.

NEW INFANT NURSERY AND MISSION.

THE Duke and Duchess of Edinburgh opened an Infant Nursery and Mission at Wellclose Square on Tuesday last. The building was designed by Messrs. Greatorex and Co., and will provide for eighty children and dwelling-rooms for the nurses. Its cost is £1,751, of which £1,500 has been received or promised. Each child will be cared for, and get a light meal of bread and milk for 2d. a day, and any provisions they may bring will be cooked for them. In the course of some remarks on the occasion, the Bishop of Rochester observed that it was impossible to think without shuddering of the fearful mortality among the children of the seamen and labourers in the neighbourhood of the docks, which amounted to no less than 44 per cent.

HOSPITAL FESTIVALS.

THE London season brings round with it, as is well known, a great many festivities—festivities of all sorts and sizes. Amongst others, it brings round the festivals—luncheons, dinners, *conversaziones*, etc.—by which some of our hospitals strive to keep themselves before the public, and to obtain the funds which are needed, or are supposed to be needed, for their self-imposed charity. The older and better established hospitals appear to be discontinuing this mode of "raising the wind", and it is said that they do not find it so remunerative as formerly. But some of the younger special hospitals have taken up the cue, and have lately been playing the game with great vigour. On these occasions, there is usually a good deal of "tall talk" about the value of our charitable institutions in general, and of the hospital or dispensary in question in particular. "The toast of the evening" contains a terrible picture of distress, with just one ray of sunshine. The case of the people who suffer from bad hearts, bad skins, and bad legs is quite appalling; and that they should have been left thus long without special assistance is highly discreditable to us as a nation. But the victims of neglect have now a hope. Their case has attracted the attention of some disinterested and benevolent gentlemen. A hospital has been founded for their relief. Its doors are thronged—a fact which is taken to show how much it was required—the waiting-rooms are crowded, and already the Committee have it in contemplation to build a new wing. For this purpose, funds are urgently needed, and an appeal is accordingly made to the generous British public, who are always so ready to assist the poor creatures who have bad hearts, bad skins, or bad legs. But we need not sketch the chairman's speech any further. Who does not know the high-sounding platitudes and the exaggerated statements of this after-dinner benevolence? What we are mainly concerned with is the question—How does it affect the community at large, and our own professional class in particular? This inquiry it is not difficult to answer. The indiscriminate extension of medical charity cannot be considered beneficial to the public and to the medical profession. It injures our social status, and lowers the whole scale of our professional remuneration. It is not merely the general practitioner who suffers because his patients are drawn away from him to the free dispensary or hospital. This is a flagrant and obvious way in which a hard working and most deserving class of men are injured by the multiplication of so-called charities. But there are other and more subtle ways in which all grades of medical men suffer by it. The effect of the excessive number of free hospitals and dispensaries, and of the way in which they vie with one another to see which shall distribute the largest amount of "charitable" relief, is to depreciate the whole value of medical advice and assistance. The public argue, and not unreasonably, that the commodity which the medical men are so ready to part with for nothing cannot really have much intrinsic worth; and thus the doctor, by cheapening his services to the artisan class, cheapens them to all classes. The great commercial class of this country, by whom many of our brethren obtain their livelihood, has many links of connection with the artisan class; and the rapid and unnecessary multiplication of hospitals and dispensaries, bidding against one another for the favour of the working people, makes it difficult for the general practitioner to get adequate fees from the higher classes. Thus, the ill-judged efforts of a few to bring themselves into notice and to obtain practice by setting on foot needless "charities" injures the whole circle of the profession by depreciating the value of the article that we have to sell. The experience of all ranks—consultants and general practitioners alike—will, we are sure, bear us out in these remarks; and where the evil is to cease it is difficult to see. What is needed is that the truth we have been insisting upon—namely, that the excessive amount of gratuitous medical service, besides its other evils, cheapens the whole business of our profession, and therewith injures our social status—should be clearly recognised, and that our efforts should be directed towards restricting unpaid attendance within those narrow limits which alone are beneficial for society, and thus raising the scale of remuneration throughout the entire profession. If this were done, the social position of the profession would rise also, and approach more nearly to what it ought to be in these days of high scientific education. The medical practitioner of to-day belongs to a very different class from those against whom the play-writers and the novel-writers of the last century levelled their sarcasms, and he deserves higher emoluments and higher social consideration. But our medical arrangements, more particularly in the large cities, are such as, under the specious name of charity, to deprive him of the proper reward of his labours.

EDINBURGH UNIVERSITY BUILDINGS EXTENSION FUND.

WE have been requested to announce that Sir Alexander Grant and the Committee have decided to postpone the meeting in connection with this project, announced to be held in the course of the present month, until November next.

MEDICAL SCIENCE IN PADUA.

A NEW anatomical and pathological institute was publicly opened in Padua on May 20th. An address on the occasion was delivered by Professor Brunetti. A portion of the ceremony consisted in the unveiling of busts of the celebrated pathologists Morgagni, Rokitansky, and Virchow, the former of whom was a teacher in the University of Padua.

ST. MARY'S HOSPITAL, PADDINGTON.

THE annual general meeting of the governors and subscribers of St. Mary's Hospital, Paddington, was held in the Board Room of the hospital on June 19th; Sergeant Gaselee in the chair. The report stated that the number of patients admitted into the hospital during the year 1873 was 1,753, as compared with 1,777 in the year 1872. The number of out-patients was 20,807, against 20,478 in the previous year. In the maternity department there had been 304, as compared with 305 in the year 1872. The expenditure during the past year was greatly in excess of the previous year, owing mainly to the increased price of every hospital necessary. The cost of each patient, after deducting 11s. for each out-patient, was £63 13s. The governors were thankful to be able to remark that, through the very large donations received and the grant made from the Hospital Sunday Fund, they had been able to meet every liability. At the same time, the governors regretted to say there was a deficiency of annual subscriptions, notwithstanding the appeal made last year. They again urged the friends of the institution to use their influence in this particular direction. The governors had much pleasure in acknowledging the munificent donation of £1,000 from "D. T. H.," being the fifth gift of a like amount; also from "H. B.," £200; Henry Gardiner, £105; Mrs. M. A. Butcher, £100; Mr. and Mrs. J. Gibb, £100; and Mr. C. Goodly, £100. They also acknowledged the collections made at St. John's, Southall, Christ Church and St. Mary's, Paddington, and Greenford Church, amounting to £95 12s. The legacies received, including that of the late Mr. George Nicholls for £7,271 6s., amounted to £9,845 16s. 6d.; the proceeds from the annual ball to £143 15s., and from the Hospital Sunday Fund, £1,150.

ROYAL COLLEGE OF SURGEONS.

THE half-yearly examination of candidates for the License in Dental Surgery was commenced on Monday last. The following were the questions submitted on this occasion, viz.:

Anatomy and Physiology.—1. Give the anatomy of the tempero-maxillary articulation. Describe its several movements; and mention the muscles by which they are respectively effected. 2. Describe the various changes of form which the rima glottidis undergoes; and state how and for what purposes these variations are produced. *Pathology and Surgery.*—1. In what forms does syphilis affect the interior of the mouth? Describe the characteristics and treatment of each form. 2. Describe the alteration in tissue which exists in chronic enlargement of the tonsils; and state the inconveniences resulting from the condition, and how they are to be remedied.—The candidates were required to answer at least one question on each subject. *Dental Anatomy and Physiology.*—1. Name and describe the microscopic appearances of the tissues concerned in the formation of the enamel and dentine. 2. State the ages at which, and the succession in which the members of the deciduous and permanent sets of teeth are respectively erupted. 3. What are the various purposes fulfilled by the "cementum" in man and other animals? *Dental Surgery and Pathology.*—1. Explain the symptoms and pathology of irritation and acute inflammation of the pulp respectively. Describe the mode of formation and character of secondary dentine, and the symptoms associated with its development. 2. Describe fully the forms of impaction of the third molar teeth, and the consequences frequently resulting from their retarded and difficult eruption. State the treatment of such cases. 3. What is an alveolar abscess? Describe its causes, and the changes which occur in its development, with the several issues to which it may lead.—The candidates were required to answer at least two out of the three questions on each subject.

On Monday next, the oral examination will take place.

INSTRUCTION IN COOKERY AND HOUSEWORK.

WE notice with extreme satisfaction that Mrs. Baines' very liberal offer of £100 to be given as prizes for essays or manuals on cookery and housework, suitable for the use of the School Board teachers, has been accepted by the London School Board; and that the School Management Committee has been requested to present a scheme for the application of the gift. The dense cloud of ignorance concerning almost all branches of the culinary art which has hitherto overshadowed our land is being gradually broken up. The School of Domestic Cookery, Mr. Buckmaster's popular lectures, Lady Barker's *First Lessons in the Principles of Cooking*, and now Mrs. Baines' generous offer, are all assisting in the good work. This ignorance has resulted in an enormous waste of good food, and in the substitution of worthless for nutritious articles of diet, and has led to discomfort, to disease, and even death itself. The present race of cooks has simply learnt how to make a few dishes, by means of practical lessons—that is, by imitation; their successors must be taught also the science of their vocation, and must know the "why and because" of everything which pertains to their art.

CONGRESS OF THE SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS.

DURING the late Congress of this Society, the Earl of Harrowby, the chairman, read a letter from Her Majesty the Queen, expressing her approval of the objects of the Society, and containing a passage requesting him to give publicity to Her Majesty's warm interest in the success of the efforts which are being made here and abroad for the purpose of diminishing the cruelties practised on dumb animals. It went on to state that the Queen hears and reads with horror of the sufferings which the brute creation often undergo from the thoughtlessness of the ignorant, and she fears also sometimes from experiments in the pursuit of science. For the removal of the former, the Queen trusts much to the progress of education; and, with regard to the pursuit of science, she hopes that the entire advantage of those anæsthetic discoveries from which man has derived so much benefit himself in the alleviation of suffering may be freely extended to the lower animals. At the same congress, vivisection was discussed, and Mr. A. de Noe Walker of Florence read a paper. Without calling the scientific utility of vivisection into question, he nevertheless thought the practice ought to be regulated by law; and he read a telegram from Florence, from which it appeared that Professor Schiff of that city had received, between October and May, no fewer than three hundred and thirty dogs for vivisectional purposes. A communication was read from the Baroness Burdett-Coutts, protesting, in the name of the women of England, against vivisection, as an outrage on human nature and natural religion, and expressing the opinion that legal enactments against cruelty ought to apply to all classes, whether scientific or otherwise. Mr. W. Hutton moved, "That painful experiments on living animals, if not already illegal, should be forbidden by law, except under licence and precautions for publicity." Dr. Richardson made an eloquent appeal on behalf of physiologists, contending that their experiments had done a great deal to mitigate both human and animal suffering, and that much still remained for them to accomplish. For instance, one person in two thousand five hundred died under chloroform. Physiologists were seeking an agent which would not be attended with this fatal result. Would the Congress prohibit them from making experiments on animals with the view of obtaining this great boon? Mr. Colam said that experiments were now carried on in private; and, on behalf of the Royal Society, he challenged vivisectors to allow him and a properly qualified observer to attend their experiments. If everything was right and proper, why were not the operations done in public? Finally, Mr. Hutton's motion was adopted.

AN ENABLING BILL.

THE Apothecaries' Company has passed through the Commons, and is passing through the Lords, its enabling Bill; but, though the Bill is good and reasonable enough, it is still liable to the serious criticism that it does not enable the Society to do the one thing which it ought to enable them to do, viz., to withhold their license from candidates till they have passed a compound or conjoint examination. That, at least, is the opinion of the Executive Committee of the General Council, who based a resolution upon it at their last meeting. In that resolution, however, Dr. Andrew Wood and Dr. Aquilla Smith, who object to conjoint schemes and enabling resolutions, and Dr. Acland, for reasons best known to himself, declined to concur. It is a very odd sort of a Bill which omits what should be its main provision. Perhaps, however, there is more, in the omission, of method than of madness, and we shall await the sequel with curiosity.

DEATH FROM CHLOROFORM.

ANOTHER of those distressing accidents, the frequent repetition of which has already given Cincinnati an unenviable notoriety, has lately occurred. A young man was being operated upon by Drs. Dawson and Connor for the removal of a scrofulous tumour of the jaw. The chloroform was being administered carefully by one of the house-physicians; another competent assistant was in charge of the pulse, when suddenly pulse and respiration ceased. Artificial respiration was kept up for nearly three-quarters of an hour, though there was not the least response to it during any part of the time.

DRUGS IN THE MARKET.

BEFORE the Committee of the House of Commons on the Adulteration Act, Mr. Sandford, a former president of the Pharmaceutical Society, has laid the suggestion that the duty of executing the provisions of the Adulteration Act should be left, in respect to drugs, entirely in the hands of the Pharmaceutical Society. The suggestion might be improved upon. Thus the execution of the provisions of the Adulteration Act, in respect to butter, might be left entirely to a committee of buttermen; of beer and spirits, to publicans; and of sugar, to grocers; and then every one would be satisfied, except perhaps the consumers.

As, however, trade interests are very strongly represented indeed on that Committee, it might be well that some more rational evidence than this should be offered before the Committee, lest perchance such a recommendation should commend itself to the mercantile element of the Committee.

IRELAND.

DR. WARD, Professor of Anatomy at the Catholic University, has issued his address to the electors of Galway City.

AT a meeting of the Council of the Royal College of Surgeons in Ireland, held on Saturday, June 20th, Drs. Edmond Nugent and Stewart Woodhouse were elected Examiners in Arts, in room of Drs. Ward and Stoker, resigned.

PUBLIC HEALTH (IRELAND) BILL.

THE amount of attention attracted by this Bill has not decreased in consequence of the various postponements of the committal of the bill. The postponement has been advantageous, as it has permitted a much wider expression of opinion than could have taken place had the Bill passed more quickly through its various steps. The Dublin papers have almost universally accepted the views put forward by us in our recent articles, and have supported those advocated by the different deputations which waited on the Irish Chief Secretary. The only really opposing body seems to be the Dublin Municipal Council, which, according to *Saunders's News-Letter*, the old and independent Dublin morning paper, is "a body which, for some time past, cannot be considered as fully representative of the wealth or intelligence of the city". This body opposes all the clauses of the Bill tending to improvement of its present defective sanitary arrangements. Clause 10 is especially obnoxious to the Dublin town councillors, who, through their mouthpiece, a certain worthy Dublin pawnbroker, seem to object *in toto* to anything like independence on the part of Medical Health Officers, or to any governmental interference with their sanitary shortcomings. That body claims exemption from all compulsory legislation with regard to sanitary matters, and has passed the following resolution at a meeting held on Friday, the 19th instant.

"That this Council desires to inform Sir M. H. Beach and Her Majesty's Government, that no amendment of section 10 of the Public Health Bill, now before Parliament, short of excepting the city of Dublin from the operation of the said clause, will be satisfactory to this corporation, and that we most respectfully, but at the same time urgently, request that our wishes in this respect may be acceded to, and that a copy of this resolution be forwarded at once to the Chief Secretary, the Lord Lieutenant, and the Prime Minister, and such members of Parliament as are likely to assist our views in Parliament."

The Dublin Corporation have been quietly, for eight years, obtaining nearly all their sanitary information from the Dispensary Medical Officers, but now, when a measure is about to become law, compelling that body, which "represents neither wealth or intelligence", to give payment and credit for their overworked and underpaid medical officers, this intelligent body rebels against the injustice of the proceeding.

STATE OF THE RIVER LIFFEY.

THE Anna Liffey is the Father Thames of Dublin; and, like her big brother in London, the said Anna is proving a difficulty to the Dublin Corporation, the "much-enduring" ratepayers, and a nuisance to everyone, but especially stinks in the nostrils of Her Majesty's Chief Justice, who has threatened to close his court if the Corporation or the Government do not take immediate measures to prevent the pollution of the air of the Irish palace of justice, which, according to the Chief Justice, stands on the brink of a cesspool. The river Liffey is really the main sewer of Dublin; and those who remember the banks of the Thames before the present main drainage system and the embankment were constructed, can realise the present state of the Irish metropolis. It is now but twenty years since a new system of district sewers was commenced in Dublin. Many miles of these sewers have been annually added to the Dublin system; and, besides this, a great growth of the Dublin suburbs has taken place. Consequently, the amount of sewage poured into the Liffey has steadily increased, and each summer has developed an increased exhalation from the fœtid mud of the river. The matter was brought under the notice of Parliament on Monday night by Serjeant Sherlock, who, to judge by his action in this matter, as well as in the Irish Public Health Bill, takes an intelligent interest in sanitary matters. The Irish Chief Secretary promised not only the full co-operation of the Government in any measure for the improvement of the river, but also gave the House to understand that, if the improvements were not done by the Dublin Municipal Council within a reasonable time, the Local Government Board would act decidedly in the matter. The Lord Lieutenant made a communication to the Dublin Town Council to the same effect on Monday. The Council seemed to be panic-stricken by the intelligence that Government really meant to meddle in the matter; and some of the members became so frightened, that they left the day's business unfinished, much to the indignation of the Dublin papers of Tuesday morning.

DUBLIN HOSPITAL SUNDAY.

IN spite of the discouragement the Dublin Hospital Sunday movement has met with, in consequence of the want of co-operation of the Roman Catholic Church, we are happy to state that the *Dublin Mail* announces that the fifty churches, including the Jews, and Protestants of all denominations, have promised co-operation in the movement. We believe that, at a very moderate calculation, the congregations of the co-operating churches may be expected to contribute as much as, if not more than, has hitherto been collected at Hospital Charity Sermons in Dublin and the vicinity.

THE IRISH APOTHECARIES' BILL.

MR. GEORGE ERRINGTON, M.P. for Longford, has introduced a Bill into Parliament to amend the laws relating to pharmacy in Ireland. The Bill is almost identical with that proposed by the Irish College of Physicians, and seems likely to meet the requirements of the profession and the public in Ireland. We understand the Bill is likely to be referred to a select committee, in company with the proposed Bills of the College of Physicians and Apothecaries' Company. The Dublin chemists and druggists seem to have entered into some arrangement with the Irish Apothecaries' Company, for they are about to co-operate with that body, instead of opposing it, in the promotion of its Pharmacy Bill. The Irish Medical Association, through its secretary, Dr. Quinan, has collected a large amount of valuable information relative to the great deficiency of pharmaceutical chemists in Ireland. The Dublin press generally approves of the College of Physicians' Bill, and criticises severely the manner in which the Irish Apothecaries' Company has used its monopoly for the control of the sale of drugs and compounding of prescriptions.

UNIVERSITY OF DUBLIN ATHLETIC SPORTS.

THE annual meeting took place on Wednesday and Thursday, the 10th and 11th June, in the park attached to Trinity College, and were attended by an immense assemblage. The various items were fairly contested, and the Medical School Challenge Cup, for the race of 1,000 yards, was won by A. C. Courtney in two minutes thirty-six and a half seconds.

STEWART INSTITUTION FOR IMBECILES, LUCAN.

THE half-yearly meeting of this institution was held on the 17th instant; and, from the report furnished, we find that during the past six months it has progressed in a satisfactory manner. In January last, a committee of ladies was formed to collect subscriptions; and this arrangement has been found to act so successfully, that it is proposed to establish a lady secretary in each county. Owing to want of funds, no new pupils can at present be admitted, although about one hundred applications have been received. The inmates are received for five years, and taught various trades, as tailoring, mat-making, etc., and are instructed in out-door employment permitting them to be engaged as farm-labourers. The institution is a most benevolent one, and well deserves the support of the charitable.

HÆMORRHOIDS.

DR. WILLIAM COLLES, of Steevens's Hospital, Dublin, has lately suggested treating hæmorrhoids by injecting the tincture of the perchloride of iron. He had some time since a case of internal hæmorrhoids under his care, and used this method, twenty minims being injected into each hæmorrhoidal tumour; and on the rectum being explored by a speculum some weeks afterwards, no traces of the piles could be discovered except a few nodules of cuticle, each of the size of a shrivelled currant. The case had been previously treated without avail by the application of fuming nitric acid, a remedy first suggested by the late Dr. Houston of Dublin.

THE COLLEGE ELECTIONS.

NEXT Thursday, the usual annual election to the Council of the Royal College of Surgeons of England will take place. We have made little comment on the election, because the result of it is a matter of obscure speculation. The events of the last few years have robbed these elections of much of the interest which for a time centred around them. The greater part of the reforms which were needed have been introduced. The choice of examiners is no longer confined to the circle of councillors; the tenure of office has ceased to be a life-term; the examinations are reformed, as some people complain, a little too sharply; under the conjoint scheme, the sphere of the Council is very much narrowed. These, and other circumstances, have done much to lessen the importance and interest of these elections. The College of Surgeons ceases to be the imperious and sole regulator of the conditions of education and examination of the great mass of the English profession. The Council has functions, however, of enough interest, and traditions of enough greatness, to evoke something more than the languid interest which now prevails as to who is and who is not elected to it, if it were not that the late elections have tended more and more to develope conditions which have robbed them of their import and the Council of its dignity. It has been more and more evident that a system of electioneering was being organised which had the effect of deciding election by considerations, among which the intrinsic merit, reputation, and position of the candidates did not count for their full value. The results were quickly apparent in the refusal of some of the best men of the profession to pass through an ordeal, in which nothing was certain but that industrious electioneering might carry the day against all other considerations. Thus, Mr. Pollock and Mr. De Morgan, two of the metropolitan surgeons whom every one would admit to possess, in an eminent degree, the qualities specially desirable in members of the Council, have steadily declined to allow themselves to be put in nomination. Events culminated last year in the proceedings which left Mr. Savory and Mr. Cooper Forster at the bottom of the poll. Their names must now be added to those of the eminent surgeons who decline the honour of any further nomination for the Council. Their defection left, as the list of candidates for election this year, Mr. Hilton, the veteran surgeon of Guy's Hospital, ex-President, Examiner, and ex-everything at the College, whose willingness for office is not completely worn out by twenty years' enjoyment of it; Mr. Marshall, who seeks naturally re-election after a year's tenure only, being compelled to retire by the curiously artificial system which allots to each member who fills an extra vacancy only the unexpired term of his predecessor; and then come Mr. Hussey of Oxford, Mr. Baker of Birmingham, and Mr. Henry Smith of King's College Hospital. To Mr. Hussey of Oxford we can but wish the success which he desires himself: we know little of his claims, and nothing of his chances. We may perhaps fairly assume that the contest will be between Mr. Baker and Mr. Henry Smith. We have been roundly rated by that irritable contemporary whose nerves are so much affected by the most distant scent of the British Medical Association, with having given an undue advantage to Mr. Baker, by placing him higher on the list than Mr. Smith. To treat Mr. Baker, the leading consulting surgeon of the midland counties, as other than senior would have been absurd.

The technical question of what constitutes professional seniority has been long since settled. Thus, at the formation of St. Mary's Hospital, active electioneering carried some candidates to the head of the poll; being elected on the same day, however, it was decided to settle seniority in the professional order, and, after consulting the best authorities, it was decided that the date of membership of the College settled seniority among the surgeons. Any other decision would have been absurd, as it would be now to attempt to annihilate membership as a period of professional existence, in order to elevate Mr. Henry Smith for electioneering purposes into a fictitious seniority over the head of Mr. Baker. In defending our view of the seniority of Mr. Baker, we by no means infer that he will be necessarily elected. It is true that he is a provincial surgeon of the highest eminence and of proved judgment, capacity, and public spirit; that he has, in a great public capacity, received the proof of the confidence of the whole profession in the Midland Counties, and has done honour to their choice; that he has consented to be nominated on the requisition of a great body of provincial and metropolitan Fellows; that he is known to be a thoughtful and liberal-minded administrator as well as a high-minded and skilful surgeon; and that, living within two hours' reach of the College, he has undertaken to give the necessary attendance and attention to its business, if elected; but, in the face of recent evidence of the influence of active electioneering on the results of the poll, we should be sorry to assume that these claims will prevail. We may, however, be permitted to say that, for the sake of the future of the College, we hope they may.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FORTY-SECOND ANNUAL MEETING.

THE Annual Meeting of the British Medical Association will be held at Norwich, on Tuesday, Wednesday, Thursday, and Friday, August 11th, 12th, 13th, and 14th, 1874.

President—Sir WILLIAM FERGUSSON, Bart., F.R.S., Surgeon to King's College Hospital, London.

President-elect—EDWARD COPEMAN, M.D., Senior Physician to the Norfolk and Norwich Hospital.

An Address in Medicine will be given by J. RUSSELL REYNOLDS, M.D., F.R.S., Physician to University College Hospital.

An Address in Surgery will be given by W. CADGE, Esq., Surgeon to the Norfolk and Norwich Hospital.

An Address in Obstetric Medicine will be given by JAMES MATTHEWS DUNCAN, M.D., F.R.S.Edin., Lecturer on Midwifery and Diseases of Women and Children in the School of Medicine, Edinburgh.

The business of the Association will be transacted in four Sections, viz.:—

SECTION A. MEDICINE.—*President:* Dr. Eade, Norwich. *Vice-Presidents:* Dr. Sydney Ringer, London; Dr. Durrant, Ipswich. *Secretaries:* Dr. Bradbury, 59, Corpus Buildings, Cambridge; Dr. Lowe, King Street, King's Lynn.

SECTION B. SURGERY.—*President:* Sir James Paget, Bart., F.R.S., London. *Vice-Presidents:* T. W. Crosse, Esq., Norwich; Dr. Macnamara, Dublin. *Secretaries:* F. Worthington, Esq., Lowestoft; Reginald Harrison, Esq., 51, Rodney Street, Liverpool.

SECTION C. OBSTETRIC MEDICINE.—*President:* Dr. Churchill, Dublin. *Vice-Presidents:* Dr. W. S. Playfair, London; Dr. Steele, Liverpool. *Secretaries:* Dr. Edis, 23, Sackville Street, London; F. Image, Esq., Westgate Street, Bury St. Edmunds.

SECTION D. PUBLIC MEDICINE.—*President:* W. H. Michael, Esq., London; *Vice-Presidents:* Dr. Bateman, Norwich; Dr. Ransome, Bowden. *Secretaries:* Dr. Bond, Gloucester; Dr. Leech, Manchester.

The Honorary Local Secretaries are:
Dr. J. B. PITT, Norwich.
H. S. ROBINSON, Esq., Norwich.
Dr. BEVERLEY, Norwich.

Papers.—The following papers have been promised.

Ogle, J. W., M.D. 1. Cases of Tumour of the Cerebellum; 2. Cases of Adenomatous Tumours within the Thorax.

Fothergill, J. Milner, M.D. The Systemic Indication of Chronic Bright's Disease.

Gowers, W. A., M.D. Cases of Convulsions from Organic Brain-Disease.

Ferrier, D., M.D. The Localisation of Function in the Brain.

Eade, Peter, M.D. A Disease of Carpenters.

Mackenzie Morell, M.D. On the Ætiology of Bronchocele.

Anningson, Bushell, M.B. On the Ætiology of Infectious Diseases.

Ross, James, M.D. On the Action of Mercury.

Thompson, J. Ashburton, Esq. General Remarks on the Internal Administration of Free Phosphorus.

Bradbury, J. B., M.D. Notes of Four Cases of Hydatids of the Liver treated by Puncture.

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Section in which the paper is to be read. All papers should be forwarded to one of the above-named officers *on or before the* 1*st of August.*

No paper must exceed *twenty* minutes in reading; and no subsequent speech must exceed *ten* minutes.

All speeches at the General Meeting must not exceed *ten* minutes each.

Francis Fowke, *General Secretary.*

General Secretary's Office, 37, Great Queen Street, W.C.,
June 25th, 1874.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A meeting of the Committee of Council will be held at the Freemasons' Tavern, Great Queen Street, London, on Thursday, the 2nd day of July next, at 3 o'clock in the afternoon.

Francis Fowke, *General Secretary.*

37, Great Queen Street, London, June 11th, 1874.

METROPOLITAN COUNTIES BRANCH.

A special general meeting of this Branch will be held at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Tuesday, June 30th, at 8 p.m. precisely, for the purpose of electing Representatives of the Branch in the General Council of the Association for the ensuing year.

At 8 p.m. on the same day, an ordinary meeting will be held at the same place, when a paper will be read by W. Eassie, Esq., C.E., on "Cremation in its Bearings on Public Health".

A. P. Stewart, M.D.,
Alexander Henry, M.D., } *Hon. Secs.*

London, June 15th, 1874.

NORTHERN BRANCH.

The annual meeting of this Branch will be held in the Town Hall, South Shields, on Tuesday, June 30th, at 1.30 p.m.: President, 1873-74, G. Y. Heath, M.D.; President-elect, 1874-75, A. Legat, M.D.

The following resolution will be proposed by Dr. Eastwood:—That the title of the Branch be "The North of England Branch", in place of "The Northern Branch".

The annual dinner will take place at the Winterbottom Marine School, South Shields, at 4 p.m. precisely.

G. H. Philipson, M.D., *Honorary Secretary.*

Newcastle-upon-Tyne, June 17th, 1874.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

The annual meeting of the above Branch will be held at the Town Hall, Cardiff, on Tuesday, June 30th: Dr. Hearder, President; Dr. Edwards (Cardiff), President-elect.

It is proposed to make this meeting an almost exclusively social gathering; only necessary business will, therefore, be considered.

Dinner will be provided at the Cardiff Arms Hotel, at 4 p.m.

Andrew Davies,
Alfred Sheen, M.D., } *Hon. Secs.*

NORTH WALES BRANCH.

The annual meeting of this Branch will be held at the Royal Oak Hotel, Bettws-y-coed, on Tuesday, July 7th, at 1 p.m.; T. Evans Jones, Esq., President.

Luncheon will be kindly provided by the President at the Hotel, from 12 to 1 p.m.

The dinner will be ready at 4 p.m. precisely. Tickets, 10s. 6d. each, including a pint of wine.

Gentlemen who may wish to communicate papers or cases, and who intend dining, will please to give early intimation to the Secretary.

D. Kent Jones, *Honorary Secretary.*

Beaumaris, June 3rd, 1874.

SOUTHERN BRANCH: HAMPSHIRE, DORSET, SOUTH WILTSHIRE, AND THE ISLE OF WIGHT.

The first annual meeting of the above Branch will be held on Thursday, July 9th, 1874, at the Pier Hotel, Southsea, at 3.30 p.m., when the President, Inspector-General Smart, M.D., C.B., will deliver an address.

The business of the meeting will be to receive the report of the Provisional Council, to elect the officers of the Branch, and the representatives to the General Council for the ensuing year.

The dinner will take place punctually at a quarter past six. Tickets, 10s. each. (Wines at moderate charges.)

The Dinner Committee particularly request that those members who intend to be present at the dinner will send in their names before Saturday, July 4th, in order that the necessary arrangements may be completed.

J. Ward Cousins, *Hon. Sec.*

Southsea, June 11th, 1874.

BATH AND BRISTOL BRANCH.

The annual meeting of the above Branch will be held at the Mineral Water Hospital, Bath, on Thursday, July 9th, at 4.20 p.m.; when Dr. Fox will resign the Chair to F. Mason, Esq.

The members will afterwards dine together at the York House. Dinner tickets, 7s. 6d., exclusive of wine.

R. S. Fowler, Bath.
E. C. Board, Clifton. } *Honorary Secretaries.*

Bath, June 17th, 1874.

METROPOLITAN COUNTIES BRANCH.

The twenty-second annual meeting of this Branch will be held at the Banqueting Hall, Alexandra Park, on Monday, July 20th, at 4 p.m.: President for 1873-74, Richard Quain, M.D., F.R.S.; President-elect for 1874-75, T. B. Curling, Esq., F.R.S.

At 5.30 p.m. precisely, the members will dine together; T. B. Curling, Esq., F.R.S., in the Chair. Tickets, fifteen shillings each (including ices, tea, coffee, and attendance, but exclusive of wine).

A. P. Stewart, M.D.,
Alexander Henry, M.D., } *Hon. Secretaries.*

London, June 24th, 1874.

SOUTH-WESTERN BRANCH: ANNUAL MEETING.

The Annual Meeting of this Branch was held at Torquay on Tuesday, June 23rd. The President-elect most hospitably entertained the members and their friends at luncheon at his house. The meeting was afterwards held at the Museum, at 1.30 p.m.; the chair being taken by the President, J. Kempthorne, Esq., F.R.C.S., who briefly introduced the President-elect, Dr. Spencer Thompson, who then took the chair, and read an address on the Progress of Medicine, past and present.

Vote of Thanks.—Mr. A. Cumming proposed, and Mr. Kempthorne seconded, a vote of thanks to the President for his address.

Next Annual Meeting.—Devonport was fixed on as the place of meeting for 1875; and Mr. P. W. Swain, was chosen as President-elect.

Secretary.—Mr. J. Woodman was re-elected Secretary. He reported that the number of members was 131, and that twenty new members had been elected during the year.

Branch Council.—The following were elected in the room of those retiring by rotation, and to fill vacancies: R. H. Clay, M.D., Plymouth; J. May, Esq., Devonport; W. J. Square, Esq., Plymouth; W. P. Swain, Esq., Devonport; T. Littleton, M.B., Plymouth; C. H. Roper, Esq., Exeter; J. Kempthorne, Esq., Callington.

Representatives in General Council.—The following six members were elected representatives of the Branch in the General Council: J. Kempthorne, Esq., Callington; C. B. Nankivell, M.D., Torquay; W. Pollard, Esq., Torquay; W. P. Swain, Esq., Devonport; W. Square, Esq., Plymouth; C. Pridham, Esq., Paignton.

Parliamentary Bills Committee.—The Honorary Secretary, John Woodman, Esq., was elected representative of the Branch on the Parliamentary Bills Committee.

A vote of thanks was unanimously passed to the retiring President, J. Kempthorne, Esq., for the able and hospitable manner in which he had acted during his year of office.

Papers.—The following were read.

1. C. Aldridge, M.D. (Plympton): On two Cases of Insanity illustrating the Value of the Ophthalmoscope as an Aid to Diagnosis and Prognosis.
2. C. H. Roper, Esq. (Exeter): On Colotomy, and its Use in Cases of Stricture of the Rectum.—Dr. Radclyffe Hall spoke of having seen this case, and Mr. Woodman mentioned a case he had seen.
3. A. Cumming, Esq. (Exeter) exhibited two cases: one of Resection of the Elbow, in which there was very useful motion; the second, a man who had both feet crushed in a mill, and had had Chopart's Am-

putation performed on one, and Syme's on the other, but who was able to walk up the room without crutches, although he generally used them.

Visit to Kent's Cavern.—The members then visited Kent's Cavern, and examined the explorations being made there, under the guidance of E. Vivian and W. Pengelly, Esqrs.

Dinner.—The members afterwards dined, to the number of forty-five, at the Torbay Hotel.

CORRESPONDENCE.

PHYSIOLOGY IN THE BRITISH MEDICAL ASSOCIATION.

SIR,—I observe, in the announcement of the forty-second annual meeting of the British Medical Association, to be held at Norwich in August, that there is to be no section specially devoted to physiological subjects. At the meeting of the Association in London in August last, the meetings of the Physiological Section were well attended, several important papers were read, and several were not read for want of time. More papers were sent in than could be read in the time allotted to the meetings. As the advancement of physiological knowledge is becoming daily more important to all engaged in the diagnosis and treatment of disease, and as there are at the present moment many workers in physiological science in this country who would probably contribute some of the fruits of their labours, I am at a loss to see a reason for the absence of a Physiological Section at the approaching meeting.

I am, etc., JOHN G. MCKENDRICK.

University of Edinburgh, June 24th, 1874.

CASUALTY OUT-PATIENTS.

SIR,—My attention has just been directed to the narrative of a case of mine published, with another case, by Mr. Nelson Hardy in the number of your JOURNAL for June 13th, supplemented by some general remarks on the out-patient practice at St. Bartholomew's Hospital, obviously justified, in Mr. Hardy's opinion, by that narrative.

Mr. Hardy has done me the justice to avoid imputing to me any complicity with himself in the views embodied in those remarks; but, whilst fully acknowledging his fairness in this respect, I should be glad to be permitted to say a few words, for the purpose of dispelling any doubt that might possibly have been raised in the minds of your readers as to my entire accordance with him.

I do not deny that there may be defects in the management of the out-patient department, in a particular hospital, or in hospitals generally; but it does not appear to me that they are substantiated in the hospital to which Mr. Hardy alludes by the cases which he has cited; at all events, certainly not by the one which came under my care. Between the doings of the surgeon who had the treatment of this case at the outset and the issue, such as it was, when I saw it, a variety of circumstances might have occurred (and some one or more did, in all probability, occur) to mar the legitimate results of his good offices; such, for instance, as the negligence of the child's nurse—a very fruitful source of miscarriage in the treatment of children's broken bones in hospital out-patient practice—as well as other causes for which neither surgeon nor nurse can be responsible. And it is more easy in such instances to charge the consequences on the surgeon than to trace them to their true source.

I think no one can have been long engaged in the practice—especially the hospital practice—of our profession, without becoming painfully conscious of having had his best intentions and most painstaking efforts again and again thwarted by some contingency or other interference which could neither be provided against or foreseen; and, therefore, of the need of that charity, on the part of his professional brethren, which hopeth all things to the verge of that limit where even charity must fail.

I do not question Mr. Hardy's motives or his endeavours to improve out-patient hospital administration. They are highly to be commended in common with all others that have for their objects the improvement of our great institutions; but I regret the course taken on this occasion. I do so, on the one hand, because the charge of defect in the particular institution to which Mr. Hardy alludes does *not* appear to me to have been satisfactorily established by the evidence adduced; and, on the other, because, in my opinion, any reform in hospital administration is more likely to be attained by pointing out precisely where it is needed and can be made practicable, than by singling out an institution for censure upon some questionable proof of its having particularly deserved it.

I am, etc., JOHN GAY.

10, Finsbury Place South, June 22, 1874.

CASUALTY PATIENTS.

SIR,—Mr. Hardy has taken on himself to find fault with the casual treatment at St. Bartholomew's Hospital; and, making use of a few cases, has set up a charge against the hospital which, I believe, is quite unfounded. I was House-Surgeon for fifteen months; and then, as now, the House-Surgeon saw all cases but the most trifling ones, and about these the dresser consulted him if he were in doubt.

I believe the real secret of the deformities is that many patients with fractures of the upper extremities never return to the hospital a second time; and of course it cannot be expected that there will be no deformity in such cases.

I am, etc.,

Millon, near Carnforth. P. BUTLER STONEY.

CASUALTY OUT-PATIENTS.

SIR,—The Medical Society of London is quite welcome to the honour claimed for it by its secretaries, of having refused to discuss the two cases which, since they have been published in your columns, seem to have excited some slight professional interest. It is not, however, strictly accurate to assert that any interruption occurred on my "commencing my remarks on the case" of fractured radius, as I had concluded what I had to say about it, and was prefacing my history of the case of irritable stricture by disclaiming any intention of bringing a charge against the distinguished surgeons connected with St. Bartholomew's Hospital, when I was interrupted by the protest, not of the President, as your correspondents state, but of one of the Fellows of the Society, who had a paper of his own to bring forward that evening. As the secretaries mention my "exhibiting the patient" to the Society, and as he was actually examined by the President and several of the Fellows, there is not, and I think cannot be, any question raised as to the accuracy of my original statement that he was "shown at the Medical Society of London".

The secretaries have also omitted to state a fact which is essential to a fair consideration of the matter as concerns their Society; viz., that, a fortnight previously, I had given notice in writing to one of themselves of my intention to bring forward these two cases as having been "badly treated at St. Bartholomew's Hospital", although, of course, as I told him at the time, I did not expect the Society to endorse my opinion beforehand by putting that part of the title in their list of subjects. Under these circumstances, I venture to think that, as regards the Medical Society of London, I am, on the whole, more sinned against than sinning.

With regard to your own suggestion, that I should have communicated with the surgeon of the day at St. Bartholomew's, I own I was not aware, until I read your article, that any of the surgical staff would accept even a "nominal responsibility" for such cases as I have reported; and, if any of them are willing to do so now, I shall be quite ready to make the *amende honorable* for what is past, and to send them notice of any similar cases in the future. A casualty patient's ticket, which I enclose for your private inspection, however, will show that there are difficulties in the way of adopting the course you recommend; for it contains only the name of the hospital, the name of the dresser, directions about the time when the patient is to come, and a place where the date ought to be, but is not.

I am, etc.,

Fitzroy Square, June 20th, 1874. H. NELSON HARDY.

LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.

SIR,—My attention has been drawn to the communication addressed to you by the Secretary of the Medical Board of the above charities, in which he professes to show the incorrectness of the statements made by me in an article in the *Liverpool Daily Courier* of the 28th ult., a portion of which, as well as some slight alterations and an additional paragraph, appeared in the BRITISH MEDICAL JOURNAL of the 6th instant.

I first quoted the returns of the cases attended in all the departments for the last five years, which, for convenience of reference, I must ask you to reproduce here.

Number of Patients during Five Years.

	In-patients.			Dispensary
	Labour.	Special.	Out-patients.	patients.
1869	199	29	1594	5903
1870	235	85	1841	7426
1871	155	113	1777	7496
1872	189	141	1758	8014
1873	150	99	1584	8190

I then said, "Thus, with the exception of the dispensary, in which there is a slight increase, there is a considerable falling off in all the other departments." The Secretary has given you the figures of the five years prior to the amalgamation, and upon them builds a magnificent edifice of statistics, completely, as he presumes, confuting mine. Now, although the formal amalgamation of the charities took place in 1869, the two were kept perfectly distinct during the whole of that year, and it was not until the spring of 1870 that their fusion was completed. Then the hospital staff, which formerly numbered three, was increased to six; the out-door medical staff, which had previously been only five, was increased to eight; the midwives, formerly six in number, in charge of six districts, were increased to nine, with nine districts; the dispensary, which had previously been opened three days weekly, was opened daily. It was, therefore, manifestly unfair to take the year 1869 as showing in any way the result of the amalgamation; rather should it be 1870, or, still more fairly, 1871, when the full effects were beginning to be felt. If this be done, the statement I made turns out to be perfectly correct, and the superstructure of figures built up by the Secretary of the Medical Board falls to the ground. For surely a dispensary which is opened daily must have more patients than when only opened thrice weekly; and so with the other departments, a considerable annual increase was expected in the special cases and out-door maternity, but in both the numbers for last year are considerably less than they were in 1871. The falling off of the in-door labour cases is not to be regretted; on the contrary, it is to be hoped the number will soon be *nil*.

The Secretary complains of my article as "anonymous and entirely unauthorised"—a statement which would apply to almost any article in any paper; and, as he has very carefully suppressed his own name, the former of the two adjectives will equally apply to him.

I forward you a copy of the last Annual Report of these charities. You will observe the total absence of any proper medical report—an omission which is not to be found in the report of any other medical charity in this town. You will notice the extraordinary description of the course of instruction for midwives and monthly nurses; and, when you contrast the formidable list of gentlemen's and ladies' committees, consulting, honorary, and assistant honorary medical officers, with the amount of work done, the old familiar quotation from Horace will occur as most appropriate:

> "Parturiunt montes, nascetur ridiculus mus."

I am, etc., THE WRITER OF THE ARTICLE.

Liverpool, June 20th, 1874.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

VACCINATION.—Mr. C. Ashenden of Hastings has received a bonus of £23 : 18 for efficient vaccination in his district.

MR. WM. HENRY ELLIS, of Shipley, near Bradford, Surgeon to the Saltaire Infirmary, has been appointed Medical Officer of Health for Shipley.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

WEST KENT.—It appears from the first report which has been issued as to the sanitary condition of the West Kent District, that Dr. Baylis commenced his duties by making himself thoroughly acquainted with the general characteristics of his district—a plan which manifestly has great advantages. Dealing first with the acreage and population of the various constituent parts of the area, which, in its entirety, measures about five hundred square miles, Dr. Baylis gives a geological and topographical description of the district, and enters somewhat minutely into the limits of the various catchment-basins or drainage-areas of which it is composed. The brooks, streams, and rivers are all but universally used for drainage purposes; and Tunbridge, where a sewage-farm has been established, appears to be about the only populous place which has attempted to deal effectually with the generally prevailing evil. The climate is, as a rule, warm and genial; the chief industry is agriculture; and hop-growing, which in some years brings as many as twenty thousand additional persons into the district during the summer and autumn, constitutes its most important branch. The absence of any proper means of housing the hop-pickers forms, however, one of the principal difficulties in the sanitary administration of this district; and we trust that some measures will for the future be attempted, in order to deal with the sanitary and social evils which have for a long time been attendant on this annual gathering in Kent, and which are the more marked because there is already an almost universal defectiveness in the dwelling-accommodation of the poorer classes. Dr. Baylis points to the ordinary privy, with all its well-known nuisance and injury to health, as one of the existing institutions which it is essential to eradicate; and he proposes that it should be replaced by some dry form of closet, suitable means of drainage being at the same time provided, in order to carry away the liquid refuse, and thus to render unnecessary the cesspools which are generally in use, and which contribute largely to the pollution of well-water. A description follows as to the preliminary steps which have been taken with a view of procuring, for the future, all available information as to the mortality statistics, the amount of sickness, and the general sanitary circumstances prevailing in the district; and appended to the report is a plan of a dry-closet which is recommended for adoption, and which is constructed so as to combine the principles necessary for the proper management of such a structure, namely, dryness of contents, a mixture of the excreta with either earth or ashes, and a frequent removal of the contents of the closet.

MACCLESFIELD.—In issuing his monthly report on the sanitary condition of the borough of Macclesfield, Dr. George Bland avails himself of the opportunity of offering some statistics bearing on the infantile mortality which prevails in the Macclesfield Union; and he points out that, in the various subdistricts, the proportion of deaths in children under 12 months old to the total deaths varies from 32.3 in the subdistrict of East Macclesfield to 5.5 in the rural subdistrict of Rainow. Now, although it may at times be useful to calculate the rate which the number of infantile deaths bears to the total deaths, as, for example, when dealing with large and varied populations, such as that for the whole of England and Wales, we would point out that, if this method of calculation be relied on for small districts, it is open to a very grave source of error. The number of deaths amongst infants in any given district must almost of necessity be far more dependent on the number of infants there are in that district than upon the total deaths which may occur in it; and, in the present day, when young married people and adults at a marriageable age tend to migrate to manufacturing and busy localities, such, for example, as the silk, cotton, and coal districts in the Macclesfield Union, it is evident that, in such places, not only will the birth-rate be, as a rule, high, but the infantile death-rate will bear a larger proportion to the general death-rate than it will in rural and other districts from which the young adults have emigrated, leaving behind them a population largely made up of persons past the age of child-bearing. In the former, there are many more children to die than there can be in the latter; and, although at times other circumstances may also have to be taken into consideration, it is clear that a far more correct method of determining the infantile death-rate is to ascertain the proportion of children dying under one year of age to every hundred births; in other words, to calculate how many children out of every hundred born alive die within the first twelve months of life. Applying this rule to the subdistricts named, we find that, during the last six months of 1873, the death-rate of children under one year per hundred births was 26.3 in the East Macclesfield subdistrict, and 21.6 in that of Rainow; that is to say, these subdistricts closely resembled each other in the magnitude of their infantile mortality. During the same period, the rate prevailing throughout England and Wales was 16.5, and that for the agricultural districts of the southern and Welsh counties only 10.8 per 100 births registered. We are not offering these statistics as affording any criterion as to the general infantile death-rate in the subdistricts named, because the period of six months on which they are founded is far too short to afford any data of sufficient value; our object is simply to point out a source of error in the estimation of infant mortality, and we are the more desirous of drawing attention to the subject, because in many reports which we have recently received the same erroneous method of calculation has been adopted.

CARMARTHEN.—The report presented by Mr. John Hughes to the urban sanitary district of Carmarthen professes to be of a preliminary character only, but it contains a large amount of information which will be of value for future work, and it affords evidence that the general sanitary features of the district have been made the subject of careful inquiry. The report having been issued in 1873, the mortality statistics presented, and the details referred to, relate to the previous year. In 1872, the general death-rate was 23.4 per 1000 living—a rate admitted to be undoubtedly high, considering the advantages which the town enjoys as to site and climate, and the occupations and general circumstances of the inhabitants. It should, however, be borne in mind that, in 1849, when Carmarthen was visited by an inspector of the General Board of Health, the death-rate was found to be 26.2 per 1000; and, further, that there are certain circumstances which tend to show that the present death-rate is somewhat artificial. Almost throughout the district a decrease of population has taken place, a large number of the young men having quitted their homes during the prime of life in order to seek occupation elsewhere; and it follows that an unusually large proportion of aged and very young persons, amongst whom the largest amount of sickness and mortality generally prevails, are left behind. Many of the young men also, having succumbed under the arduous labour they have undertaken and the excesses to which they have given way, often return home to die, and so the general death-rate is further increased. In this manner, an excessive rate of mortality from phthisis, which, some few years ago, prevailed in Carmarthenshire and several neighbouring counties, was, after inquiry, explained. Certain details in the report tend, however, to the conclusion, that much may be done further to diminish the existing mortality. Twenty-five years ago, the sanitary requirements of Carmarthen were fully inquired into, and the improvements which were then needed were pointed out; but even these have not all been as yet complied with, and, doubtless, new ones have arisen. Some of the poorest and most crowded parts of the town have no efficient drainage; the houses of a considerable population stand directly on a wet, cold clay, which is saturated with human refuse; out of a total of 1728 houses, as many as 454 have no closet-accommodation whatever; a large amount of excremental and other refuse is stored up near human habitations; cesspools, which have not required emptying for as many as twenty years, are sunk in a porous soil, from which a considerable number of the inhabitants procure their water-supply; and sewer-air escapes into the dwellings of the population from an inefficiently ventilated system of sewers. And, with reference to this latter condition, we fear, from the wording of the report, that too much reliance is likely to be placed on the trapping of drain-inlets inside houses. As a matter of fact, the soil-pipe of a water-eloset should be the only direct communication between a sewer and the interior of a house, and even this one should be efficiently ventilated; all other pipes conveying liquid-refuse should, after having been disconnected from the house-drains, be carried to the outside of the house and there made to flow over a properly trapped drain-inlet. Some steps should at once be taken in this direction; for, in Carmarthen, the danger of breathing an air loaded with sewer-emanations is much increased by the circumstance that the outfalls of the sewers are not unfrequently closed by the tides and by flood-waters, and decomposing sewage thus becomes pent up in the sewers. Whilst recommending that every portion of the town should be supplied with an efficiently constructed and a properly ventilated system of sewers, Mr. Hughes strongly advises that, especially in the older parts of the town, where people have resided for centuries, and where the surface must be to a considerable extent saturated with organic refuse, no extensive works, by which the surface-soil would be much disturbed, as in digging sewers, should be carried out during the summer months, and that, under any circumstances, the amount of soil disturbed at any one time should not be unnecessarily great; and point is given to this advice by reference to a severe epidemic of enteric fever which took place in the town, when works of a similar character were being carried out in 1855.

Superannuation of Parochial Medical Officers.

Sir,—May I ask whether the Poor-Law Medical Officers' Association are moving in the matter of superannuation? As the law stands at present, it is most unsatisfactory. Guardians can do as they please about granting the superannuation, and can fix the amount at what they please.

The age (sixty) is too great; fifty years of age and twenty years' service ought to be sufficient qualification to ensure two-thirds amount of salary as pension, without the power of the Guardians to interfere. Why is not a petition to the House sent round to every medical officer to sign? I am, etc., M. O.

Mr. G. C. Coles.—The qualifications necessary for a medical officer of health under the new *régime* are—sufficient interest to get an appointment, and sufficient tact to retain it. As there is no test whatever for special knowledge or fitness for the post, and as every sanitary authority has a different idea as to the work to be done by it, no reply can be given as to what qualifications are necessary. To do the work efficiently from a sanitary point of view, there should be knowledge of the principles of hygiene, of the elementary principles of sanitary engineering, and of sanitary law. All these will be found in the *Manual of Public Health*, published by Smith, Elder, and Co. Inspectors and analysts give usually no notice of their intended visits. By so doing they would very probably destroy any value likely to be obtained by their investigations or inquiries.

MILITARY AND NAVAL MEDICAL SERVICES.

TITLES IN THE ARMY MEDICAL SERVICE.

Sir,—I have the honour to draw your attention to at least two points in connection with Army Medical Service, which, although matters of detail, are far from being unimportant.

Firstly, the medical department of the army is the only organisation in which a single title is in several instances used to indicate officers of quite different standing and rank. Thus the title "surgeon" is used for officers ranking with both subalterns and captains, and the title "surgeon-major" for those ranks with both majors and lieutenant-colonels. Now both those titles are indefinite, and we should have a separate title for each rank. Such has always been the army custom, and I see no good reason why we alone should be an exception.

Again, I would draw attention to the claims of the department for a honorary title, such as the word "Royal". You are aware that it has been the custom of the service to reward corps and regiments who have done good service by such distinctions. Now, so long as medical officers formed part of the regiments of the army, they shared in the honours given to their regiments, and had no reason to complain that the nation failed to reward their deeds. Under our new organisation, however, all this is changed, and we, being outside the regiments, have no longer any interest in their traditions, and it behoves us to develope a departmental tradition instead; and there is ample room for such a tradition. We should certainly claim the title "Royal", which we as a body deserve as well as the Artillery, the Engineers, the Marines, and a number of infantry regiments. Although it may appear to outsiders a small thing, yet in the army such distinctions have a certain value; and, however much we may individually despise such trifles, we are bound, while they are of value, to claim them. I do not think the claim could be refused, remembering what good and gallant service our department has done in every quarter of the empire. We should also claim a badge and motto, as is the custom of the army in many regiments. We have in the Geneva Cross a badge honourable and perfectly distinctive, and I think every medical officer should be proud to wear it, and we will make it as honourable and as good as the best. The more we have perfectly similar treatment in such matters with our combatant brother officer, the better it will be for us as a department; hence every question of uniform, and such like, ought never to be despised.

I imagine every medical officer in the army knows the battle we are fighting; for it is a battle. It is the struggle of modern society against feudalism represented in the army. A certain set of the army officers still believe that the sword is alone the calling of a gentlemen, and affect to despise all others as quite secondary. So long as medical officers were, as in the old times, the nominees of persons in authority, and the brothers of the officers themselves, the question of position and privileges never raged as it has done since competition began.

We, the army doctors, have borne the brunt of the competition fight. Chosen by competition, we were, and are, placed in constant intercourse with men to whom competition was hateful, and we are now winning the day after years of struggling. The abolition of purchase has given the death-blow to the ancient theories of the combatant officers, and soon the mess-tables will cease to rail against competition men when half the table will be surrounded by them. But we should not forget the past, when, educated men as we were, and belonging to an educated profession, we were placed in the society of men who hated culture, and looked upon a reasoning or studying officer as a bore; and, when chosen by competition, we were placed in the midst of men chosen by money and interest only.

The position of medicine in the future is far brighter than it has been in the past; and slowly, but surely, the *prestige* and honour in which feudalism placed the sword is bound to disappear. In America and in France, the position of a military officer does not give that social position that it gives in countries where feudal theories reign; and, as those theories are every day disappearing, the rank and *prestige* of the army will disappear with them. Medicine and law, however, will always hold their own. I am, etc., I. V. R. C.

EXPENSES OF RETIREMENT.

Sir,—In your late interview with the Right Honourable the Secretary for War, the question was put by him, "Has the expense of the retirement been calculated?" In answer to this query, I beg to forward a statement of the actual cost to the public of each retirement at twenty years' service at 18s. 6d. per day; premising that this proposal is put forward as a temporary measure to relieve the present plethora of surgeons-major, not as a permanent right.

The cost of each retirement (should no consequent promotion occur) would be 1s. per day; should a promotion be made, 7s. per day.

Before entering on the calculation, I may premise that, in consequence of the very long service of the late assistant-surgeons (now called surgeons), a promotion of all over fifteen years' standing was made; and this principle has since obtained, yet there are now twenty-six over fifteen years who still await that boon. These, with existing surgeons-major, now number 437 in all, whilst there are but forty-four higher appointments to which they may aspire—one to every ten. In consequence of their increased numbers, forage-allowance has been denied to their rank; and this retirement would seem a happy means of abating this grievance, and at the same time of reducing the number of horses kept for the public service to its actual needs. It is quite true, that a certain number of experienced officers would be lost to the service, to be replaced by men who had their experience yet to acquire; still it would seem probable that the latter, having far better prospects in the Army, would make more contented and efficient public servants than the former, whose promotion is hopeless unless their numbers be reduced.

My calculation is as follows.

A surgeon-major of twenty years' service receives in pay	24s. a day.
In forage (sometimes stable-money), about . .	2s. ,,
Excess of field-officer's fuel, light, and superior quarters, over subaltern successor's	1s. 6d. ,,
Total . . .	27s. 6d.

Retirement, 18s. 6d.; *plus* surgeon as successor, 10s.; total 28s. 6d.; balance against Government, 1s. a day.

The retiring surgeon-major leaves 9s. a day in pay and allowances towards the payment of 10s. a day to his successor, who will not have any claim to the forage or field officer's allowances for fifteen years.

Again: should it seem desirable to relieve the list at all points, by taking some from each overcrowded year, a lesser rate—in fact, the present half-pay rate of 13s. 6d. a day—might be given to one of fifteen years; he leaving behind him 6s. 6d. in pay, and 3s. 6d. allowances, as above—total, 10s. a day—which would exactly pay his successor, and cause no expense to the public. For each year's extra service, he might have 1s., till at twenty years', 18s. 6d., as before proposed. As he is approaching an increase of 4s. per day after five years more, while his successor approaches 2s. 6d. only, the Government would soon be recouped this cost. Without further comment, I venture to submit this proposal for consideration. I am, etc.,

June 1874. REDUCTION.

NAVAL MEDICAL APPOINTMENTS.

STAFF-SURGEON (second class) Henry A. Close, from half-pay, to H.M.S. *Flying Fish*, commissioned.

Surgeon George B. Murray, from full-pay leave, and Staff-Surgeon (second class) James Bradley, and Staff-Surgeon (second class) John Mulvany, from half-pay, to H.M.S. *Duke of Wellington*, additional for temporary service at Haslar Hospital.

Staff-Surgeon (second class) F. A. Brice, from half-pay, to H.M.S. *Devastation*, *vice* Cooper, superseded at his own request.

Staff-Surgeon William L. Gordon, M.D., from half-pay, to H.M.S. *Osborne* (Royal yacht), commissioned.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Friday, June 19th.

Contagious Diseases (Animals) Acts.—Lord KIMBERLEY inquired whether Government intended to carry into effect the recommendation that the regulations as to the contagious diseases of animals should be the same in England and in Ireland. In the course of a conversation which followed, Lord PORTMAN expressed an opinion that the spread of cattle-disease was chiefly attributable to the number of hours the animals were compelled to travel without water, and that there was no necessity for a stringent regulation of the traffic between this country and Ireland.—The Duke of RICHMOND, in reply to the question put by Lord Kimberley, advised that there should be a better inspection of Irish cattle on their landing at English ports, and said he had been in communication with the Chancellor of the Exchequer with a view to the appointment of additional inspectors.

HOUSE OF COMMONS.—Thursday, June 18th, 1874.

Yellow Fever on Board the Aboukir.—Replying to Mr. E. Noel, Mr. HUNT stated that reports of the outbreak of yellow fever on board Her Majesty's ship *Aboukir*, at Port Royal, were received at the Admiralty at the end of December last. Previously, a hundred and forty supernumeraries had been sent to Jamaica, *en route* for the Pacific station. At the time of the outbreak, which was caused by the return of a marine who had been on leave at Kingston, there were two hundred and eighty-three officers and men on board the *Aboukir*, and, besides cases of ordinary fever, thirty-three cases of yellow fever occurred, of which twenty-one were fatal. On receipt of this news, an order was sent on the 1st of January, by telegraph, to the commodore at Jamaica, to remove the officers and men into barracks or tents on shore, and, if necessary, to charter a ship to take them to Halifax or Bermuda. Before these directions reached the commodore, he had embarked the officers and men on board the *Sphinx* and two other vessels, and sent them to the northern division of the station, and had also adopted vigorous measures for cleansing and fumigating the ship. On the return of the *Sphinx* with the regular crew, the supernumeraries having gone on to other stations, he was of opinion that they might, without danger, re-embark in their own ship; and in that view the Deputy-Inspector of Hospitals concurred. At the end of May, the commodore reported that, although objections had been offered by the new deputy-inspector to the re-embarkation of the crew, he believed there was no danger of a fresh outbreak. It had been decided that another of Her Majesty's ships should take the place of the *Aboukir*, and instructions were sent by the last mail to the commodore, in the event of a fresh outbreak, to remove the crew on shore, and employ native seamen, who were not so susceptible to fever, as far as possible in the duties of the ship. In March 1873, the ship was surveyed, and reported to be unfit to go to sea, and the surveying officers recommended that, as soon as she was relieved she should be sold. Subsequently she was reported, on May 10th, 1873, to be healthy and sweet.

Friday, June 19th.

The Factory Acts.—In reply to a question from Mr. Tennant, Mr. CROSS said it was his intention to consolidate the law relating to factories and workshops, and, in order to do that, the Government would find it necessary to ask the house to sanction the appointment of a select committee to inquire into and report upon the application of the Factories (Health of Women) Bill to other manufactories, with a view to early legislation on the subject.

College of Physicians in Ireland.—In reply to Mr. Dunbar, Sir M. H. BEACH said the Government had not received a report from the Irish law officers on the memorial of the King's and Queen's College of Physicians in Ireland, praying for a supplemental charter, but he expected the report would be received in a few days. He was not able to say when he should be able to lay it before the house.

Monday, June 22nd.

The State of the Liffey.—Mr. Sergeant SHERLOCK asked the Chief Secretary for Ireland, whether his attention had been called to the strong observations made by the Lord Chief Justice of Ireland, as to the abominable condition of the river Liffey, and to the intimation of that learned judge that he would retire from the bench if the nuisance should continue, and whether Her Majesty's Government proposed to take any proceedings to compel the Corporation of Dublin to cleanse the river Liffey?—Sir M. HICKS BEACH said his attention had been drawn to the observations of the Lord Chief Justice, and he was afraid those observations had been made with only too good reason. The Government would favourably consider any application which might be made to them by the Corporation of Dublin for the purpose of raising money to abate the nuisance, and if the corporation did not take steps to abate it, the Government would take the matter into their own hands.—Mr. BROOKE (Lord Mayor of Dublin) said the Common Council of Dublin would assemble on Thursday next (June 25th), and would apply to the Government for increased borrowing powers, in consequence of the increased price of building materials.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

MEDICAL STUDY DURING THE LONG VACATION (July and August).—Notices have been issued that the Laboratories of Chemistry, Physiology, and Experimental Physics, will be open, and the Professors and Demonstrators will be in attendance to give assistance to students. There will also be a class for Practical Human Anatomy, more particularly Osteology and Clinical Instruction, at Addenbrooke's Hospital.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 18th, 1874.

Pugh, John Hopkins, Hemel Hempstead
Wilson, Henry, Clifton Park, Birkenhead

The following gentlemen also on the same day passed their primary professional examination.

Rees, Alfred, University College
Todd, Howard James McChleary, St. Thomas's Hospital
Wilkins, Gilbert Hamilton, St. Thomas's Hospital

University of Dublin: Trinity College: School of Physic.—At the Trinity Term examination for the degree of Bachelor of Medicine, held on Monday and Tuesday, June 8th and 9th, 1874, the successful candidates passed in the following order of merit.

Young, Charles G. } equal
Hunter, Joseph }
Chester, William L.
Eakin, James W.
Forsyth, George C.
Walter, William
Dorman, John C.
Tuthill, Phineas B.
MacLaughlin, Alexander J.
Eaton, James B.
Leonard, Henry J. } equal
Pollen, Henry }
Owen, William } equal
Spear, William }
Enright, Thomas } equal
Leahy, Thomas }
Chatterton, William } equal
Tuthill, Frederick }
Griffith, J. De Burgh
Fausset, John D.
Murphy, George W. } equal
Lynch, Anthony R. }
Murphy, James } equal
James, Charles E. }
Boyce, Joseph W.
Johnston, William

At a private examination, the following gentlemen also qualified for the degree of M.B.

Comyn, John Sarsfield
Ormsby, Lambert H.

At the Trinity Term examination for the degree of Master in Surgery, held on Monday and Tuesday, June 15th and 16th, the following candidates passed.

Eakin, James W.
Young, Charles G.
Dorman, John C.
Chester, William L.
Murphy, James
Hamerton, Morgan F.
Hunter, Joseph
Chatterton, William
Gwynne, Charles N.
Fausset, John D.

The Medical Travelling Prize, of the value of £50, has been awarded to Mr. James W. Eakin.—The Surgical Travelling Prize, of the same value as the foregoing, has been won by Mr. Charles G. Young.—The Court of Examiners have recommended that a second prize should be granted to Mr. Theodore Stack, whose answering was of a very high order of merit.

King and Queen's College of Physicians in Ireland.—At stated monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, June 9th, 10th, and 11th, the following candidates were successful for the License to practise Medicine.

Chartres, William
Fendick, Rowing William
Given, Marcus
Halton, Matthew Corri Stephen
Lewis, Samuel Thomas
Martland, William
Molony, John
Scott, Henry Mark
Wybrants, Joseph Henry

For the License in Midwifery.

Given, Marcus
Halton, Matthew Corri Stephen
Lewis, Samuel Thomas

MEDICAL VACANCIES.

The following vacancies are announced:—

ANDERSON UNIVERSITY, Glasgow—Professor of the Practice of Medicine; Professor of Anatomy. Applications 29th instant.

ARMY MEDICAL DEPARTMENT—Surgeons. Applications, 10th August, to Sir W. M. Muir, Director-General.

ASYLUM FOR IDIOTS, Earlswood—Assistant Medical Officer: £150 per annum, board, and apartments. Applications, 29th instant, to the Secretary, 36, King William Street.

AUCKLAND UNION—Medical Officer for the Byers Hall District: £20 per ann.

BARONY PARISH NEW LUNATIC FARM ASYLUM, Woodlie, Glasgow—Medical Superintendent: £500 per annum, house, etc. Applications, 1st July, to Peter Beattie, Inspector of Poor.

BRIGHTON AND HOVE LYING-IN INSTITUTION, HOSPITAL, and DISPENSARY FOR WOMEN AND CHILDREN—House-Surgeon: £100 per annum, furnished apartments, etc. Applications, 1st July, to Thomas A. Brew, Honorary Secretary.

CARDIFF UNION—Medical Officer for the Cardiff West District: £125 per ann.

CARLISLE DISPENSARY—Assistant House-Surgeon: £90 per annum, apartments, coals, gas, and attendance.

CAXTON and ARRINGTON UNION—Medical Officer for the Workhouse. Applications, 29th instant, to Henry Mortlock, Clerk.

CHARING CROSS HOSPITAL—Medical Registrar. Applications, 1st July, to Henry Woolcott, Secretary.

GENERAL HOSPITAL, Birmingham—Resident Surgical Officer: £100 per annum, board, and residence.—Assistant Dispenser: £40 per annum to commence. Applications, 29th instant, to W. T. Grant, House Governor.

HARTLEPOOL HOSPITAL and DISPENSARY—House-Surgeon: £80 per annum, increasing to £100, board and lodging. Applications, 13th July, to the Secretary.

HUDDERSFIELD and UPPER AGBRIGG INFIRMARY—Surgeon. Applications, 17th July, to John Marsden, Honorary Secretary.

INDIAN MEDICAL SERVICE—Fourteen Surgeons. Applications, 10th August, to T. P. Pears, Major-General, Military Secretary.

KENMARE UNION, co. Kerry—Medical Officer, Public Vaccinator, and Registrar of Births, etc., for the Sneem Dispensary District: £100 per annum, and fees. Applications, 7th July, to Thomas M. Jermyn, Hon. Sec., Less Cottage.

KIDDERMINSTER INFIRMARY—House-Surgeon: £150 per annum, furnished apartments, etc. Applications, 9th July, to T. F. Toens, Honorary Secretary.

KING'S COLLEGE, London—Professor of Materia Medica.—Professor of Comparative Anatomy.

KING'S COLLEGE HOSPITAL—Physician.

LEOMINSTER URBAN SANITARY DISTRICT—Medical Officer of Health: £40 per ann. for two years. Applications, 6th July, to G. T. Robinson, Clerk.

MALE LOCK HOSPITAL—House-Surgeon: £50 per annum, board, and apartments. Applications, 30th instant, to the Secretary.

NORTHAMPTON GENERAL INFIRMARY—Physician. Applications, 1st July, to S. P. Bennett, Secretary.

OKEHAMPTON UNION—Medical Officers for No. 2 District, and the Workhouse: £55 and £40 per annum respectively. Applications, 10th July, to Robert Fulford, Clerk.

OWENS COLLEGE, Manchester—Professor of Anatomy: minimum emoluments, £500 per annum. Applications, 1st August, to the Council, under cover to J. Holme Nicholson, Registrar.

QUEEN'S HOSPITAL, BIRMINGHAM—House Physician: £50 per annum, board, lodging, etc. Applications, 16th July, to Walter Young, Secretary.

RAWMARSH URBAN SANITARY DISTRICT—Medical Officer of Health: £40 for one year. Applications, 6th July, to F. L. Harrop, Clerk.

ROTHES, Morayshire—Parochial Medical Officer: £52:10 per annum. Applications, 1st July, to Wm. Watson, Inspector.

ROYAL ALBERT EDWARD INFIRMARY and DISPENSARY, Wigan—House-Surgeon; £150 per annum, furnished apartments, and rations. Applications, 27th instant, to Wm. Heaton, Honorary Secretary.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City Road—Physician. Applications, 14th July, to C. L. Kemp, Secretary.

ROYAL NAVAL MEDICAL SERVICE—Surgeons. Applications, 6th August, to A. Armstrong, Director-General.

ST. GEORGE'S HOSPITAL—Resident Medical Officer: £250 per annum, increasing to £300, furnished rooms, and board. Applications, 30th instant, to C. L. Todd, Secretary.

SIDMOUTH URBAN SANITARY DISTRICT—Medical Officer of Health: £25 for one year. Applications, 30th instant, to J. G. G. Radford, Clerk.

THORNE UNION, Yorkshire—Medical Officers and Public Vaccinators for the Hatfield and Stainforth Districts: £20 per annum, and fees, each. Applications, 1st July, to George Newborn, Clerk.

WEST NORFOLK and LYNN HOSPITAL—House-Surgeon and Secretary: £80 per annum, board, and apartments. Applications, 11th July, to the Weekly Board.

WESTMINSTER HOSPITAL—Resident Obstetric Assistant: board and lodging. Applications, 4th July, to F. J. Wilson, Secretary.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Kesteven, Leighton, M.R.C.S., appointed Assistant Medical Officer to the Derby County Lunatic Asylum.

Will, J. C. Ogilvie, M.D., appointed Junior Surgeon to the Aberdeen Royal Infirmary.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the communication.

BIRTHS.

Dickinson.—On June 19th, at 162, Bedford Street, Liverpool, the wife of Edward H. Dickinson, M.A., M.B., of a son.

Ireland.—On June 23rd, at the Limes, Linton, Cambridgeshire, the wife of Edward Ireland, Esq., Surgeon, of a son.

DEATHS.

Creighton, William, Esq., Surgeon, of Morpeth, aged 71, on June 3rd.

Sleman, John, L.A.C., eldest son of Richard Sleman, F.R.C.S., of Tavistock, at Whitehaven Infirmary, of typhus fever, aged 20, on May 31st.

Alleged Manslaughter by a Schoolmaster.—A lengthened inquiry was held last week into the circumstances attending the death of Henry Griffiths Stanley, aged 9 years, son of Mr. Stanley of Cobourg Road, Peckham, whose death was alleged to have been accelerated by a severe beating administered by Mr. Joseph Woodman, a schoolmaster, of Gloucester House, Old Kent Road. The mother of the deceased deposed that the boy had been a boarder at Mr. Woodman's school for a considerable time. On the 11th instant, witness went there and found her son in bed seriously ill. On his body were upwards of a dozen marks, evidently caused by a severe thrashing. She caused him to be removed home, where he died on the 17th instant. He was nearly always insensible after having been taken home, and could never give any account of the beating he had had. John Besley, assistant to Mr. Woodman, deposed that, on the 3rd instant, deceased was struck in the mouth by a cricket-ball while playing on Peckham Rye, but he did not appear to be hurt. Witness heard that he had been chastised, but knew nothing of the circumstances. Mr. Woodman, after having been duly cautioned, said that the deceased, on the 9th instant, acquitted himself very badly at his writing lessons, and witness, thinking that his conduct proceeded from obstinacy, took him up stairs and gave him three stripes with a small birch. In answer to the coroner, the witness denied that the boy complained of not being able to see, and that that was the cause of his awkwardness in writing. He repeated on his oath that he only struck the deceased three blows, and added, that afterwards the lad went out with his schoolfellows, and appeared to be perfectly well. Medical evidence having shown that the actual cause of death was phrenitis, the jury eventually returned a verdict to that effect, adding a recommendation to Mr. Woodman not to chastise children privately in future, but to have some one present to witness the punishment.

OPERATION DAYS AT THE HOSPITALS.

MONDAY ......Metropolitan Free, 2 P.M.—St. Mark's, 9 A.M. and 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.

TUESDAY ......Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.

WEDNESDAY ..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—St. Thomas's, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Cancer Hospital, Brompton, 3 P.M.—King's College, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

THURSDAY ....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Royal Orthopædic, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.

FRIDAY........Royal Westminster Ophthalmic, 1.30 P.M. — Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.

SATURDAY ....St. Bartholomew's, 1.30 P.M.—King's College, 1.30 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Free, 2 P.M.—East London Hospital for Children, 2 P.M.—Hospital for Women, 9.30 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 9.30 A.M.—Royal Free, 9 A.M. and 2 P.M.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Dr. Schnegierieff (of Moscow), "On Vaginismus"; Dr. John Williams, "On the Relation between Congestion of the Uterus and Flexion of the Organ"; Dr. Bathurst Woodman, "On the Treatment of Mammary Abscess"; Dr. Boulton, "Cases of Melancholia and Epilepsy caused by Uterine Disorder"; Dr. Galton will show an Instrument for the "Treatment of Anteflexion of the Uterus"; and other communications.

NOTICES TO CORRESPONDENTS.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, in forwarding their Annual and other Reports, favour us with *Duplicate Copies.*

AUTHORS desiring reprints of their articles published in the JOURNAL, are requested to communicate beforehand with the printer and publisher, Mr. T. Richards, 37, Great Queen Street, W.C.

CORRESPONDENTS, who wish notice to be taken of their communications, should authenticate them with their names—of course, not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COMMUNICATIONS respecting editorial matters, should be addressed to the Editor: those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 37, Great Queen Street, W.C.

DR. D. P. BARRY.—Take the boy to the Deaf and Dumb Home, 44, Burton Crescent, W.C.

A VERY OLD MEMBER OF THE ASSOCIATION must apply through the English Ambassador for a permission to practise, which will no doubt be granted.

ERRATUM.—In the last paragraph of Dr. Hughlings Jackson's paper, p. 805, for "ascending parietal", read either "antero-parietal (Huxley)", or "ascending frontal (Turner)".

DELTA.—No such statement nor report as that inquired for by our correspondent is in existence. There must be some error of date; it certainly is not in the number for March 22nd, 1872.

NOTWITHSTANDING that nearly every number of the BRITISH MEDICAL JOURNAL published this year has included a supplement of eight pages, and that one-third more of original matter has been published this year in the BRITISH MEDICAL JOURNAL up to the present date than in any former year, we have still a considerable accumulation of manuscripts from town and country contributors. We would therefore especially ask our correspondents to compress, as much as possible, any communications with which they may favour us, with a view to their publication with the least possible delay.

DR. DOBELL'S PARTY.

SIR,—In answer to your note in last week's JOURNAL, I beg to state that I think it is a most indecorous thing that a physician cannot give a private party at his own house without its being dragged into the medical journals. I contend that the medical press has nothing whatever to do with private parties, and I distinctly disapprove of their meddling with mine.

When I issued my invitations to a "Library Party", I neither "expected" nor "intended" that it should get into the papers, on this any more than on previous occasions; and I do not believe it would have done so, had not some silly correspondent of the *Lancet* so broken through social decorum as to advertise in its columns a copy of my private invitation card. After that, no one can complain if others felt at liberty to make equally public the novelties they saw at my house, which appeared to them of interest and importance to the profession. But I am no more responsible for the one than I am for the other.

84, Harley Street, June 17th, 1874. I am, etc., HORACE DOBELL.

*** The explanation is far from satisfactory.

NOTICES of Births, Deaths, Marriages, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

ETIQUETTE AT THE BRIDGNORTH UNION WORKHOUSE.

SIR,—I agree in the main with "Amicus Curiæ" in his remarks on this case; but I think that a similar case in which I was once engaged may serve to explain the position in which Mr. Bethell was probably placed, and show that he had no alternative left to him but to act as he did. I was summoned by the bench of magistrates to visit a lunatic in a workhouse to which my friend Mr. A. was surgeon. On arriving at the workhouse, I found Mr. A. there, evidently expecting to certify the patient. I therefore at once mentioned the fact to the magistrate, and offered to retire, leaving Mr. A. to certify the patient. The magistrate replied that he could not recognise any other medical man but me, and desired me to see the patient, which I did. My friend Mr. A. has never forgiven me for so doing, and probably never will. I consider, however, that I had no alternative, having no desire to risk my appointment as surgeon to the magistrate, which I most certainly should have done had I persisted in my refusal to certify. I also am surgeon to a workhouse, and in a similar case I should probably get the relieving officer to call in the clergyman of the union, who together of course would request me to certify. The case at Bridgnorth was certainly irregular, but I think it unfair to blame Mr. Bethell for his conduct therein. I am, etc.,

June 23rd, 1874. A POLICE SURGEON.

M.D. AND M.B.CANTAB.—During the academical year 1873-74, the number of degrees conferred by the University of Cambridge was larger than any on record; viz., 822. Of this number, three took the degree of M.D., and six proceeded to that of Bachelor of Medicine.

F.R.C.S.—There are three vacancies; but a voter cannot give more than one vote to any candidate. He can of course plump for one gentleman, if so disposed. Full instruction can be obtained from the Secretary at the College; but we believe the plan adopted is to draw the pen through the names of those not voted for, taking care not to leave more than three.

A SUCCESSFUL CANDIDATE should complain to the journal stigmatising him as a "doubtful and inferior student". The recent examination for the Fellowship was thoroughly good. Gentlemen may carry off the prizes mentioned in Medicine, but may fail in Surgery, from the fact of working so hard for the former.

THE SOHO HOSPITAL FOR WOMEN.

SIR,—Dr. Rogers has drawn attention in your last number to some proceedings of the Soho Hospital for Women. Very lately I attended a patient who informed me that she had been an out-patient at that hospital, and that she paid five shillings there for each visit. I did not think that there could be any charitable institution in London that could receive patients upon such terms, and was inclined to think that there was some mistake in my patient's statement. Dr. Rogers's letter has, however, recalled the circumstance to my mind; and the profession and the public would, I am sure, be much indebted to him (or to any other gentleman) if he would inform us if that is really the way in which the charity is worked.

June 22nd, 1874. I am, etc., INQUIRER.

WE are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Birmingham Daily Gazette, June 22nd; The Carlisle Patriot, June 20th; The Macclesfield Advertiser; The Shield; The Glasgow News; The Manchester Guardian; The Cork Examiner; The Sunderland and Durham County Herald; The Cork Constitution; The Blackburn Standard; The Berkshire Chronicle; The Brighton Daily News; The Dublin Evening Mail; The York Herald; The Kendal Mercury; The Western Mail; The Bath Express and County Herald; The Pembrokeshire Advertiser; The Leeds Mercury; The Blackburn Times; etc.

COMMUNICATIONS, LETTERS, ETC., have been received from:—

Dr. T. More Madden, Dublin; Dr. G. H. Philipson, Newcastle-upon-Tyne; Mr. J. Richardson, Newcastle-upon-Tyne; Dr. J. W. Taylor, Scarborough; Mr. F. W. Lowndes, Liverpool; Dr. J. C. Ogilvie Will, Aberdeen; Mr. W. Fairlie Clarke, London; Mr. P. B. Stoney Millon; Miss Ferris, London; Exhausted Brain; Ignoramus; Dr. J. W. Moore, Dublin; Dr. Edis, London; Dr. George Johnson, London; Mr. L. W. Marshall, Nottingham; Dr. Horace Dobell, London; Dr. Grabham, Earlswood; Mr. E. P. Goodworth, Hatfield; A Police Surgeon; Dr. McLelland, Bonhill; Dr. Wm. A. McKeown, Belfast; Our Paris Correspondent; Mr. Eastes, London; Mr. T. Holmes, London; Mr. Lawson Tait, Birmingham; Mr. R. S. Ellis, St. Ives; Mr. E. Williams, Talgarth; Ou Dublin Correspondent; Mr. W. H. Michael, London; M.R.C.S.; Dr. Thorne Thorne, London; Mr. G. F. Hodgson, Brighton; M.D.Edin.; Dr. T. Cliffor Allbutt, Leeds; Dr. Farquharson, London; Dr. Arthur Ransome, Manchester The Secretary of Apothecaries' Hall; The Registrar-General of England; Th Registrar-General of Ireland; Mr. Wanklyn, London; The Registrar of th Medical Society of London; Mr. T. H. Bartleet, Birmingham; Dr. H. Charlto Bastian, London; Mr. C. W. Ryalls, London; Mr. T. M. Stone, London; Th Honorary Secretaries of the Aboo Lawrence School, Byculla, India; M. Decroix Lille; Dr. Grimshaw, Dublin; Dr. D. M. Williams, Liverpool; Dr. A. B. Steele Liverpool; Reduction; Mr. E. Bellamy, London; Mr. Lennox Browne, London Dr. Bond, Gloucester; Dr. Dyce Duckworth, London; A very Old Membe of the Association; Mr. John Gay, London; Mr. John Woodman, Exeter; Th Secretary of the Obstetrical Society; J. J.; Dr. McKendrick, Edinburgh: Dr T. K. Chambers, London; Dr. Finny, Dublin; Dr. Wiltshire, London; Mr. W P. Blanchard, London; Mr. George Cowell, London; Mr. E. H. Dickinson Liverpool; Dr. Hughlings Jackson, London; etc.

BOOKS, ETC., RECEIVED.

Catalogue of the Library of the Surgeon-General's Office, United States Army Three volumes. Washington: 1874.

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